







Telecommunication Equipment

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Telecommunication

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ABOUT US

With an intelligent leadership, Danial Moj has been able to gather a young and cohesive family of unique specialists in advanced technology systems. The primary team of Danial Moj was established to supply and support fiber optic solutions. Today, our corporation is at its highest speed on the path of evolution, thanks to having much experience in Iranian optical telecommunication infrastructure projects.

As one of the leading companies in research, development, and production of optical telecommunication equipment in Iran, we provide a wide range of products and services. By investing in R&D, Danial Moj has been able to produce equipment and devices using the latest modern technologies with the best quality in many fields such as telecommunications, Industrial, automaton, and many more.

After years of professional activity in telecommunications infrastructure, and having analyzed the future market, managers of the company have decided to invest on more advanced products. Following this conclusion, R&D teams were formed with the participation of relevant elites and the necessary investment was made.

The year 2020, could be considered as a peak in Danial Moj History; By designing a road map for the future, we started to expand our departments by forming R&D units in each department. We hired young specialists with bold visions to extend our basket with various products and services. Telecommunication systems, advanced lasers for medical and industrial use, renewable energy, high-tech batteries, IoT and AI are the main parts of the company's vision.

Danial Moj has always looked forward for establishing close business relationships with international companies in the world-wide market. We are open to invest on high-tech ideas for the future market and following this policy we are open to having elites and artisans on our team.

ORGANIZATIONAL POLICIES

Help Shape the future technology

Danial Moj has had a logical approach towards developing telecommunication systems for more than a decade. Using pioneering technology of optical fibers, Danial Moj has significantly supplied and supported this technology in Iran, and we are proud to compete with large companies.

Alongside the global development of information and communication technology, we are focusing on both Telecommunication Systems, and IOT to supply the upcoming needs in the international market.

In order to be a leading company in the Middle East, and to increase productivity, we use the full potential of elite employees. Extensive experience and comprehensive expertise have turned us into a leading company in cooperation with companies and organizations in the international arena.

We look forward for developing technological solutions in a wide range of science so we can solve industrial problems. Following this crucial policy, the main value of the company is bestowed upon R&D units, therefore, we have cooperated with reputable and high-ranking universities, and we are also interested in cooperating with knowledge-based and innovative teams.

Organizational policies

High-quality products, environmental protection, particularly the preservation of our natural resources, promotion of our employees' health and performance, responsibility and a safe workplace are the key pillars of Danial Moj's social and entrepreneurship commitment. Our performance is in line with global standards, and the continuous development and promotion of indigenous advanced technologies is one of Danial Moj's ethical commitments.

• **Quality management**

With its Bold visions, Danial Moj guarantees the unique and efficient quality of its products for a long term, along with complete customer satisfaction. In the global market, safety and quality are non-negotiable because customer satisfaction is our priority.

• **Environmental Protection**

Environmental protection and preservation of natural and underground resources are important issues for Danial Moj Company. Our solutions to provide clean and sustainable energy for the environment are our commitment to the next generation. With the development of photovoltaic technologies, we are trying to make the use of clean solar energy easy for all people. Also, to preserve the aquifers, the company has been able to play a significant role in reducing agricultural water consumption with IoT technologies.

• **Energy**

In an age when fossil energy resources are running out, we offer solutions for the use of renewable energy. The use of solar energy is known as the most efficient solution available by Danial Moj experts due to the long life of this energy source and its availability. Along with energy production, energy conservation and consumption reduction are also great value to our collection. Therefore, in this regard, advanced battery technologies and energy management systems in R&D units are constantly being developed to be produced with optimal efficiency for consumers.

• **Occupational safety and health**

Danial Moj's highest priority is to maintain the safety of the staff and keep the employees healthy. Our occupational safety and health management aims to create extraordinary working conditions and make our employees aware of an optimal health-related behavior.

VALUES

Involving our business partners, and suppliers we base our actions on clearly defined principles and values.

● **Danial Moj Business Policies**

In May 1400, the board approved trade policies of Danial Moj. These policies explain the values of the company and therefore provide clear instructions for each Danial Moj employee.

● **Business Partners Performance Code**

The Danial Moj Business Partners Code of Conduct describes the legal and ethical standards that all business partners are required to comply with, and all decisions and actions affecting the entire set must be subject to the rules of this code.

● **Membership in general assemblies**

Along with other companies, we believe with public participation, the necessary synergy can be achieved to reach common goals, so Danial Moj plays its part by attending to domestic and international NGO's. The associations in which we have a permanent membership are:

- Iran Telecommunication Industry Syndicate
- Union of Exporters of Engineering Technical Services, Consultants and Contractors
- Tehran Computer Guild Organization

HISTORY

2020

- National Standard for DMCWDM4CH8096
- National Standard for DMCWDM16CH60
- National Standard for DMDWDM40CH6096
- Participation in the exhibition of the Research Institute of Communication and Information Technology in 1399
- Afghanistan Exhibition in 1399

2019

- BakuTel exhibition in 1398
- Sulaimaniyah Exhibition of Iraq in 1400
- Russian Exhibition of 1400

2018

- Obtaining standard OHSAS18001
- Obtaining standard ISO9001
- Obtaining standard ISO14001
- Obtaining the Iranian national knowledge-based certificate
- Membership in the Computer Guild Organization of Tehran Province
- Membership in the Union of Exporters of Engineering Technical Services, Consultants and Contractors
- Membership in the Telecommunications Industry Syndicate of Iran

2013

- Establishment of Danial Moj Company by Dr. Samadiani

We have more than 300 experts who serve under the guidance of successful Iranian managers in various specialties.

OUR TEAM



Dr. Samad Samadiani
Founder & CEO



Mitra Mehrabadi
President



Mehdi Sabbagh
Development & Investment
Senior Consultant



Mohammad.H Amiri
Senior Financial Advisor and
Investment Analyst



Yashar Sarafi
Technical Deputy



Amir Reza Tavakoli
Administrative Finance
Deputy



Dr. Farhad Puladi
Director of IoT Department



Saman Ebadi
Network Operations Manager



Mehdi Mehrabi
Electronics Manager



Amir Hossein Aghdam
R&D Manager



Emran Vahedi
IoT platform manager



Farham Habibi
IT Manager



Mehdi Karami
Data Mining & AI Department
Director



Amin Horri
Director of Energy
Department



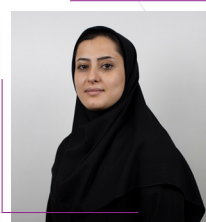
Ababs Fadavi
Customer Relationship
Manager



Rafat Hashemzade
Optical Telecommunications
Sales Manager



Amir Hossein Naghdi
Production group manager



Jale Vakili
Warehouse Manager

PROJECTS

Our team holds numerous successful projects on its CV, here are a few examples sorted by category.

■ Telecommunication

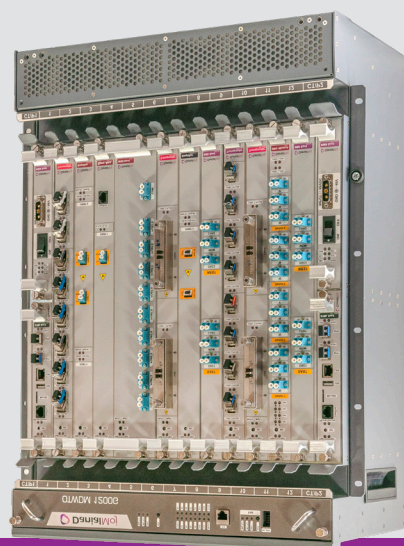
- Isfahan Province Center Transmission Bandwidth Improvement
- Upgrading the network capacity of Semnan province
- Upgrading the network capacity of Kohgiluyeh and Boyer-Ahmad Provinces
- Providing network equipment requirements for telecommunication areas of Iran (more than 20 provinces of the country)
- Supply and development of network equipment requirements for deprived and low-capacity telecommunication areas of Iran USO (more than 20 provinces of the country)
- Increasing the bandwidth capacity of Khorasan Razavi, South Khorasan, Hamedan, Kermanshah and 25 other provinces as an independent purchase
- Bandwidth development of FCP companies (AsiaTek, Web, Afrant, Mobinnet, etc.)
- First Role Quality Company (Knock)
- Purchase of telecommunication equipment of the data network of the country's electricity industry pilot

■ IoT

- Design and feasibility study of intelligent electrical and mechanical installations of buildings of the Regulatory Authority for Radio Communications
- Research in the field of intelligent building systems of the Faculty of Posts and Telecommunications
- Codification of rules and regulations for the operation of LORA radio in the country along with the design of a pilot network
- Feasibility study and smartening of Shahid Rajaei port

OTWDM 1200G OTN

DMOAP01200GOTN



DESCRIPTION & FEATURES

OTWDM 1200G is the fourth generation of the shelves produced by Danial Moj Company with the capability of transporting 1200Gbps Data. This shelf has 14 slots, the first slot (CT/PI) and the last slot (CT/P2) are for power card and control card. Slots 1 to 12 are used for Transponder CFP 100G, XFP 10G-8Port Transponder, Transponder 10GSFP+, Amplifier EDFA 2P, Amplifier Raman1P, OPM 1P Spec.Ana and OPU 4 Channels. In this type, a tray with 8 smart fans 7500RPM is installed for cooling the modules and cards. By changes in the rotation speed, these fans maintain fixed and suitable temperature for the equipment. Two control cards are used in these shelves for managing and supervisory monitoring; hence, if one of the control cards does not work for any reason, the other card will perform the duty of transmitting the supervisory data.

Specifications of the card:

Transporting traffic to 1.2 Tbps

Having Dual control cards in 1+1 form to create sustainability in transporting supervisory data

Dual Power in 1+1 form to create sustainability in providing system feed/input

Installation of shelf service cards in the shelf sides for easier installation and maintenance

Accessibility to all items through front side of the shelf

Product specification

Performance Data	Technical Indexes
Model and part number	OTWDM 1200G OTN DMOAP01200GOTN
Shelf Size	8 U: 600mm (height) x 480mm (width) x 305mm (length)
Maximum Supported slots	14 Slots
Maximum Supported Channels	DWDM: 160 wavelengths; CWDM: 18 wavelengths

Optical Spectrum	DWDM: C- Band, 100GHz or 50GHz CWDM: 1270nm~1610nm
Data Transmission Each Channel	100 Gbit/s
Supported Services	STM-1/4/16/64, OC-3/12/48/256, 100M~2.5Gbps, FE/GE/10GE/100GE ESCOM, FC100/FC200/ FC400/SAN
Module/Connector Type	XFP/SFP+/SFP, LC type interface
Network Topology Type	Point to point, chain type, star type, ring type, ring- with-chain type, ring-cross type, ring-rangency type
Backup and Protection	Network Level Protection Equipment Level Protection
Working Operation Temperature Range	optical line 1+1 Protection Dual power 8 num fan 0oC~50oC
Working Environment Humidity Range	5~90%
Storage Temperature Range	-10~70 oC
Cooling system power	Auto fan cooling
Power Supply	DC: -36~-72 (1+1)
Power Consumption	MIN 150 MAX 600
Management Card	1+1
POWER MODULE PART NUMBER	DMAPM2X5000000
Input V	48V
Output V	5V~10A

OTWDM 100G OTN

DMOAP00xxxGOTN



DESCRIPTION

This device has four operational slots that can include different modules and pass up to 100G of traffic. In this type of shelves, there is a slot for placing a control card, a second slot for EDFA, and slots 3 and 4 for placing a Transponder card, which includes a CFP Coherence 100G module and a QSFP 28 100G module.

With the rapid development of the Internet, the bandwidth pressure caused by the spurt growth of data traffic makes it imperative to introduce a 100G system into the transmission network. Therefore, DanialMoj communication co., Ltd. has introduced a new generation of high-capacity, long-distance 100G wavelength division transmission Equipment DMO8600 series products. The product uses advanced transmission technology and high integration technology to support single-channel transmission rate from 100Mbps to 100Gbps, and provides wide bandwidth, large capacity and fully transparent transmission for 200Gbps and 400Gbps expansion, enabling smooth upgrade of capacity. It provides a stable platform for multi-service operation and future network upgrade and expansion. It is widely used in operators, broadcasting, IDC, finance, government, cloud network, big data and other industries

PRODUCT FEATURES



DMOAP00100GOTN-1RU back power



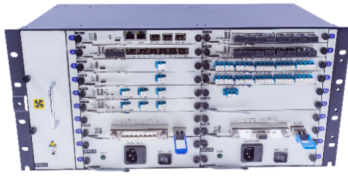
DMOAP00300GOTN-2RU

Huge capacity transmission

Supports 96×100G ultra-large capacity transmissions, that is, single fiber transmission capacity up to 9.6Tb/s, and support 80/96×10G/100G hybrid transmission, supporting smooth upgrade from 40 waves to 80 waves, 48 waves to 96 waves. It ensures low investment and smooth expansion in the early stage of network construction to meet the growing bandwidth demand in the future.

Excellent 100G transmission performance

100G system adopts PDM-QPSK coding technology for coherent detection, supports SD-FEC, B2B OSNR tolerance index is excellent, adopts industry advanced DSP processing technology, dispersion tolerance is 22000 PS/nm, and supports 1200 km or more of non-electric relay transmission. Save investment and greatly facilitate operation and maintenance.



DMOAP00700GOTN-5RU

Flexible and comprehensive service access capability

Supports 100M~100G any service access: CPRI1~10, eCPRI FE/GE/10GE/25GE/40GE/100GE, FC 1G~32G, STM-N, OTU1/2/3/4, etc. Transparent transmission reduces the cross-transmission delay of the circuit.

Telecom Reliable protection

Supports multiple network protection schemes such as optical layer 1+1 channel protection and optical line side 1+1 protection, providing multiple protection for important equipment units and optical fiber lines.

Support AC 220V, DC -48V power supply, 1+1 power protection.

Excellent structure, convenient and easy to maintain

It adopts 1U, 2U, 5U standard 19-inch rack design, completely configuration-free installation, device plug-and-play, and unified network management platform, providing complete network and equipment performance monitoring capabilities.

Product specification

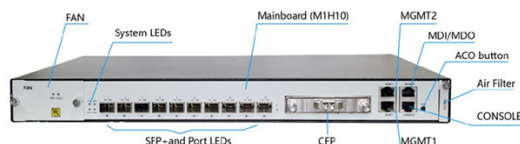
Function	Note		
Part number	DMOAP00100GOTN	DMOAP00300GOTN	DMOAP00700GOTN
Equipment Size (H x W x D, mm)	1U: (back-power supply) 44x442x280	2U: (front -power supply) 88x442x220	5U: (front -power supply) 220x442x220
Service slot	4 slots	8 slots	16 slots
Power consumption	120W (Max)	180W (Max)	450W (Max)
Power module part number	DMAPM2X1200000	DMAPM2X1800000	DMAPM2X4500000
Max channel number	CWDM: 18 wavelengths, DWDM: 96 wavelengths (50GHz)		
Single channel max rate	100Gbit/s		
Line side rate	1.25Gbit/s, 2.5Gbit/s, 8Gbit/s, 10Gbit/s, 16Gbit/s, 25Gbit/s, 40Gbit/s, 100Gbit/s		
Support service	STM-1/4/16/64/256、OC-3/12/48/192/768 OTU-1/2/3/4 FE/GE/10GE/25GE/40GE/100GE FC 1G/2G/4G/8G/16G/32G CPRI 1/2/3/6/7/10, eCPRI		
Clock features	Support IEEE 1588V2		
Network topology	Point to point, chain type, star type, ring type		
Network level protection	Optical channel 1+1 protection, optical multiplex 1+1 protection, optical line 1+1 protection		
Equipment level protection	Power supply backup		
Network management	SNMP, Web, CLI, Telnet		
Installation	"19"and 23" cabinets, ETSI 300mm/600mm cabinets Wireless outdoor base station cabinet, hanging wall		
Working temperature range	-10°C ~ 60°C		
Working humidity range	5~95% no condensation		
Storage temperature range	-40°C ~ 85°C		
Heat dissipation	Fan cooling , 10000 RPM		
Power supply mode	AC: 90 ~ 260V or DC: -36 ~ -72 V		

Muxponder 100G

DMAMUXP100G101

DESCRIPTION

This is one of the telecommunication facilities in OTN level which is used for accumulating the 10G traffics and converting them into one 100G, and/or receiving the 100G and Demultiplex traffics and changing them to 10 traffic 10G. This system contains 10 input client ports for receiving services where the +SFP modules are placed in it; and there is one port with GFP module inside. It is used for transmitting and receiving the 100G traffic. The tunable modules are CFP and have the capability of tuning channels in different wavelengths.



Product specification

Performance Data	Technical Indexes
Power Supply	AC: Input 100~240V, 47~63Hz DC: Input -40.5V~-72V
Power consumption	130W with coherent CFP/110W with grey CFP
Client Interface	10 SFP+ based 10G ports (10GE LAN/WAN, STM-64/OC-192, FC8G, OTU2, OTU2e)
System Interface	One CFP based 100G port (coherent CFP, 4x25G DWDM CFP, grey CFP)
Environment	Working temperature: 0°C~45°C Storage temperature: -40°C~70°C Relative humidity: 10%~90%, no condensing

System Side Signal and Multiplexing Structure	100G Grey CFP: OTU4 <--> ODU4 <--> ODU2 or ODU2e or ODUflex
	100G DWDM CFP: OCH <--> OTU4 <--> ODU4 <--> ODU2 or ODU2e or ODUflex
	10G grey SFP+: OTU2/OTU2e <--> ODU2/ODU2e
	10G WDM SFP+: OCH <--> OTU2/OTU2e <--> ODU2/ODU2e
	OC-192/STM-64 (via AMP or BMP) <--> ODU2
Client-Side Signal and Mapping Mode	10GBASE-R (via BMP) <--> ODU2e
	10GBASE-R (via GFP-F) <--> ODU210GBASE-R (via GFP-F extended payload with preamble) <--> ODU2
	FC8G (via BMP) <--> ODUflex
FEC on 100G Port	100G OTU4: G.709 Regular FEC
	100G coherent OCh: Soft-Decision FEC
	Regular FEC (G.709)
FEC on 10G Port	I.4 Super FEC (G.975.1)
	I.7 Super FEC (G.975.1)
In-band DCN Management	GCC0 on OTU4
	GCC1 or GCC2 or GCC1+2 on ODU4
	GCC0 on OTU2/2e
	GCC1 or GCC2 or GCC1+2 on ODU2/2e
Out-band DCN Management	Management Ethernet port
Transmission Protection	SNC/N
	SNC/I
	PRBS
Maintenance	Loopback
Network Management System	SNMP based NMS
Shelf Type and Dimensions(mm) (W*D*H)	440mm*350mm*44mm

Muxponder 10G OTN

DMAMUXP010G082



DESCRIPTION

This is one of the telecommunication facilities in OTN level which provides the possibility of transporting the traffic in different capacities ranging 100Mb to 10Gb on the OUT frame. This system contains 8 input client ports for the recipient services (UNI) and two Uplink (NNI) ports. The NNI1 port serves as the Main Uplink and NNI2 is Protection Uplink. Due to the existence of two ports NNI supporting (the Protection Config function in SNCP brands in Ring networks and/or establishing double routes in the Chain Networks) the function of this system is in this manner; The UNI side consists of eight any-client multi-rate access ports, UNI1 and UNI2 support 100Mbps~11.1Gbps services, and the other six support 100Mbps~6.5Gbps services. The total usable bandwidth of the 8-channel is limited to 20Gbps. The NNI side has two OTU2 ports. As an OTN access device, DMAMUXP010G082 is used to aggregate STM-1/4/16/64 service, GE/10GE service, and arbitrary service rate between 125Mbps and 10.7 Gbps into OTU2 for OTN networking. The 8 UNI ports receive multi services in clients and as the Cross connect already defined in the system, (the system) contains the capability of supporting a combination of TDM and Base Packet services. In the frame, the OTU2 is transmitted to recipient via one of the NNI defined ports. In opposite side; too, the Muxponder 10G receives the OTU2 frame from its NNI port and connects the received traffics to each UNI port of the relevant service client as per the defined CrossConnectConfig; and, the client receives this service.

Specifications of the apparatus (front view) include:

- Eight service inputs (UNI)
- Two service outputs (NNI)
- The network port (NM)
- The Console ports
- The BITS port for adjusting the apparatus clock by an outside system
- The RST switch (for the hardware reset of the apparatus).

Muxponder 10G with 322x482x45 (HxWxD) physical dimensions in mm scale

Features

- G.709 defined OTN encapsulation, mapping, and overhead;
- Pluggable optical modules;
- Alarm detection;
- SNMP, CLI command line;
- Intelligent fan with controllable temperature and manual/automatic adjustable fan speed.

Product Specifications

- Eight service inputs (UNI)
- Two service outputs (NNI)
- The network port (NM)
- The Console ports
- The BITS port for adjusting the apparatus clock by an outside system
- The RST switch (for the hardware reset of the apparatus).

Index		Performance Parameter			
Monitoring Interface	SNMP Interface	Connector Type	RJ-45		
		Rate	10/100M		
		Interface Protocols	SNMP Protocol		
Line side optical	Console Interface	Connector Type	RJ-45		
		Baud Rate	115200; Data bit: 8; Stop bit: 1; No parity check		
		Electrical Specifications	RS-232		
	OUT Input Rn Parameter	Receiving sensitivity dBm	-21(PIN) <-28(APD)		
		Receiver Reflection	<-27		
		Overload power dBm	0(PIN) -9(APD)		
		Input signal wave-length area-nm	1280~1565		
	OUT 1 interface	Optical Spectral Properties	Maximum -20dB Spec-trum width-nm	1(SFP)	
			Minimum side mode suppression ratio-dB	35	
		Center frequency	Nominal center fre-quency-THz	192.1~196.0	
			Center frequency offset	≤ ±12.5(100 GHz)	
		Average transmit power	Max-dBm	6	
			Min-dBm	0	
		Minimum extinction Ratio	8.2 (SFP)		
		Dispersion accommodation value-ps/nm	3600 (DM SFP)		
	Eye Frame	Meets ITUT.G957 or ITUT.G959.1			
	OUT 2 interface	OUT input Rn parameters	Rate - Gbit/s	9.953~11.318	
			Receiving sensitivity dBm	-14(PIN) <-21(APD)	
				Receiver Reflection	<-27
			Overload power dBm	>0(PIN) >-9(APD)	
Input signal wavelength area-nm		1280~1565			
OUT output sn parameters		Optical spectral prop-erties	Maximum -20dB spec-trum width-nm	<0.3(NRZ)	
			Minimum side mode. / Suppression ratio-dB	>30	
		Central frequency	Nominal center frequency-THz	Meets ITU-T G.694.1	
			Center frequency offset	≤ ±12.5(100 GHz)	
		Average Transmit power dBm	-3 ~ 1		
		Minimum extinction Ratio dB	8.2		
		Dispersion accommodation value-ps/nm	-300 ~ 800		
		Eye Frame	Meets ITUT.G957 or ITUT.G959.1		
Stm-1 interface		Rate	155 Mbit/s		
		Line pattern	Scramble NRZ		
		Optical interface	According to the selected SFP/SFP+ module		
	Connector	Standard	LC dual Fiber Bi-direc-tional (SFP)		
Optional/s		LC single Fiber Bi-di-rectional (SFP)			

Client-side optical interface	Stm-4 interface	Rate	622 Mbit/s
		Line pattern	Scramble NRZ
		Optical interface	According to the selected SFP/SFP+ module
		Connector	Standard Optional/s LC dual Fiber Bi-directional (SFP) LC single Fiber Bi-directional (SFP)
	Stm-16 interface	Rate	2.5 Gbit/s
		Line pattern	Scramble NRZ
		Optical interface	According to the selected SFP/SFP+ module
		Connector	Standard Optional/s LC dual Fiber Bi-directional (SFP) LC single Fiber Bi-directional (SFP)
	Stm-64 interface	Rate	10 Gbit/s
		Line pattern	Scramble NRZ
		Optical interface	According to the selected SFP/SFP+ module
		Connector	Standard Optional/s LC dual Fiber Bi-directional (SFP) LC single Fiber Bi-directional (SFP)
	FE ethernet interface	Rate	125 Mbit/s
		Optical interface	According to the selected SFP/SFP+ module
		Connector type	SFP
		Interface standard	IEEE 802.3
	CE ethernet interface	Working mode	Auto negotiation, forced 100M full duplex
		Rate	1.25 Gbit/s
		Optical interface	According to the selected SFP/SFP+ module
		Connector type	SFP
	10G Ethernet interface	Interface standard	IEEE 802.3
		Optical interface	According to the selected SFP/SFP+ module
		Connector type	SFP+
		Working mode	Full duplex
	OUT1 interface	Rate	10Gbit/s
		Transmission rate	2.5Gbit/s
		Line pattern	Scramble NRZ
		Optical interface	According to the selected SFP/SFP+ module
	OUT2 interface	connector	SFP
		Transmission rate	10Gbit/s
		Line pattern	Scramble NRZ
		Optical interface	According to the selected SFP/SFP+ module
	External clock Input/output interface	connector	SFP+
		rate	2048 Kbit/s or 2048 KHz
		Connector type	RJ45
	voltage	voltage	AC~220v(AC 85v ~ 264v)
	power	power	<28w
Environment	Operating temperature		0~50 centigrade
	Storage temperature		-25 ~ 60 centigrade
	Relative Humidity		10 ~ 90 % RH (non -condensing)
Physical Dimension H/D/W	Size-mm		44.180.360
Weight full load	< 2.1 Kg		

1U Management 8*1GE to 2*10GE Muxponder card

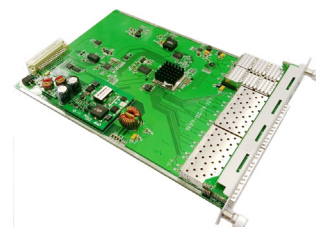
DMAMUXPXXFP082

DESCRIPTION

DMAMUXPXXFP082 is a Muxponder uses advanced TDM technology to transport eight separate 1G Ethernet data streams into two 10G Ethernet trunk ports, as well as provide 1+1 traffic protection for 2*10G Ethernet. It can improve fiber utilization and achieve reliable 1+1 protection. It is a cost-effective high-quality management system when plugged in Fiberroad 1U chassis to implement device configuration, control and maintenance easily.

Features

Wide range of applications: 10GE Data MUX/deMUX Wave-length Conversion WDM/OADM
Support 2*10GE trunk mode
Support 10G 1+1 protection mode
Up to 2 10GE ports (with XFP fiber module)
Up to 8 GE independent ports (with SFP fiber module)
Support SNMP-based network management
Support CLI, web, telnet and NMS (network management system)
Graded management mode (common user, super user or administrator)



Product Specification

Performance Data	Technical Indexes
Part number	DMAMUXPXXFP082
Module type	XFP*2 optical module optional SFP*8 optical module optional
Center wavelength	Compliance with ITU-I standard
Data Rate (Gbps)	Client Side: 1000Base-X/100Base-FX Line Side: 10.3Gbps
Optical interface type	Client Side: SFP*8 Line Side: XFP*2
NMS	TELNET、SNMP、WEB
Dimensions	482.6(W)x350(D)x43.6(H)
Power Consumption	≤15W

OTWDM 300 G

DMOAP00000300G



DESCRIPTION

OTWDM 300G is the second generation of Danial Moj shelves which has been produced with more capacity and facilities and is able to transport data with 300Gbps speed. These shelves have four

SFP modules, two modules of which are for receiving the service and the other two modules are used for data transmission. The slot 1 of this shelf is designed for RTL card. This card is used to monitor the status of transponder cards. In addition, in this shelf, a DWDM 40ch rail-moving tray has been designed under the shelf.

00G type optical transmission network system, which is mainly used in metro convergence layer and metro core layer, is a new generation of optical transmission system with high integration, high capacity and long distance launched by DanialMoj Co., Ltd. The equipment applies an advanced transmission technology and highly integrated technology. It provides a function of wide bandwidth, high capacity and fully transparent transmission, which can realize smooth capacity upgrade, offer a comprehensive, flexible and mature protection solution and provide a stable platform for multiple service operation and future network upgrade and expansion.

That optical transmission network system is standard 8U rack type design fully adopts the way of outlet on the front panel, provide 16 service slots, with a super high level of integration.

It supports access rate of up to 10Gbit/s for single channel, Powerful capacity of service convergence.

It ensures the low investment in the early stage of the network construction and the smooth expansion in the late stage, so as to meet the future growing demand in bandwidth

PRODUCT FEATURES

- it supports 19 inches and ETSI cabinet, easy to lay out, with a strong suitability
- it supports free-of-configuration installation, and the equipment is plug-and-play
- it supports a unified network management platform and

provides a perfect performance monitoring ability in performance of network and equipment

- it adopts green energy-saving design, with a typical configuration of 150W power consumption
- it focuses on the metro area network and meets service access & convergence and networking

PRODUCT SPECIFICATION

Note	Function
DMOAP00000300G	Part number
8U: 370mm x 444mm x 305mm	Equipment Size (H x W x D, mm)
16 slots	Service slot
150W	Power consumption
CWDM: 18 wavelengths, DWDM: 96 wavelengths	Max channel number
100Gbit/s	Single channel max rate
DWDM: C- Band, 100GHz or 50GHz CWDM: 1270nm~1610nm	Optical Spectrum
STM-1/4/16/64/256 OC-3/12/48/192/768 100M~2.5Gbps FE/GE/10GE/100GE ESCOM, FC100/FC200/FC400/ SAN	Support service
XFP/SFP+/SFP, LC type interface	Module/connector type
Point to point, chain type, star type, ring type, ring-with-chain type, ring-cross type, ring-fan-gency type	Network topology
optical line 1+1 protection	Network level protection
Dual power Dual fan	Equipment level protection
SNMP, Web, CLI, Telnet	Network management
19" Rack inch	Installation
0°C~50°C	Working temperature range

5~90%	Working humidity range
-10°C~70°C	Storage temperature range
Fan cooling	Heat dissipation
DC: -36 ~ -72 V (1+1)	Power input
5V, 24A	Power output
150w	Power consumption
DMAPM2X1500000	Power part number
5000 rpm	Fan speed

OTWDM 300G power MODULE

Two Power modules in 1+1 are used at the same time to provide 48V input, needed by the 300G shelves and in case of fault or breakage of any of the two powers, the other power provides the shelf with the necessary power.



RTL Switch Card

DMARL000FE010

This card is used as Sub device to add accessory apparatuses to the main shelf. also as displaying the status of Transponder cards in slots 2 to 16.

This card is used in OTWDM 300G.

OTWDM 180 G

DMOAP00000180G

DMOAP000180GFN



DESCRIPTION

The OTWDM system is composed of the active and passive part, the Active section include Transponder cards and client and link SFPs, and its passive part comprises Mux-De-mux which can be either CWDM or DWDM. Therefore, CWDM SFPs are used for Passive CWDM and DWDM SFPs are used for Passive DWDM. OTWDM physical dimension (H x W x D) is 190x440x480 mm, and in the case of a Full Load, its power is 70W. Full Load is meant to place all Transponder cards and link SFPs, and also all client traffics meet all 16 slots.

OTWDM 180G POWER MODULE

To supply the power for each Shelf required 2 Power -48V DC inputs and working as a Backup Modular and parallel state (i.e., if one Power fails, the Second Power is replaced)



PRODUCT SPECIFICATION

Function	NOTE
Part number	With Fan unit Without Fan unit DMOAP-000180GFN DMOAP00000180G
equipment size (H x W x D)	190x440x480 mm
Service slots	slot
Channel in use	CWDM:18 wavelength DWDM:96 wavelength
mux & demux channel	18 channels

Single channel max rate	10 Gbit/s	
Support services	125 Mbps	Fast Ethernet
	155.52 Mbps	STS-3/STM-1
	200 Mbps	ESCON/SBICON
	622.08 Mbps	STS-12/STM-4
	1.0625 Gbps	1×Fiber Channel
	1.25 Gbps	Gigabit Ethernet
	2.125 Mbps	2×Fiber Channel
	2.48832 Mbps	STS-48/STM-16
	2.5 Gbps	2.5 InfiniBand or PCI Express
	4.25 Gbps	Express
	9.95-11.35 Gbps	4×Fiber Channel
	10G LAN/WAN	
Transceiver Modules type	SFP SFP+ XFP	
Transponder cards	2.5G 2R 4.25 3R 10G 2R	
Network topology	Point to point, chain type, star type, ring type, ring-with-chain type, ring-cross type, ring-rangency type	
Network level protection	optical line 1+1 protection	
Working temperature	0 ~ +50 centigrade	
Humidity	5%~90%	
Power use in full load		
Power input	DC: -36 ~ -72 V (1+1)	
Power output	+5V----11A +12V---0.2A	
Power unit part number	DMPW2X0700000	
Fan speed	5000 rpm	

Amplifier

DMAExxxxxxxxxxx



DESCRIPTION

An apparatus with 318x 430x43(HxWxD) physical dimensions in mm scale which are used for amplifying the signals transmitted to long distance in DWDM optical networks. Amplifiers are produced in different Inlines, Booster and PReAm models. Booster is used for amplifying the signal power in the source station, Inline in the mid-route and PreAm is used in the Destination. This system functions in AGC and APC modes.

Specifications of the apparatus (front view) includes:

An In/Out adaptor

Alarm LED (consisting of Pump, out, PWR, Ptem, ma, In, Run and Tem)

The REST switch equivalent to Reset

The Eth and Console ports

The PS-B, FAN, RS-A and ERR lights

In the rear view: There are two Power switches, two Connectors and two Fuses.

Type and gain of amplifier	Part number
Preamp, gain:20	DMAEDFPA016020
Preamp, gain:25	DMAEDFPA016025
Preamp, gain:30	DMAEDFPA016030
Preamp double, gain:28	DMAED2PA020028
Booster, gain:12	DMAEDFBA016012
Booster double, gain:14	DMAED2BA022014
Inline, gain:12	DMAEDFLA016012
Inline double, gain:12	DMAED2LA022024
Doble Preamp and Booster	DMAEBP22201428
Preamp and Inline	DMAEPL20222824
Booster and Inline	DMAEBL22221424

Product specification

parameter	Min	Typ	Max	Units
Operating wavelength	1528		1561	nm
Input optical power range	-15		4	dBm
Input optical power threshold	-20	-	-	dBm
output power	-3		16	dBm
On/off gain		12		dB
Gain flatness		1.5	-	dB
Noise factor	-	5.5	0.3	dB
Operating voltage	AC220V & DC-48V			
interface	LC-UPC			
Working temaratene	-5	-	+60	centigrade
Storage temperature	-40	-	+80	centigrade
Humidity	5	-	85	%
Power supply	85/170	110/220	132/264	VAC
Size(H*D*W)	430x320x43.6			mm

Panel LED Indicators illustration

Item	Description
PS_A	Powe Supply A normal, green is on.
PS_B	Powe Supply B normal, green is on
FAN	Fan LED, ON is normal
ERR	While error, red is on
RUN	System operating normally, green is on
IN	When the input optical power is below the set threshold input power, red is on.
OUT	When the output optical power output power lower than the set threshold, red is on
PUMP	Pump laser is abnormal, red is on
mA	Pump current warning LED Indicators, when pump current is abnormal, red is on.
Ptem	Pump temperature warning LED Indicators, when the pump temperature is too high, red is on
Tem	Equipment temperature warning LED Indicators, when the device temperature is too high, red is on

Device interface definition

Interface Printing	Name	Function
RJ45	Ethernet Port	Remote Management Interface
Consul	Serial port	Serial Management Interface
In	Input	EDFA Input Interface
Out	Output	EDFA Output Interface
P_In	PA Input Interface	
P_Out	PA Input Interface	
MON	Monitoring Port	

Raman amplifier

DMARAMAN014015

DESCRIPTION

This product is a high-power Raman Amplifier module which is used in low noise, long span or high-speed optical transmission system. Applying transmission fiber as the gain medium to form distributed amplification which can reduce system noise and get best gain and noise index.



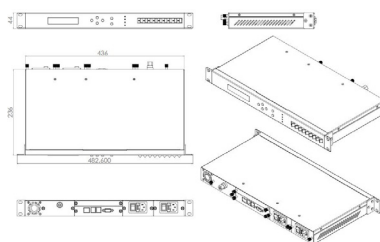
Features

- Distributed low-noise amplification
- control and operate: Dual CPU process control Loops
- Interface respectively
- High stability and reliability
- Intelligent temperature control system: power consumption and hot
- Radiation reduces 30% than common products
- Pump polarization-Independent design

specification

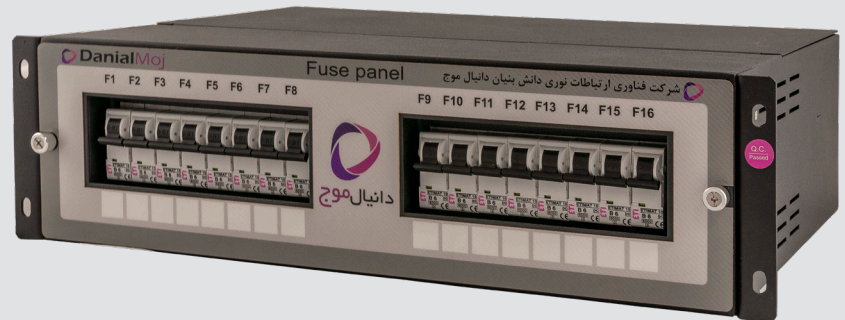
parameter	symbol	Min	Typ	Max	Units
Operating wavelength	λ_c	1525	1550	1565	nm
Pump wavelength	λ_p	1425	–	1505	nm
Pump output power	Po		500	1000	mw
On/off gain	G	6	–	15	dB
Gain flatness	FL		1	2	dB
Polarization dependent gain	PDG	–	–	0.3	dB
PMD	PMD	–	–	0.3	ps
Relative noise figure	NF	–	–	0	dB
Working temarotene	c	–5	–	+60	centigrade
Storage temperature	c	–40	–	+80	centigrade
Humidity		5	–	85	%
Power supply		85/170	110/220	132/264	VAC
size	H*D*W	44*236*483			mm
Weight		7			kg
Power consumption		18			w
cooling		Air cool fan			
Interface		RS-232 Ethernet			

Mechanical Dimension



Fuse Panel

DMAFPU06ADC000



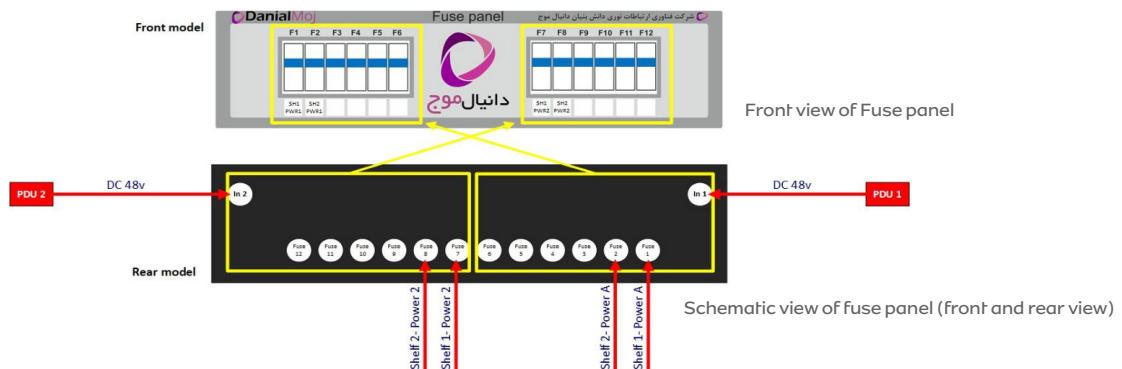
DESCRIPTION

Fuse panel is a unit for power distribution –48 DC that has 12 or 16 fuses 6 amps DC which used for WDM equipment such as Shelves, Amplifiers, Muxponder and etc. This unit has 2 inputs that feed the telecommunication equipment from two separate PDU. Two PDUs are used to have Redundancy so that if one of the PDUs is disconnected the second PDU will continue to flow. The first input receives the power from the first PDU and the second input receives the power from the second PDU. fuses number from 1 to 6 are connected to the first input and the other connected the second input from 7 to 12.

For example, fuse number 1 is connected to Power A first shelf, fuse 2 to Power A second shelf, fuse 7 to Power B first shelf and fuse 8 to Power B second shelf. (Each shelf is fed from two separate fuses). To install the equipment inside the rack, first, put/place Fuse Panel in the first row of the rack and fasten with a screw.

The new fuse panels of Danial Moj Company have 16 fuses of 6 amps DC designed as a slider that to connect the power cables of the equipment, you can easily pull out the fuse panels and connect the power cables.

PDU Dimensions: (H xW xD) 94x200 x 440 mm.



Optical Switch

DMAOPU1UxxS00x



DESCRIPTION

This apparatus is used for establishing Protection on optical signals. The function of this system is in Channel Protection and Line Protection. In the Channel Protection mode, the Transponder card is connected to Port W; and, in the Line Protection mode, the Mux-DeMux outlet is connected to W port; in this way, we can transport the input traffic that is connected to W port in both M and P routes. In case of disconnection in M, it automatically switches to P. the physical dimensions of this apparatus are: (HxWxD) 302x482x43 in mm scale.

The specifications of the apparatus (front view) include:

- Four Work inputs (W)
- Four main outputs (M)

- Four Protection outputs (P)
- One LED for apparatus power
- Four LEDs for main output (indicating the main outputs are active for each switch)
- Four LEDs for Protection outputs (indicating the active Protection output for each switch)
- One LED for the time when Minor alarm occurs on Optical Switch.
- One LED for the time when Major alarm occurs on Optical Switch.
- Four LEDs for each switch, if there is no signal.
- One switch to Reset the apparatus
- One network port to connect to the system.

From rear view: It includes two Power switches and two power Connectors.

Function of optical switch	number of ports	Part number
Sense Main	1	DMAOPU1U0MS001
	2	DMAOPU1U0MS002
	4	DMAOPU1U0MS004
Sense Main and protection	1	DMAOPU1UMPS001
	2	DMAOPU1UMPS002



Rural Low-Capacity Telecommunication System

DMA4CV01GO4004

DESCRIPTION

This product is designed and built with low price for optimized use of fiber in the rural and suburb routes. It has the capability of transporting the Four CWDM channels with EF, STM1, STM4, STM16 Bit Rates; and, eight CWDM passive channels for up to 80 km links. For economic reasons, this system is presented without network management.

PRODUCT SPECIFICATION

Function	Note
Performance Data	Technical Indexes
Access Type/ Transmission Speed	Fast Ethernet
	125Mbps
	STS-3/STM-1
	155.52Mbps
	ESCON/SBCON
	200Mbps
	STS-12/STM-4
	622.08Mbps
	1×Fiber Channel
	1.0625Gbps
	Gigabit Ethernet
	1.25Gbps
	2×Fiber Channel
	2.125Gbps
	STS-48/STM-16
	2.48832Gbps
	2.5 InfiniBand or PCI Express
	2.5Gbps
Interface Type	SFP to/from SFP
Transmission Distance	Up to SFP module
Local SFP	Support SFP/CWDM/DWDM,
power requirement	Rack-mountable: AC 85 ~ 220V OR
	DC -48V dual-supply, optional
	Power consumption: ≤ 3W
	Operating Temp: 0~50oC
Work environment	Storage Temp: -10~70oC
	Humidity: 5%~90% (non-condensing)

IP Over WDM

DMAIPOM1GE8002



DESCRIPTION

Danial Moj Optical Communication Technology Company, as a science-based manufacturing Company and the only Iranian Company holding License to Approve CWDM, DWDM Systems samples issued by the Communications Regulatory Authority (both permits) offers different types of its products as described below:

IP Over VIDM

It is a single U system containing Active and Passive Parts and includes pre-defined Lambdas.

Passive Section:

In the Passive part, the wavelength of the 1550 system accumulates with wavelength 1310 and is separated in the opposite side too. In this stage, the main cores are connected to the left and right links of the apparatus and the wavelength 1310 is connected through the relevant adaptor to SDH equipment in the place. The PatchCord connection tests prevent any possible communication inside the network. Implementing this part is achievable and implementable with least disconnection time in network in case of not being exposed to high fall in the main core. Due to using passive parts in this section, it provides more than 100 years MTBF and causes higher probability of communication sustainability than other telecommunication systems.

Active Section:

This part consists of two switches:

- Second layer switch: This contains eight network ports

10/100/1000 and two SFP 1G optical ports

- Third layer switch: This contains eight network ports 10/100/1000 and two SFP 1G/ 10 G optical ports

SPECIFICATION SWITCHES

Layer 2 Features:

- Link Aggregation Control Protocol (LACP)
- Up to 4K VLANs simultaneously (out of 4K VLAN IDs)
- GVRP (GARP VLAN Registration Protocol)
- Port Isolation
- STP/RSTP/MSTP
- IGMP Snooping

Management

- Web-based GUI
- Command Line Interface
- SNMP v1/v2c/v3
- RMON (1,2,3,9 group)

Quality of Service

- 4 priority queues
- Support IEEE 802.1P
- DSCP QoS
- Rate limit feature

Security Strategies

- IP-MAC-Port-VID Binding
- Access Control List (L2~L4 ACL)
- 802.1x and RADIUS Authentication
- Support DoS defend
- Port Security
- SSL and SSH encryptions

PERFORMANCE

Certification	CE, FCC, RoHS
Package Contents	Switch; Power Cord; Quick Installation Guide; Resource CD; Rack mount Kit; Rubber Feet
System Requirements	Microsoft® Windows® 8, 7, Vista™, XP or MAC® OS, NetWare®, UNIX® or Linux.
Environment	Operating Temperature: 0°C~60°C Storage Temperature: -40°C~80°C Operating Humidity: 10%~90% non-condensing Storage Humidity: 5%~90% non-condensing

HARDWARE FEATURES

Standards and Protocols	IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3ad, IEEE 802.3x, IEEE 802.1d, IEEE 802.1s, IEEE 802.1w, IEEE 802.1q, IEEE 802.1x, IEEE 802.1p
Interface	8 10/100/1000Mbps RJ45 Ports (Auto Negotiation/Auto MDI/MDIX) 2 1000Mbps SFP Slots 1 Console Port
Network Media	10BASE-T: UTP category 3, 4, 5 cable (maximum 100m) 100BASE-TX/1000Base-T: UTP category 5, 5e, 6 or above cable (maximum 100m) 1000BASE-X: MMF, SMF
Fan Quantity	Fan less
Dimensions (W x D x H)	11.6*7.9*1.7in. (294*200*44 mm)
Power Consumption	Maximum: 10.7W (220V/50Hz)
Power Supply	-48 V DC

PERFORMANCE

Bandwidth/Backplane	20Gbps
MAC Address Table	8k
Packet Buffer Memory	4Mb
Packet Forwarding Rate	14.9Mpps
Jumbo Frame	10240 Bytes

SOFTWARE FEATURES

Quality of Service	Support 802.1p CoS/DSCP priority Support 4 priority queues Queue scheduling: SP, WRR, SP+WRR Port/Flow-based Rate Limiting Voice VLAN
L2 Features	IGMP Snooping V1/V2/V3 802.3ad LACP (Up to 8 aggregation groups, containing 8 ports per group) Spanning Tree STP/RSTP/MSTP - Port isolation BPDU filtering/guard - TC/Root protect Loop back detection - 802.3x Flow Control
VLAN	Supports up to 4K VLANs simultaneously (out of 4K VLAN IDs) Port/MAC/Protocol-based VLAN GARP/GVRP Management VLAN configuration
Access Control List	L2~L4 package filtering based on source and destination MAC address, IP address, TCP/UDP ports, 802.1p, DSCP, protocol and VLAN ID; Time Range Based
Security	IP-MAC-Port-VID Binding IEEE 802.1X Port/MAC Based authentication, Radius, Guest VLAN DoS Defense Dynamic ARP inspection (DAI) SSH v1/v2 SSL v2/v3/TLSv1 Port Security Broadcast/Multicast/Unknown-unicast Storm Control
Management	Web-based GUI and CLI management SNMP v1/v2c/v3, compatible with public MIBs and TP-LINK private MIBs RMON (1, 2, 3, 9 groups) DHCP/BOOTP Client, DHCP Snooping, DHCP Option 82 CPU Monitoring - Port Mirroring Time Setting: SNTP - Integrated NDP/NTDP feature Firmware Upgrade: TFTP & Web System Diagnose: VCT SYSLOG & Public MIBs



Media converter

DMAMCEM1Gx1001

Mini Gigabit Ethernet Media Converter

PART NUMBER: DMAMCE01GE1001

DESCRIPTION

DMAMCE01GE1001 Mini Gigabit Ethernet Media Converter is a Gigabit Ethernet stand-alone Mini media converter that provides cost effective, entry-level media conversion between 1x10/100/1000Base-TX ports and 100/1000Base-FX ports. With its fixed configuration, deployments are just plug-and-play, and with its small size, Mini Gigabit Ethernet Media Converter is ideal for locations where space is limited. 1x10/100/1000Base Fiber Media Converter, SFP Fiber Media Converter, Options in single mode dual fiber, multimode dual fiber and single mode single fiber. We also supply Media Converter Chassis, the 1U height 12 slots media converter rack mount chassis specially designed for accommodating chassis-based mini-Media Converters.

Mini Gigabit Ethernet Media Converter features

- 10/100/1000Base-TX to 1000Base-FX fiber media converter;
- Unit and Port LEDs allow for quick status information;
- Support Auto-Negotiation, Auto MDI/MDI-X and Half/Full Duplex mode;
- Support Jumbo Frame;
- Automatic Link Restoration;
- Connect to legacy network equipment;
- Eliminate Collision Domains;
- Support 1U Rack (12 channel) and Standalone use;
- Comply with IEEE 802.3/802.3u/802.3ab/802.3z Ethernet standards;
- Prevent packet loss with back pressure and IEEE 802.3x pause frame flow control;
- SC/FC/ST/LC Connectors optional;
- DIP Switch to set different configurations;
- Compact package size, easy installation;
- Support Link Fault Pass Through (LFP) and Automatic Laser Shutdown (ALS) function



Product specification

Physical Port	Specification
Copper Port	10/100/1000Base-T RJ45
SFP Port	100/1000BASE-X SFP interfaces
Fiber Mode	1000BASE-X, 550m-160km
Parameters	
Ethernet Standards	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/100BASE-FX IEEE 802.3ab Gigabit Ethernet IEEE 802.3z Gigabit Ethernet over Fiber Optic IEEE 802.3x flow control and back pressure

Packet Length	2046bytes
Transmission Mode	Store and Forward/Cut through
Exchange Property	Delay time: < 7ps Backplane bandwidth: 20Gbps; Packet forwarding rate: 14.88Mpps
DIP Switches	LFP function: Disable/Enable Forward mode: Store and Forward/Cut through Fiber Speed 100M/1000M
LED Indicator	
Power	Connect-always
RJ45	Link/Act: connect-always; data exchange-hwinkle
Fiber	Link/Act: connect-always; data exchange-hwinkle
Fiber Speed	FX 100M/1000M
Power Information	
Power Input	Adapter Type: DC 5-12V
Power Consumption	Full-load<3W
Physical Property	
Dimensions	120mm×90mm×35mm
Installation Mode	wall-mountable
Weight	130g
Working Environment	
Operating Temperature	0°C~50°C
Operating Humidity	10%~90% non-condensing
Storage Temperature	-10°C~70°C
Warranty	
MTBF	50,000 hours
Defects Liability Period	1 year warranty, lifetime technical support
Certification Standard	
EMC	FCC Part15 Class A CE-EMC/LVD RoHS EN61000-4-2 (ESD), EN61000-4-3 (RS) EN6100044 (EFT), EN6100045 (Surge) EN61000^1-6 (CS), EN61000-4-8 EN61000-4-11

Mini Gigabit Fiber to Fiber Converter

Part number: DMAMCE01GO1001

Description

DMAMCE01GO1001 Mini Gigabit Fiber to Fiber Converter offers protocol transparent connectivity between different wave-lengths or fiber modes for speed from 100Mbps to 1250Mbps. Protocol independence allows for use in broad range of applications including Fast Ethernet, Gigabit Ethernet, OC-12 and Fiber Channel.

We also supply Media Converter Chassis, the 1U height 12 slots media converter rack mount chassis specially designed for accommodating chassis-based mini-Media Converters.

Mini Gigabit Fiber to Fiber Converter features

- SFP to SFP optical mode converter;
- Supports rate from 100Mbps to 1250Mbps;
- Supports multimode and single-mode;
- Wide power supply voltage range;
- Unit and Port LEDs allow for quick status information;
- Compact package size, easy installation;
- Support 1U Rack (12 channel) and Standalone use;



Product specification

Parameter	Specifications
Part number	DMAMCE01GO1001
Data rates	100Mbps to 1250Mbps
Wavelength	850nm/1310nm/1550nm
Transmission distance	Multi-mode: 2 km; Single mode: 20/40/60/80/100 km;
Conversion means	Cut-Through mode
Input voltage	DC 5V~12V
Power consumes	<3W
Operating temperature	0~50°C
Operating humidity	5%~90%
Maintaining temperature	-40~70°C
Maintaining humidity	5%~90% non-condensing
Dimensions	60mm (W)×20mm (H)×90 mm (L)



DWDM (Mux-Demux) passive

DMPDWxxxxxxxxx

DESCRIPTION

The number of optic channels in these systems is more than 8 channels, the distance between the channels is very narrow and less than 1.6nm. Manufacturing such systems with precision, high wavelength and very narrow distance between channels requires high technology in supplying optical resources and equipment. Such systems with 16 to 40 channels and 1.6nm and 0.8 nm channel distance were made in mid 1990s.

Building systems with more channels and consequently less distance has proceeded as at the end of 1990s, systems with 64 to 160 channels with 0.4nm and 0.2nm distance were tested.

For the purpose of consistency and to determine the wavelength of the channels in these systems, the ITU-TG.694.1 recommendation has determined the central wavelengths

per the inter-channel distance of 0.8nm, 0.8nm, 0.2nm and 0.1nm; and for the purpose of compatibility, the companies that produce the optical resources and apparatuses follow this standard.

It should be noted that the 0.8nm distance is equivalent to 100GHz, 0.4nm equivalent to 50GHz, 0.2nm equivalent to 25GHz and 0.1nm is equivalent to 12.5GHz.

In addition, in this recommendation, the 193.1 THz frequency is equivalent to 1552.52nm. The range of using these systems has been divided into the two Bands C and Bands L; where Band C includes 1530~1565nm; and Band L includes 1620~1565 nm. Of course, the advantage of the DWDM systems is their capability in transporting very long distances on the fiber (several thousand kilometers), large number of channels (many hundred channels) as well as supporting big bit rates such as 10Gbs and 40Gbs.

Part number structure

Number of wavelength and wavelength in use	Part number	Number of wavelength and wavelength in use	Part number
(32-29) DWDM 4+1	DMPDW401029032	(48-21) DWDM 28+1 DeMux	DMPDWD29021048
(34-29) DWDM 6+1	DMPDW601029034	(52-21) DWDM 32+1 Mux	DMPDWM33021052
(36-29) DWDM 8+1	DMPDW801029036	(52-21) DWDM 32+1 DeMux	DMPDWD33021052
(27-20) DWDM 8+1	DMPDW801020027	(59-20) DWDM 40 Mux	DMPDWM40020059
(36-27) DWDM 10+1	DMPDW101027036	(59-20) DWDM 40 DeMux	DMPDWD40020059
(36-21) DWDM 16+1	DMPDW161021036	(60-21) DWDM 40 Mux	DMPDWM40021060
(42-27) DWDM 16+1	DMPDW161027042	(60-21) DWDM 40 DeMux	DMPDWD40021061
(38-21) DWDM 18+1	DMPDW181021038	(60-13) DWDM 96 Mux	DMPDWM96013060
(44-21) DWDM 24+1 Mux	DMPDWM25021044	(60-13) DWDM 96 DeMux	DMPDWD96013060
(44-21) DWDM 24+1 DeMux	DMPDWD25021044	(61-14) DWDM 96 Mux	DMPDWM96014061

Optical WDM Data sheet											
DWDM-16CH-MUX/DEMUX		part number: DMPDW161021036									
Parameter		DMPDWxxxxxxxx									
Operating Wavelength(nm)		MUX	ch21	ch22	ch23	ch24	ch25	ch26	ch27	ch28	ch29
Insertion Loss(dB)		<3.8	0.83	0.93	1.02	1.11	1.21	1.09	1.26	1.24	1.33
Operating Wavelength(nm)			ch30	ch31	ch32	ch33	ch34	ch35	ch36	exp	
Insertion Loss(dB)		<3.8	1.4	1.87	1.83	2.07	2.15	2.5	2.24	2.4	
Operating Wavelength(nm)		Demux	ch21	ch22	ch23	ch24	ch25	ch26	ch27	ch28	ch29
Insertion Loss(dB)		<3.8	2.4	2.23	2.62	2.05	1.93	1.77	1.64	1.67	1.38
Operating Wavelength(nm)			ch30	ch31	ch32	ch33	ch34	ch35	ch36	exp	
Insertion Loss(dB)		<3.8	1.39	1.46	1.02	0.75	0.68	0.66	0.41	2.14	
Channel Ripple(dB)		<0.3									
Polarization Dependent Loss(dB)		<0.10									
PMD (ps)		<0.10									
Isolation	Adjacent(dB)	>30									
	Non-adjacent(dB)	>45									
Express Isolation(dB)		>15									
Directivity(dB)		>50									
Return Loss(dB)		>45									
Fiber length(m)		0.5									
Fiber Type		SMF-28e with 900um Loose Tube									
connector		LC/UPC									
Operating Temperature(centigrade)		-20~+70									
Storage Temperature(centigrade)		-40~+85									
Package Dimension(mm)		140*115*18									



The CWDM (Mux-Demux) Passive

DMPCWxxxxxxxxxx

DESCRIPTION

In this type of systems, first, the number of optical channels increased to 4 and then to 8 channels. The inter-channel distance is also reduced to 20nm too. The first prototype of multiplex systems for dividing the wavelength in 20nm wavelength was built in the first years of 1990s. The wavelengths and the inter-channel distances of CWDM systems have been specified in the ITU-TG.694.2 recommendations.

According to this recommendation letter, 18 optical channels in 1271nm wavelength to 1611nm wavelengths in the 20nm interchange distances have been specified. In addition, in this recommendation, 7 ± 6 nm wavelength variation for the optical sources in such systems has been authorized.

Today, such systems in the 8-channel type in the window 1550 are built from 1470nm wavelength to 1610nm wavelength. Furthermore; fewer common types have also been built in 1310nm window from 1310 nm to 1450 nm wavelength as well.

Part number structure			
Number of wavelength and wavelength in use	Part number	Number of wavelength and wavelength in use	Part number
(1590-1550) CWDM 3+1	DMPCW301550590	(1610-1470) CWDM 8+1	DMPCW801470610
(1330-1270) CWDM 4+1	DMPCW401270330	(1610-1470) CWDM 8	DMPCW800470610
(1490-1430) CWDM 4+1	DMPCW401430490	(1610-1430) CWDM10+1	DMPCW101430610
(1530-1470) CWDM 4+1	DMPCW401470530	(1610-1410) CWDM 11+1	DMPCW111410610
(1610-1550) CWDM 4+1	DMPCW401550610	(1610-1390) CWDM 12+1	DMPCW121390610
(1610-1510) CWDM 6+1	DMPCW601510610	(1610-1370) CWDM13+1	DMPCW131370610
(1590-1470) CWDM 7+1	DMPCW701470590	(1610-1290) CWDM17+1	DMPCW171290610
(1610-1490) CWDM 7+1	DMPCW701490610	(1610-1270) CWDM1*18	DMPCW180270610
(1410-1270) CWDM 8+1	DMPCW801270410		

Optical WDM Data sheet											
CWDM-17CH-MUX/DEMUX		part number: DMPCW171290610									
Parameter		DMPCWxxxxxxxx									
Operating Wavelength(nm)		MUX	1290	1310	1330	1350	1370	1390	1410	1430	1450
Insertion Loss(dB)		<2.5	1.27	1.84	1.8	1.61	1.58	1.26	1.15	1.84	1.46
Operating Wavelength(nm)			1470	1490	1510	1530	1550	1570	1590	1610	EXP
Insertion Loss(dB)		<2.5	1.14	1.77	1.3	1.43	1.42	1.49	1.24	1.16	1.25
Operating Wavelength(nm)		DEMUX	1290	1310	1330	1350	1370	1390	1410	1430	1450
Insertion Loss(dB)		<2.5	1.94	1.46	1.14	1.94	1.85	1.54	1.48	1.26	1.74
Operating Wavelength(nm)			1470	1490	1510	1530	1550	1570	1590	1610	EXP
Insertion Loss(dB)		<2.5	1.59	1.24	1.57	1.44	1.35	1.42	1.27	1.29	1.65
Channel Ripple(dB)		<0.3									
Polarization Dependent Loss(dB)		<0.10									
PMD (ps)		<0.10									
Isolation	Adjacent(dB)	>30									
	Non-adjacent(dB)	>45									
Directivity(dB)		>50									
Return Loss(dB)		>45									
Fiber length(m)		0.5									
Fiber Type		SMF-28e with 900um Loose Tube									
connector		LC/UPC									
Operating Temperature(centigrade)		-20~+70									
Storage Temperature(centigrade)		-40~+85									
Package Dimension(mm)		140*115*18									

DWDM OADM

DMPDO1xxOCHOCH

DESCRIPTION

The DanialMoj Dense Wavelength Division Multiplexing Optical Add/Drop Multiplexer (DWDM OADM) is designed for ITU channel spacing applications. It is based on the Thin Film Filter (TFF) technology and operates at 100GHz or 200GHz channel spacing ITU Grid DWDM wavelengths from 1526nm to 1565nm. DanialMoj provides a series of customized DWDM OADM within plastic ABS box, metal LGX box, or rack mount to meet different requirements on Port Configuration, Operating Wavelength, Package Type, Fiber Type, Fiber Length, Input Connector, and Output Connector.

FEATURES

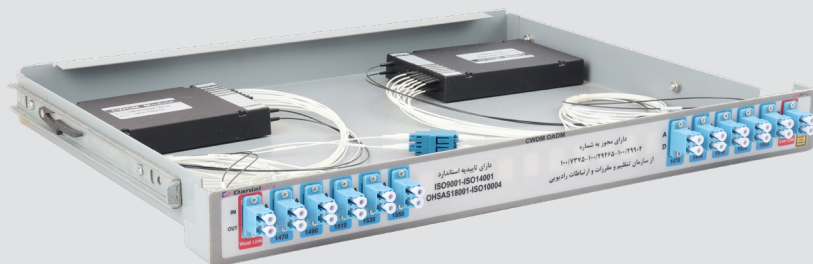
- Low Insertion Loss (IL)
- High isolation
- Low Polarization Dependent Loss (PDL)
- Available in 1 to 8 channels with compact design
- Wide operating wavelength range
- High reliability and high stability
- Telcordia GR-1209-CORE-2001 compliant
- Telcordia GR-1221-CORE-1999 compliant
- ITU-T G.694.1 compliant
- RoHS-6 compliant (lead free)

Specification

Parameters	DWDM OADM							
Part number	DMPDO1xxOCHOCH							
Part number structure	xx=number of channels in use= 01~09,10,11, ... First CH =2 last characters of first wavelength in use Second CH =2 last characters of last wavelength in use Example: DWDM OADM 1*9(CH37~CH45) = DMPDO109O37O45							
Port Configuration	1CH	2CH	3CH	4CH	5CH	6CH	7CH	8CH
Center Wavelength (nm)	ITU Grid							
Operating Wavelength (nm)	1525 to 1565							
Channel Space (nm)	0.8							
Passband 0.5dB (nm)	ITU±0.11							
Add/Drop Channel IL (dB)	< 1.2	< 1.6	< 1.8	<2.0	<2.2	< 2.4	< 2.8	< 3.2
Input/Output Channel IL (dB)	< 1.0	< 1.6	< 1.8	<2.2	<3.2	< 3.4	< 3.8	< 4.0
Adjacent Channels Isolation (dB)	> 30							
Non-Adjacent Isolation (dB)	> 40							
Express Channel Isolation (dB)	> 20							
Directivity (dB)	> 50							
Return Loss (dB)	> 45							
Ripple (dB)	<0.4							
PDL (dB)	< 0.1							
PMD (ps)	< 0.1							
Maximum Optical Power (mw)	300							
Operating Temperature (°C)	-5 to +75 c							
Storage temperature	-40 ~ +85 c							

CWDM OADM

DMPCO1xxxxxxxxx



DESCRIPTION

The DanialMoj Coarse Wavelength Division Multiplexing Optical Add/Drop Multiplexer (CWDM OADM) is designed for multi-wavelength CWDM network applications. It is based on the Thin Film Filter (TFF) technology and operates at 20nm channel spacing ITU Grid CWDM wavelengths from 1270nm to 1610nm. DanialMoj provides a series of customized CWDM OADM within plastic ABS box, metal LGX box, or rack mount to meet different requirements on Port Configuration, Operating Wavelength, Package Type, Fiber Type, Fiber Length, Input Connector, Add/Drop Connector, and Output Connector.

FEATURES

- Low Insertion Loss (IL)
- High isolation
- Low Polarization Dependent Loss (PDL)
- Available in 1 to 8 channels with compact design
- Wide operating wavelength range
- High reliability and high stability
- Telcordia GR-1209-CORE-2001 compliant
- Telcordia GR-1221-CORE-1999 compliant
- ITU-T G.694.2 compliant
- RoHS-6 compliant (lead free)

Part number structure

Number of wavelength and wave-length in use	Part number	Number of wavelength and wave-length in use	Part number
CWDM OADM 1*4 (1270-1330)	DMPCO104270330	CWDM OADM 1*3 (1270-1310)	DMPCO103270310
CWDM OADM 1*4 (1350-1410)	DMPCO104350410	CWDM OADM 1*2 (1270-1490)	DMPCO102270490
CWDM OADM 1*4 (1510-1570)	DMPCO104510570	CWDM OADM 1*2 (1310-1450)	DMPCO102310450
CWDM OADM 1*4 (1430-1490)	DMPCO104430490	CWDM OADM 1*2 (1310-1370)	DMPCO102310370
CWDM OADM 1*4 (1470-1530)	DMPCO104470530	CWDM OADM 1*2 (1310-1290)	DMPCO102310290
CWDM OADM 1*5 (1270-1350)	DMPCO105270350	CWDM OADM 1*2 (1310-1350)	DMPCO102310350
CWDM OADM 1*5 (1370-1450)	DMPCO105370450	CWDM OADM 1*2 (1550-1570)	DMPCO102550570
CWDM OADM 1*5 (1470-1550)	DMPCO105470550	CWDM OADM 1*2 (1470-1490)	DMPCO102470490
CWDM OADM 1*8 (1470-1610)	DMPCO108470610	CWDM OADM 1*10 (1270-1450)	DMPCO110270450
CWDM OADM 1*8 (1270-1410)	DMPCO108270410	CWDM OADM 1*10 (1430-1610)	DMPCO110430610
CWDM OADM 1*3 (1550-1590)	DMPCO103550590	CWDM OADM 1*12 (1270-1490)	DMPCO112270490

Product specification

Parameter	Channel option							
Part number	DMPCO108270410							
Port Configuration	1CH	2CH	3CH	4CH	5CH	6CH	7CH	8CH
Center Wavelength (nm)	1270 to 1610							
Operating Wavelength (nm)	1260 to 1620							
Channel Space (nm)	20							
Pass Band (nm)	ITU±6.5							
Add/Drop Channel IL (dB)	< 1.2	< 1.6	<1.8	<2.0	<2.2	<2.4	<2.8	<3.2
Input/Output Channel IL (dB)	< 1.0	< 1.6	<1.8	<2.2	<3.2	<3.4	<3.8	<4.0
Adjacent Channels Isolation (dB)	≥ 30							
Non-Adjacent Isolation (dB)	≥ 40							
Directivity (dB)	> 50							
Return Loss (dB)	> 45							
Ripple (dB)	< 0.5							
PDL (dB)	< 0.2							
PMD (ps)	< 0.1							
Maximum Optical Power (mw)	300							

BiDi MUX & DEMUX CWDM

DMCWBD9270590

DESCRIPTION

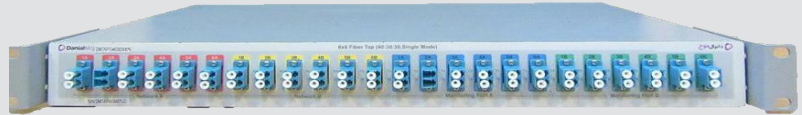
Bidi Coarse Wavelength Division Multiplexer & Demultiplexer (CWDM Mux DeMux) is designed for multi-wavelength CWDM network applications. It is based on the Thin Film Filter (TFF) technology and operates at 40nm channel spacing ITU Grid CWDM wavelengths from 1270nm to 1610nm. DanialMoj provides a series of customized CWDM Mux DeMux within plastic ABS box, metal LGX box, or rack mount to meet different requirements on Port Configuration (2 to 9 channels), Operating Wavelength, Package Type, Fiber Length, Input Connector, and Output Connector.

FAETURE

- Low Insertion Loss (IL)
- High isolation
- Low Polarization Dependent Loss (PDL)
- Available in 2 to 9 channels with compact design
- Good channel-to-channel uniformity
- Wide operating wavelength range
- High reliability and high stability
- Telcordia GR-1209-CORE-2001 compliant
- Telcordia GR-1221-CORE-1999 compliant
- ITU-T G.694.2 compliant
- RoHS-6 compliant (lead free)

Specification

Parameters	Channel Options			
Part number	DMCWBD9270590			
Port Configuration	1x2	1x4	1x8	1x9
Center Wavelength (nm)	1270 to 1610			
Operating Wavelength (nm)	1260 to 1620			
Channel Space (nm)	40			
Channel Passband 0.5dB (nm)	ITU±6.5			
Channels IL (dB)	< 1.2	< 1.8	< 3.0	< 3.4
Link IL (Mux + Demux) (dB)	< 2.1	< 2.7	< 3.9	< 4.6
Adjacent Channels Isolation (dB)	> 30			
Non-Adjacent Isolation (dB)	> 45			
Directivity (dB)	> 50			
Return Loss (dB)	> 45			
Ripple (dB)	< 0.5			
PDL (dB)	< 0.2			
PMD (ps)	< 0.1			
Maximum optical power(mw)	300			
Operating temperature	-5 ~ +75 c			
Storage temperature	-40 ~ +85 c			



Tap Monitoring

DMPTx00xxxxxxxx

✦ DESCRIPTION

The TAP Test Access Point is a device that looks like a three-way! Connects to the network and sends the data being exchanged to the network traffic analyzer. The TAP system simultaneously transmits incoming and outgoing data over the dedicated channel.

Ensures the receipt of data by the monitoring system instantly and at the same time redirects all-optical traffic to the Monitoring.

Passive Monitoring TAPs are a set of optical fibers that have a unique capability by branching off from the main optical signals and receiving the minimum optical power. Dividing TAPs perform well without the need for a power supply, and Network operators also have full Duplex monitoring of Multimode (mm) and Single mode (SM) optical fibers for 1GB, 10GB, 40GB, and 100GB connections.

The benefits of this system include high port density, increased network visibility (Monitoring), reduced response time to security incidents, and up to 80% cost savings and ongoing operating costs when combined with Monitoring's Distribution Traffic.

This system has a combination of monitoring output ratios.

The highly reliable construction of this device ensures maximum continuity of communication.

Advantages

- Eliminates the possibility of drop packets.
- The monitoring device receives all packets, including physical errors.
- You can monitor Full-duplex networks.
- Ability to implement and produce for different types of optical networks with different coefficients.
- Create a structure and firewall to prevent cyber attacks.

Disadvantages

- The monitoring device may require a Dual-Receive capture interface.
- It is not possible to monitor the traffic inside the switch.

Part number structure

Tap single-mode type	Part number
TAP SINGLE MODE 50-50	DMPTS00005050
TAP SINGLE MODE 10-90	DMPTS00001090
TAP SINGLE MODE 20-80	DMPTS00002080
TAP SINGLE MODE 30-70	DMPTS00003070
TAP SINGLE MODE 40-60	DMPTS00004060
TAP SINGLE MODE 25-25-50	DMPTS00252550
TAP SINGLE MODE 20-20-60	DMPTS00202060
Tap multi-mode type	Part number
TAP MULTI MODE 50-50	DMPTM00005050
TAP MULTI MODE 10-90	DMPTM00001090
TAP MULTI MODE 20-80	DMPTM00002080
TAP MULTI MODE 30-70	DMPTM00003070
TAP MULTI MODE 40-60	DMPTM00004060
TAP MULTI MODE 25-25-50	DMPTM00252550
TAP MULTI MODE 20-20-60	DMPTM00202060

Specification

Mechanical									
Total Weight:	5 lb. / 2.300 kg.								
Dimension	17.3" (w) x 12.5" (d) x 1.75" (h) / (440mm x 300 mm x 45mm) 1RU High, Fits standard 19" Rack, 21" Deep								
Fiber Network Ports:	X3 ~ x18								
Fiber Monitor Ports:	X6								
Split Ratio:	90:10		80:20		70:30		60:40		
Wavelength	Insertion Loss (dB)	Net	Mon	Net	Mon	Net	Mon	Net	Mon
	850nm	< 1.3	< 10.8	< 1.9	< 8.0	< 2.0	< 6.0	< 3.3	< 4.2
	1310/1550nm SM	< 0.6	< 10.5	< 1.0	< 7.3	< 1.7	< 5.5	< 2.5	< 4.1
Performance									
Full line rate:	2 – 960 Gbps								
Environmental									
Operating Temperature	0 ~ +55 c								
Storage temperature	–20 ~ 100 c								
Humidity:	5% – 95%, non–condensing								
Data									
Rates:	All speeds up to 40 Gbps								
Types:	All Optical*								
Propagation Delay									
Network to Network	< 3.2ns								
Network to Monitor	< 3.2ns								
TAP Interface									
Speed Duplex	Full duplex 100Gb, 40Gb, 10Gb, 1Gb, fiber links								
Fiber Types	SM (9/125 micron) for 1310nm or 1550nm wavelength MM (62.5/125micron) for 850nm wavelength								
Connector Types	LC for all network and monitor ports								

DCM (Dispersion Compensation Module)

DMPDCMxxxKM0LC

✦ DESCRIPTION

DanialMoj Technology Co. optical compensation function with slope dispersion compensation for standard single-mode fiber can DCM (G.652) were dispersion and dispersion slope compensation broad band in the C-band, allowing the system to optimize residual dispersion. In the dispersion compensation value of 1545nm wavelength dispersion can reach -2070ps / nm.

The DCMs offer a high dispersion compensation level and a very low insertion loss penalty. They provide negative dispersion compensation over the full C-Band with possible distance extensions of up to 120 kilometers.

DWDM system dispersion compensation and broadband low residual dispersion

G.652 fiber C-band 100% slope compensation (standard value)

Low insertion loss

Low polarization mode dispersion

Performance indicators by

Telcordia GR-2854-CORE standard certification

Reliability by Telcordia GR-1221-CORE standard certification

Dispersion compensation and dispersion slope compensation

Obtained at a specific wavelength dispersion compensation, should satisfy the following relationship:

$$DTF \times LTF + DDCF \times LDCF = 0$$

DTF: transmission fiber dispersion;

LTF: length of the transmission fiber;

DDCF: dispersion of the dispersion compensating optical fiber;

LDCF: dispersion compensation fiber length;

Dispersion slope compensation in the band, should satisfy the following relationship:

$$STF \times LTF + SDCF \times LDCF = 0$$

STF: dispersion of the transmission fiber;

SDCF: dispersion of the dispersion compensating optical fiber

According to the above two relationships obtained dispersion compensation and dispersion slope

compensation, should satisfy the following relation:

$$RDSDCF = SDCF / DDCF = STF / DTF$$

Assuming standard single mode fiber at 1545nm wavelength dispersion of 16.7ps / nm / km, a dispersion slope of 0.060 ps / nm² / km, RDS about 0.0036nm⁻¹

Specification

Parameters	MIN	MAX
Brillouin scattering threshold (dBm)	6	–
Non-linear coefficient (n_2/A_{eff}) (W ⁻¹)	–	1.4×10^{-9}
Effective area (A_{eff}) 1550nm (um ²)	20	–
Maximum input power (dBm)	–	23
Operating temperature range	-5°C	70°C
Storage temperature range	-40°C	85°C
Relative humidity	<85%	
Environmental / reliability testing	Comply with Telcordia GR-2854 and GR-1221 standard	
Size	482.6(W)x350(D)x43.6(H)(mm)	

Part number structure

DCM model	Part number
DCM 10KM	DMPDCM010KM0LC
DCM 20KM	DMPDCM020KM0LC
DCM 40KM	DMPDCM040KM0LC
DCM 60KM	DMPDCM060KM0LC
DCM 80KM	DMPDCM080KM0LC
DCM 100KM	DMPDCM100KM0LC
DCM 120KM	DMPDCM120KM0LC



DWDM MUX&DMUX 96 Channels

DMPDWx96013060

DESCRIPTION

The DWDM 96 channel MUX & DEMUX along with the OTWDMs 300G or 1200G are used for transporting high-capacity data. This system uses C13 to H60 channels for the transport.

Specifications of the passive:

- Establishing minimum appending loss (IL)
- No leakage in adjacent channels
- High reliability and sustainability
- According to ITU-TG.694.1 standard
- According to the ROHS-6 Standard on not using hazardous materials in electronic and mechanical products

Product specification

Performance Data		Technical Indexes		
Mux Part Number	DMPDWM96013060			
Demux part number	DMPDWD96013060			
Channel Spacing	50GHz		100GHz	
Channel Type	Flat top Gauss		Flat top Gauss	
Channel Number	96	80	48	40
Wavelength Accuracy (nm)L	±0.5			
−1dB Bandwidth (nm)L	>0.34	>0.24	>0.38	>0.2
−3dB Bandwidth (nm)L	>0.51	>0.3	>0.58	>0.4
Channel Insertion Loss (dB)L	<7.0	<6.0	<5.5	<3.5
Adjacent Channel Isolation (dB)L	>26		>23	>26
Non-adjacent Channel Isolation (dB)L	<30			
Total Isolation (dB)L	<20		<21	
Flatness (dB)L	<1.5			
Return Loss (dB)L	>40			
Directivity (dB)L	>50			
Polarization-Dependent Loss (dB)L	<0.5			
Polarization Mode Dispersion (PS)L	<0.5			
Operating Temperature °C	−10 ~+70			
Storage Temperature °C	−40 ~ +85			
Package Type	Passives in ABS box, 2U standard 19-inch rack			
Dimension	220mm (height) x 27mm (width) x 105mm (Length)l			



Techsis SE-4048-PoE

XXXXXXXXXXXXXXXXXX

DESCRIPTION

SE-4048-PoE layer 3 management switches are designed for small and medium enterprises (SMEs), large enterprises and Internet service providers (ISPs). They have high performance, flexibility, fault tolerance and advanced software capabilities to maximize commercial value. The SE-4048-PoE switch features 48 gigabit Ethernet RJ45 ports and 10 Gb SFP + ports, advanced security features and advanced quality of service (QoS), can be used as a core, distributed or access layer switch, has high port density, switch stack and manageability, and is an ideal choice for a variety of commercial network applications.

FEATURES

Ports

- 48 10/100/1000Mbps RJ45 ports
- 4 10G SFP+ fiber ports
- 1 RJ45 Console port, 1 Mini-USB Console port

Performance:

- Backplane bandwidth: 176 Gbps
- Packet forwarding rate: 136 Mpps
- L3/Routing:
- Static routing, OSPF v1/v2, RIP v1/v2
- IPv4, IPv6 Address Configuration

IPv6

- IPv6 Ping, IPv6 Tracert, IPv6 Telnet,
- IPv6 SSH, IPv6 SSL

Multicast

- IGMP v1/v2 Snooping, Fast Leave Mechanism
- Multicast VLAN, Multicast Filtering, Packet Statistics

- and Unknown Multicast Discards

aggregation

- Static Aggregation, Dynamic Aggregation
- IP, MAC, Hybrid Load Balancing Mode

Access Control (ACL)

- L2 (Layer 2) ~ L4 (Layer 4) packet filtering
- Port Mirroring, Port Redirection, Flow Rate Limiting

DHCP

- DHCP server, Rarely, Snooping

VLAN

- 802.1Q VLAN, MAC VLAN, IP VLAN, Voice VLAN

QoS

- Port Priority, 802.1P Priority, DSCP Priority
- SP, WRR, W FQ Priority Scheduling Algorithm

PoE

- 48 10/100Mbps RJ45 port support PoE+ power
- Total max power 300W or 600W
- Single max power 46W

ORDERING

Part Number	PSU	Chipset	CPU	Airflow	Power cord
SE-4048-P300-O-AC-FB-EU	Dual AC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	Europe
SE-4048-P600-O-AC-FB-EU	Dual AC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	Europe
SE-4048-P300-O-DC-FB-XX	Dual DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	-
SE-4048-P600-O-DC-FB-XX	Dual DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	-
SE-4048-P300-O-AD-FB-EU	AC-DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	Europe
SE-4048-P600-O-AD-FB-EU	AC-DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	Europe
SE-4048-P300-O-AC-BF-EU	Dual AC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	Europe
SE-4048-P600-O-AC-BF-EU	Dual AC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	Europe
SE-4048-P300-O-DC-BF-XX	Dual DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	-
SE-4048-P600-O-DC-BF-XX	Dual DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	-
SE-4048-P300-O-AD-BF-EU	AC-DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	Europe
SE-4048-P600-O-AD-BF-EU	AC-DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	Europe



Techsis Se-4024

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DESCRIPTION

The Techsis SE-4024 is a new generation of high-performance L3 Lite switch that provides flexible, cost-effective full Gigabit access and uplink ports, support for Layer 3 routing protocols, complete security protection mechanisms, and comprehensive ACL/QoS policies. Rich VLAN function, easy to manage and maintain, meets the user's easy-to-manage, high-security, and low-cost networking requirements for network devices. It is suitable for network access, aggregation, and core application scenarios in campus, hotel, and enterprise campuses.

FEATURES

Ports

- 24 10/100/1000Mbps RJ45 ports, 4 1000Mbps port (Combo)
- 4 10G SFP+ fiber ports
- 1 RJ45 Console port
- 1 1000Mbps RJ45 management port
- 1 USB 2.0, 1 Mini-USB Console port

Performance

- Backplane bandwidth: 128 Gbps
- Packet forwarding rate: 95.2 Mpps

Spanning tree

- STP, RSTP and MSTP protocols

L3/Routing

- OSPF v1/v2, RIP v1/v2, Static routing,
- IPv4, IPv6 Address Configuration

IPv6

- IPv6 Ping, IPv6 Tracert, IPv6 Telnet

- IPv6 SSH, IPv6 SSL

QoS

- Port Priority, 802.1P Priority, DSCP Priority
- SP, WRR, W FQ Priority Scheduling Algorithm

Multicast

- IGMP v1/v2 Snooping, Fast Leave Mechanism
- Multicast Filtering, Multicast VLAN, Packet Statistics
- and Unknown Multicast Discards

Link Aggregation

- Static Aggregation, Dynamic Aggregation
- IP, MAC, Hybrid Load Balancing Mode
- Access Control (ACL)
- L2 (Layer 2) ~ L4 (Layer 4) Packet Filtering
- Port Mirroring, Port Redirection, Flow Rate Limiting, QoS Re-Marking

DHCP

- DHCP server, Relay, Snooping

VLAN

- 802.1Q VLAN, MAC VLAN, IP VLAN, Voice VLAN

ORDERING

Part Number	PSU	Chipset	CPU	AirFlow	Power Cord
SE-4024-O-AC-FB-EU	Dual AC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	Europe
SE-4024-O-DC-FB-XX	Dual DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	-
SE-4024-O-AD-FB-EU	AC-DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	Europe
SE-4024-O-AC-BF-EU	Dual AC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	Europe
SE-4024-O-DC-BF-XX	Dual DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	-
SE-4024-O-AD-BF-EU	AC-DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	Europe



Techsis Se-4048

XXXXXXXXXXXXXXXXXX

DESCRIPTION

The Techsis SE-4048 is a new generation of high-performance hardware and software platform to provide flexible and cost-effective full Gigabit access and uplink ports. It supports Layer 3 routing protocols, complete security protection mechanisms, and complete ACL/QoS policies and enrichment. The VLAN function is easy to manage and maintain. It meets the user's easy-to-manage, high-security, and low-cost networking requirements for network devices. It is suitable for network access, aggregation, and core application scenarios in campus, hotel, and enterprise campus.

FEATURES

Ports

- 48 10/100/1000Mbps RJ45 ports
- 4 10G SFP+ fiber ports
- 1 RJ45 Console port, 1 Mini-USB Console port

Performance

- Backplane bandwidth: 176 Gbps
- Packet forwarding rate: 136 Mpps

Spanning tree

- Supports STP, RSTP and MSTP protocols

L3/Routing:

- Static routing, OSPF v1/v2, RIP v1/v2
- IPv4, IPv6 Address Configuration

IPv6

- IPv6 Ping, IPv6 Tracert, IPv6 Telnet,
- IPv6 SSH, IPv6 SSL

Multicast

- IGMP v1/v2 Snooping, Fast Leave Mechanism
- Multicast VLAN, Multicast Filtering, Packet Statistics, and Unknown Multicast Discards

Link aggregation

- Static Aggregation, Dynamic Aggregation
- IP, MAC, Hybrid Load Balancing Mode

Access Control (ACL)

- L2 (Layer 2) ~ L4 (Layer 4) packet filtering
- Port Mirroring, Port Redirection, Flow Rate Limiting, QoS Re-Marking

DHCP

- DHCP server, Rarely, Snooping

VLAN

- 802.1Q VLAN, MAC VLAN, IP VLAN, Voice VLAN

QoS

- Port Priority, 802.1P Priority, DSCP Priority
- SP, WRR, W FQ Priority Scheduling Algorithm

ORDERING

Part Number	PSU	Chipset	CPU	Airflow	Power cord
SE-4048-O-AC-FB-EU	Dual AC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	Europe
SE-4048-O-DC-FB-XX	Dual DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	-
SE-4048-O-AD-FB-EU	AC-DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Panel to Power	Europe
SE-4048-O-AC-BF-EU	Dual AC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	Europe
SE-4048-O-DC-BF-XX	Dual DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	-
SE-4048-O-AD-BF-EU	AC-DC PSUs	Broadcom Hurricane2	Arm Cortex A9	Power to Panel	Europe



Techsis SSR Series

XXXXXXXXXXXXXXXXXX

DESCRIPTION

This is a software-based high-capacity router that uses x86 architecture and the new generation of packet vector processing mechanism, designed and produced in DiGT company. This line of the product supports various routing protocols such as BGP, OSPF, ISIS, and advanced MPLS based services such as MPLS L3 VPN and VPLS. The Command-line of this router is the same as Cisco CLI that makes it easy for the user to use. This router has passed the various type of tests and is fully compatible with Cisco routers.

FEATURES

Hardware Specification

- 8 Slots (each 8 x 1Gbps SFP / 4 x 10Gbps SFP+)
- 120 to 260 Gbps Throughput
- 2U Rack-mount
- 1 x RJ45 type console port
- 2 x Management LAN port
- Power-Supply Redundancy
- MDIX (Automatic Media-Dependent Interface Crossover)
- 0 to +40 degree of Celsius

Routing Protocols

- IGP (IS-IS, OSPF v3, OSPF v2, RIP v1, RIP v2, RIP ng)
- BGP, MP-BGP, IPv6
- MPLS
- VPLS (Q-in-Q Supported),
- MPLS Based VPN (L2 and L3),

- QoS (BFD, Rate Limit, WRED)

Management Features

- Backup, Restore, Role Back
- NTP
- NetFlow
- SNMP v1/v2/v3
- Telnet
- SSH
- Console, Terminal, CLI and Web Interface
- SPAN and Syslog

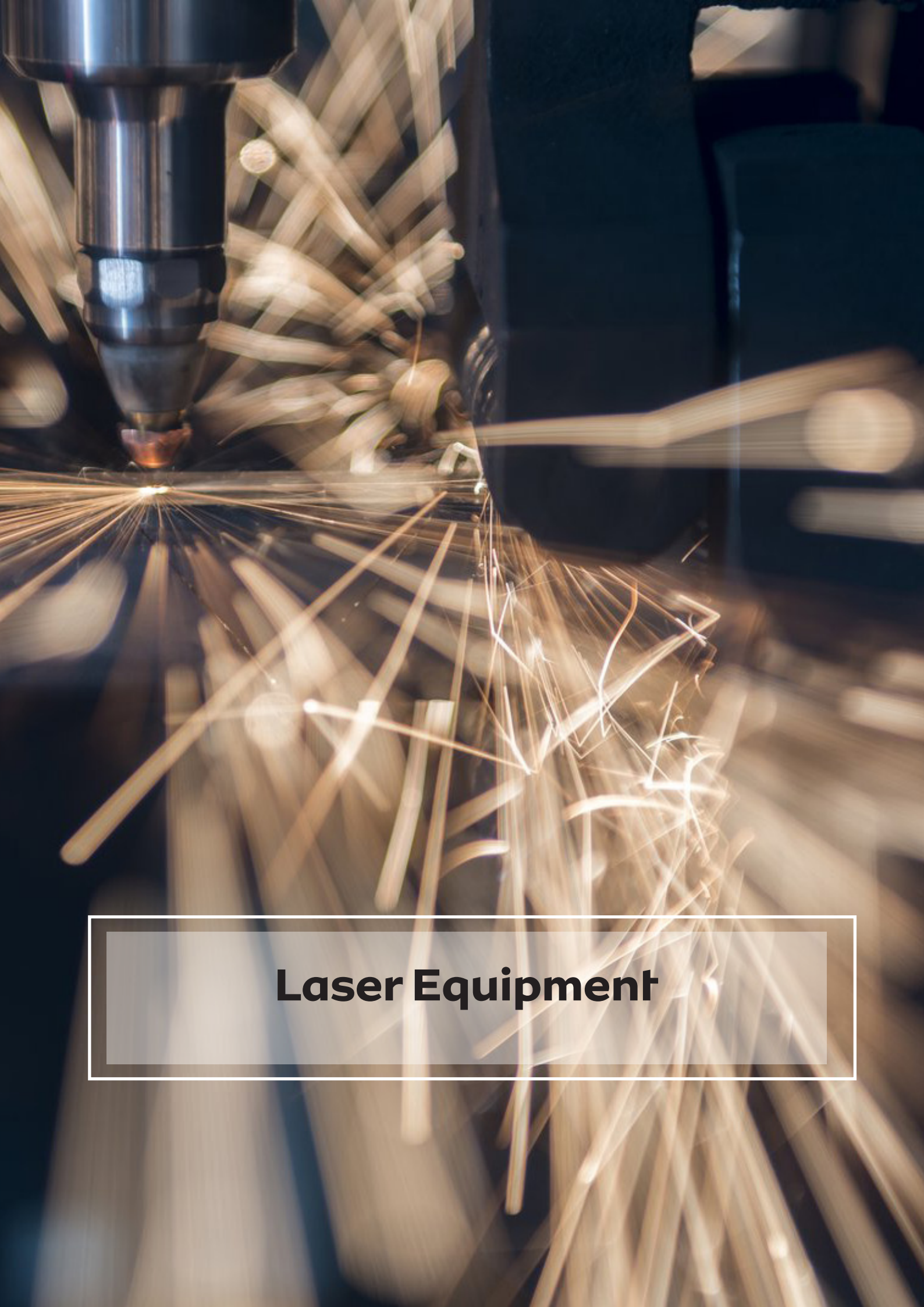
Security Features

- Multiple privilege modes
- AAA Support (RADIUS)
- Multiple access list
- Port Security
- Password-protected command line

ORDERING

Part Number	PSU	Throughput	CPU	Airflow	Power cord
SSR-12k-O-AC-FB-EU	Dual AC PSUs	120 Gbps	Intel XEON GOLD	Panel to Power	Europe
SSR-16k-O-AC-FB-EU	Dual AC PSUs	160 Gbps	Intel XEON GOLD	Panel to Power	Europe
SSR-22k-O-AC-FB-EU	Dual AC PSUs	220 Gbps	Intel XEON GOLD	Panel to Power	Europe
SSR-26k-O-AC-FB-EU	Dual AC PSUs	260 Gbps	Intel XEON GOLD	Panel to Power	Europe





Laser Equipment

ABOUT US

PartoSum was established in 2021 with the investment of Danial Moj company to start producing laser-based products for industrial and medical uses. Relying on the knowledge and technology developed in the INLC (Iranian National Laser Center), PartoSum started recruiting expert staffs with deep knowledge and experience on laser technology and its applications.

Although PartoSum is a startup company, but involving active laser technology experts in the country, including Dr. Jamshid Sabbaghzadeh (INLC Founder) and having the INLC as our mentor and partner in laser science, we are not far from achieving our main interest which is manufacturing high technology laser products.

Creative and innovative ideas in the INLC have played an effective role in producing and supplying various applications for different aspects such as industrial, healthcare, research etc. All laser equipment produced were customized with high quality according to the international standards for necessary needs. All these research and productions were made for the intention of country's needs, but for commercialization it has always faced many challenges. As a solution, PartoSum has been involved to economically develop and commercialize these research and products on the behalf of INLC.

In PartoSum, our intension is to actively supply and educate the industrial customers with the benefits of laser technology. The importance of using laser technology for increasing product quality and work efficiency may lead our customers to greater independence of supporting their own needs. Therefore, PartoSum is open to invest on high-tech ideas for the future market; following this policy, we are also grateful to have elites and artisans on our side.

OUR TEAM

History

Laser technology is now one of the most advanced technologies in the world and its increasing development process is astonishing. Comparing to other technologies such as aerospace, stem cells, nanotechnology, nuclear technology etc. laser has a various range of applications in different fields, which has made laser important in the world market.

The head of our industrial laser department, we have Dr. Turkaman which has experience in designing and manufacturing gas and solid-state lasers. His laboratory has been processing materials with laser and manufacturing subsystems used in laser coating.

Dr. Mashayekhi, vice president of LICI (Laser Innovation Center of Iran), is the head of the healthcare laser department. His experience in manufacturing optical devices and medical lasers, has meet the needs of the social community of health and medical treatments.

Relying on experts with brilliant records in laser technology and optical telecommunications, we are ready to provide products and services along with laser knowledge.



Dr. Samand Samadiani
Head of Board



Mehdi Sabbagh
Ceo



Dr. Jamshid Sabbaghzadeh
Board Member

VISION

In science research and technology production, laser plays the most sensitive and strategic role in global science and research centers. Knowing that laser has been of the main tools for research and development in industrial developments, performing sensitive and important projects without this technology could be impossible.

Specific capabilities and applications of laser is the result of its difference between the laser structure and conventional light sources. After 50 years of laser history, it has just found its place in the global market in a way that many industrial developments depend on this technology. In healthcare, laser technology is the only solution for improving disease recognition and safe treatments.

According to the INLC projects such as:

Design and production of laser welding inflators (car safety airbag) for Iranian industries.

1. Design and production of laser welding inflators (car safety airbag) for Iranian industries.
2. Production and installation of 10KW fiber laser system with beam guidance for automated laser welding for steel sheets with 5.2mm thickness in cold rolling line of Mobarakeh Steel Company of Isfahan.
3. Developing fiber laser for research uses ordered by many Iranian universities such as Sharif, Kashan and Malek Ashtar.

A suitable space is provided for developing high quality products using this technology for more industrial applications with the help of young and expert teams of this organization.

SERVICE & SUPPORT

Due to the knowledge and experience of our engineers, we can support and guarantee the quality of all our products. In PartoSum, the main priority is the customer satisfaction, therefore, we are constantly working to improve the quality of our products by receiving feedback from our customers.

In PartoSum, products are customized and manufactured based on customer needs. After customer request, the product will be designed in the R&D department based on the customer's needs. Afterwards, the result will be passed for manufacturing to the production line. Finally, the high-tech product will be installed and trained by our experts with a long-term support for our customers.

One of the most important benefits of PartoSum is one-year valid warranty and full after-sales service, continuously and without restrictions for our customers. Also, the after-sales service will support in the shortest time and as soon as possible and with the lowest cost after the warranty period.

Support Features

- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical defects.
- Product guide with detail explanation.

PRODUCT

We manufacture and supply laser applications in two main fields as mentioned below:

Industrial lasers

- Laser welding
- Laser cladding
- Laser hardening
- Laser cleaning
- Laser cutting
- Laser sharegraphy
- Laser shock peening

Medical lasers

- Hair removal laser
- Q-Switch laser
- Fractional carbon dioxide laser
- Holmium urology laser
- Low power laser therapy



Laser welding 3 kw Fiber Laser

PSLIW1080F3KC

DESCRIPTION

In this machine, by combining the latest welding technology and robotics, high-quality welding on extra-long, over-sized and complex shaped products are provided. Amongst these various laser welding types, fiber laser welding allows for the highest power density and highest concentrated beams. The power density of laser welding is said to be more than 1000 times that of gas arc welding. Fiber lasers (not to be confused with fiber-delivered lasers where the fiber is merely an optical delivery mechanism) are solid state lasers in which an optical fiber doped with low levels of a rare earth element is the lasing medium. Laser diodes are used to stimulate the lasing medium to emit photons, an action known as pumping, at a wavelength specific to the rare earth element used as the doping element. Ytterbium is generally used for the high-power fiber lasers currently available for material processing and emits a wavelength approximately the same as Nd: YAG lasers, i.e., between 1.060 and 1.085 micron. The doped fiber is surrounded by a low refractive index material that acts as a waveguide for the pumping light and ensures optimum transfer of this energy to the lasing medium. Diffraction gratings are used as rear mirror and output coupler, to form the laser resonator, creating a long thin laser, which due to the flexibility of the optical fiber (which is simply coiled up) can be very compact.

ADVANTAGES

- High-precision accuracy for joining parts
- High-strength welding is achieved at high speed
- Discoloration or deformation, burns from welding are minimal
- The robotic nature of this welding accommodates complex welding requirements such as remote welds, long welds, curved welds and spot welds
- The heat affected zone is limited, and due to rapid cooling, the surrounding material is not annealed.
- Low heat input for minimal distortion
- Optimal energy consumption
- The short, controllable melting time
- Controllable process parameters
- The very narrow weld may be obtained
- High quality of the weld structure.

APPLICATIONS

- Dissimilar metals can be welded together
- They can sometimes even join materials that are otherwise impossible or difficult to weld
- Weld materials with both high melting temperatures and high thermal conductivity
- Ability to weld metals with different thickness

INDUSTRIAL USERS

- Aviation industry
- Heavy metal parts
- Heavy industrial molds
- Automotive Manufacturing
- Energy and power plant industries

SUPPORT FEATURE

- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL SPECIFICATION

Laser type	Fiber laser: YFL-3000-MM
Wave length	1080 nm
Power	3 kw
Out fiber type	20mic & 400mic
Laser mode	CW
Line width (FWHM)	<5 nm
Cooling	water
Number of Axis	6 main axes (include: X, Y, Z, A, B, C)
Reach	1150 mm
Positioning Accuracy	0.1 mm
Repeatability	0.5 mm
Rotational	90/s
Workstation bearing Capacity	Unlimited for 6axis
Main process system	Main Process: 2.4 MHz Field bus protocol: ether CAT I/O: 64 DA: 2(0-10) V dc



Laser welding

10 kw Fiber Laser

PSLIW1080F10KC

DESCRIPTION

In this machine, by combining the latest welding technology and robotics, high-quality welding on extra-long, over-sized and complex shaped products are provided. Amongst these various laser welding types, fiber laser welding allows for the highest power density and highest concentrated beams. The power density of laser welding is said to be more than 1000 times that of gas arc welding. Fiber lasers (not to be confused with fiber-delivered lasers where the fiber is merely an optical delivery mechanism) are solid state lasers in which an optical fiber doped with low levels of a rare earth element is the lasing medium. Laser diodes are used to stimulate the lasing medium to emit photons, an action known as pumping, at a wavelength specific to the rare earth element used as the doping element. Ytterbium is generally used for the high-power fiber lasers currently available for material processing and emits a wavelength approximately the same as Nd: YAG lasers, i.e., between 1.060 and 1.085 micron. The doped fiber is surrounded by a low refractive index material that acts as a waveguide for the pumping light and ensures optimum transfer of this energy to the lasing medium. Diffraction gratings are used as rear mirror and output coupler, to form the laser resonator, creating a long thin laser, which due to the flexibility of the optical fiber (which is simply coiled up) can be very compact.

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- Ability to weld metals with different thickness

INDUSTRIAL USERS

- Aviation industry
- Heavy metal parts
- Heavy industrial molds
- Automotive Manufacturing
- Energy and power plant industries

SUPPORT FEATURE

- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL SPECIFICATION

Laser type	Fiber laser: YFL-10000-MM
Wave length	1080 nm
Power	10 kw
Laser mode	CW
Lasers per unit	13 * 1 KW (+2 spare)
Transmission fiber length	30 m
Main process system	2.4 MHz
Beam guidance	Reflective optics with cooling capability
Working accuracy	±0.1
Beam transmission optics	QD
Cooling	water
Power consumption	3 phases

Laser Cladding Machine

PSLIC1030D1800



DESCRIPTION

The surface of metals is always damaged by many factors, The laser cladding process allows for property improvements for the surface of a part, including better wear resistance, as well as allowing for the repair of damaged or worn surfaces.

Laser cladding is a technique for adding one material to the surface of another by coating and welding which involves the feeding of the metallic powder into a melt pool that is generated by a precisely focused laser beam.

The highly accurate nature of the laser beam allows fully dense cladding with a perfect metallurgical bond.

The precise nature of the process allows the quality of the coating to be accurately controlled.

The result is a metallurgically bonded layer which is tougher than can be achieved with thermal spray and less dangerous to health than the process of hard chromium plating.

Creating this mechanical bond between the base material and the layer is one of the most precise welding processes available

ADVANTAGES

- Controlling the heat input into the base material, which can be minimized whilst maintaining a high strength metallurgical bond
- The very fast cooling rate with minimal effect on the mechanical properties of the base material
- The operation is non-contact, so there is the ability to cover inaccessible areas
- Low exposure time and depth of the laser
- Short laser cladding process period, high-energy efficiency
- High surface quality and low warpage, with almost no post-processing necessary

APPLICATIONS

- To protect, restore surfaces of metal components
- Increase the wear resistance, corrosion resistance or impact performance of metallic components

INDUSTRIAL USERS

- Energy and power plant industries
- Rotating metal industry
- Oil and gas and petrochemical industries
- Turbine manufacturing industries
- Transportation systems

SUPPORT FEATURE

- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL SPECIFICATION

Laser type	Solid state Yb: YAG thin-Disk laser, fiber coupled
Wave length	1030 nm
Power	1800 w
Laser mode	CW
Fiber core	600 micrometers
Number of Axis	5 axes (include: X, Y, Z, A, B, C)
Axis pulse	Rotary Table
Stroke	X: 1300 mm, Y: 400 mm, Z: 600 mm, A: $\pm 1^\circ$, B: $\pm 60^\circ$
Positioning accuracy	0.05 \pm
Repeatability	1.0 \pm
Max sync Speed	10 m/min
Workstation bearing capacity	UP to 400 Kg for 2 axes
Cooling	water

Powder feeder system

Powder feeder rate	0.5–25 gr/min
Powder size	10–200 micron
Powder tank size	1.5 lit
Cladding head	3 channels



Laser hardening Machine

PSLIH808D1600C

DESCRIPTION

Laser hardening is a heat treatment process or surface hardening process in which a laser beam is used to heat the surface of a metal part. This modern technique of hardening is predominantly for strengthen used on materials and components that are prone to wear.

This process is used exclusively on ferrous materials suitable for hardening, including steels and cast iron with a carbon content of more than 0.2 percent. Laser hardening consists of the rapid heating of a material's surface by laser beam, the energy from the laser beam is applied directly to the component surface. The surface layer is heated up to the hardening temperature ($>1000^{\circ}\text{C}$) in a reduced area within a very short period of time, a short hold at the target temperature, and intensive cooling due to the high thermal conductivity of the material. During the cool-down period a process called "self-quenching" takes place, where a fine-grained structure is formed in the thin layer on the surface of the part. This results in a significant increase in hardness of metal part.

The hardening depth of the outer layer is normally 0.1 to 1.5 millimeters, although on some materials, it may be 2.5 millimeters or more. Lasers tend to produce harder surfaces to a shallower depth compared to other hardening processes. This makes laser hardening ideal for improving the performance of intricate and high accuracy components. This differs from conventional methods, which are less precise and more invasive to your materials.

ADVANTAGES

- The amount of heat input is comparatively low, so heat is transmitted into the base material
- Requires less refinishing work
- High throughput, reproducibility
- Precise energy input with minimum heat effect
- No heat distortion
- This machine will ensure that even the hardest to reach places are accessible
- Non weakening or damage to the material

APPLICATIONS

- Increases hardness and wear resistance, which leads to reduction of abrasive wear
- Improve the service life of parts and quality

INDUSTRIAL USERS

- Heavy industrial molds
- Heavy metal parts
- Automotive Manufacturing
- power plant industries

SUPPORT FEATURE

- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL SPECIFICATION

Laser type	Diode laser
Wave length	808 nm
Power	1600w
Laser mode	CW
Beam shape	Rectangular
Beam size	1.5*8 mm ² , 12*12 mm ² , 5*18 mm ²
Number of Axis	6 main axes (include: X, Y, Z, A, B, C) & 2 accessory axes (tip, tilt)
Reach	1650 mm
Point positioned	± 0.05 mm
Rotational	± 0.03 mm
Workstation bearing capacity	Unlimited for 6 axes Up to 400 kg for 2 axes
Main process system	Main process: 2.4 MHz Field bus protocol: ether CAT I/O: 64 DA: 2(0-10) V Dc
Option	Exhaust Thermo cam
Cooling	water

Laser Cleaning Machine

PSLIC1070F100P

PSLIC1070F200P

PSLIC1070F500P



DESCRIPTION

Laser Cleaning Machine is modern and most advanced, non-touch device with optimal energy consumption which cleans the metal surface from oxide, rust and other contaminants through scanning the metal surface by laser beam. This process can replace conventional industrial cleaning methods such as sandblasting, chemical and mechanical methods, as these methods may cause component or environmental damage.

ADVANTAGES

- Non-Contact / Non-Abrasive
- Eco-Friendly
- No segment damages
- Economical
- High reliability
- High flexibility
- Long operating life

APPLICATIONS

- Rust cleaning
- Industrial molds cleaning
- Cleaning oil, stains and oxides from surfaces
- Paint removing from surfaces
- Cleaning segments from contamination for pre-coating, welding and soldering

INDUSTRIAL USERS

- Aviation industry
- Heavy metal parts
- Heavy industrial molds
- Automotive Manufacturing
- Energy and power plant industries

SUPPORT FEATURE

- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL SPECIFICATION

Laser type	Pulsed fiber laser
Wave length	1070 nm
Power	100-500 w
Frequency	10 K Hz
Pulse width	80-170 ns
Cleaning area	10-30 cm liner Zigzag, circular
Cooling	Air/ Closed Water cycle
Power consumption	Single phase, 3 phases

Laser cutting Machine

PSLIC1070F1KC PSLIC1070F2KC

PSLIC1070F3KC PSLIC1070F4KC

PSLIC1070F6KC PSLIC1070F8KC

DMLIC1070F10KC



DESCRIPTION

Laser cutting is a process that uses a laser to cut different materials for many applications.

Laser cutting is a thermal cutting process for processing sheet metal. The laser beam is created by the laser source (resonator), conducted by a transport fiber or mirrors in the machine cutting head where a lens focuses it at very high power on a very small diameter. This focused laser beam meets the sheet metal and melts it. Fiber lasers are the most efficient way in laser cutting. The laser beam is created by an active fiber and transmitted over a transport fiber to the machine cutting head. Fiber lasers are significantly smaller than CO₂ lasers and generate several times the power from the same amount of current. A fiber cutting system is primarily suited for processing thin to thick sheet metal from steel, stainless steel, aluminum and also other non-ferrous metals (copper and brass).

ADVANTAGES

- Fast cutting speed
- Good cutting effect
- Rapid processing times
- Operating at high power with great efficiency
- So precise that the beam won't cause any damage to the surrounding material of the object that they are working in
- Lower power consumption rate.
- Reduce the mechanical stress that a sheet metal form experiences while being cut
- The heated zone is incredibly small
- Work piece is exposed to little or no heat, preserving the properties of the material being handled
- A suitable tool for creating all
- The most efficient and cost-effective fabrication methods

APPLICATIONS

- Fiber lasers can cut through thin materials at very high speeds
- To cut reflective materials without risk of reflections causing damage to the machine, which allows metals such as copper, brass and aluminum to be cut without issue.
- It can so easily cut through thick materials like steel

INDUSTRIAL USERS

- Metal Industry
- Home Appliances
- Automobile manufacturing
- Power plants and defense industries
- Medicine
- Aerospace
- Electronics

SUPPORT FEATURE

- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL SPECIFICATION

Laser type	Fiber laser
Wave length	1070 nm
Power	(1, 2, 3, 4, 6, 8, 10) Kw
Laser mode	CW
Z-axis travel	150mm
Positioning accuracy	±0.05mm
Repeatability	±0.03mm
Max cutting Speed	20m/min
Workstation bearing capacity	1200 kg
Cutting width	0.5-4 mm CS
Work piece table	3000mm*1500mm (variable customizable to larger sizes)
Cooling	Water



Laser shearography Machine

PSLIS600D120M

DESCRIPTION

Laser Shearography uses the coherent and monochromatic properties of laser light to illuminate the surface of a component under investigation.

The lights reflected by the component surface will generate a speckle pattern. This speckle pattern is then recorded by a digital camera and converted into an image using Fourier analysis

When the component is stressed e.g., by a mechanical load, thermal heating, etc., the speckle pattern will change accordingly as the component deforms. By recording the new speckle pattern and converting into an image by Fourier analysis and subtracting it from the original speckle pattern, a fringe pattern will be produced and can be displayed on a computer screen. This fringe pattern contains information about the relative deformation of the component between its two states (before and after stress).

When there are no features within the component, a regular fringe pattern (usually in the form of uniformly distributed fringes) will be obtained. When there is a subsurface feature such as crack, the regular fringe pattern will be disturbed. This enables the defect to be identified by the operator. Therefore, using this device, defects that are on the back and invisible areas of parts in different shapes and sizes can be identified and measured with sufficient accuracy.

ADVANTAGES

- Rapid, full-field and online inspection
- No segment damages during the inspection
- High performance speed
- High sensitivity
- Non-contact
- Ensure the quality and health of the part while using it

APPLICATIONS

- Detection of internal defects (hole, crack, separation) on the surfaces of parts that have a complex structure.
- Identify the type and size of corrosion
- To extend the life of parts

INDUSTRIAL USERS

- Aircraft and Aviation industry
- Automotive Manufacturing
- Oil, gas and petrochemical industries
- Shipping
- Tires
- Power plant industries

SUPPORT FEATURE

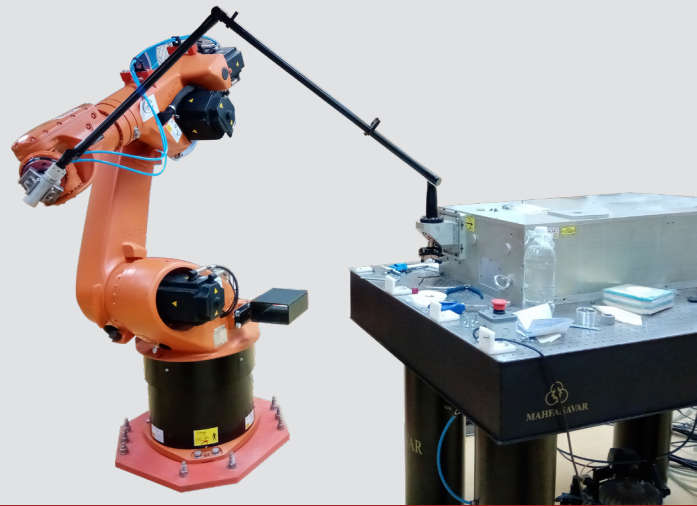
- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL SPECIFICATION

Laser type	Diode laser, 120 mw, 600 nm
CCD-resolution	1500*1100 pixels
Loading unit	Thermal lamp 2000 w
Working distance	30-100 cm (other size can be customized)
Operation modes	Manual, 2D and 3D operation
Date interface	TIFF, ASCII
Date acquisition speed	Online Measurement & 60 sec per inspections
Dimensions of sensor head	40 cm*15 cm*15 cm (with-out illumination arms)
Dimensions of control unit	110 cm*60 cm*60 cm
Weight	5 kg (sensor)
Control and evaluation unit	Portable head with controller unit
Operation system	Windows 7

Laser shock peen

PSLIC1064N2JPX



DESCRIPTION

Improvement of material surfaces has become an integral part of industrial operations.

Laser shock peening (LSP) is a relatively new surface treatment for metallic materials.

Laser shock peening (LSP) is a very useful surface treatment technique in practical applications. It can create a compressive stress of a significant magnitude using shock waves generated by laser pulses, beneath the treated surface and deep into the treated metallic components. Compressive stress created by LSP can significantly improve the mechanical performance and increasing life time of components.

Particularly, in aerospace components because of exposure to the high degree of dynamic load, using the LSP technique leads to preventing of failure of parts by means of eliminating the residual stress.

ADVANTAGES

- Flexibility
- Deep penetration of laser-induced shocks with precise control of the intensity of energy.
- shorter process times
- high speeds
- accuracy
- free form surface
- The ability of robot coupling via the articulated arm.

APPLICATIONS

- improve the mechanical and metallurgical properties such as fatigue life, corrosion resistance, and wear and erosion resistance, Stress Corrosion
- rejuvenation of fatigue life of pre fatigued specimens and hybrid technique to rejuvenate the damaged components
- improving fatigue performance in terms of modification of microstructure, surface morphology, hardness and strength
- Increasing life time

INDUSTRIAL USERS

- Aerospace industries
- Defense Industries

SUPPORT FEATURE

- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL SPECIFICATION

Laser type	Nd: YAG
Wave length	1064 nm
Peak Power	2 j
Laser mode	Short pulse
Laser pulse width	8–12 ns
Repetition	5–20Hz
cooling	Cold water
Beam delivery	Articulated arm
Number of Axis	6 main axes (include: X, Y, Z, A, B, C)
Reach	1150 mm
Positioning Accuracy	0.03 mm
Repeatability	0.05 mm
Rotational speed	90/s
Main process system	Main Process: 2.4 MHz Field bus protocol: ether CAT I/O: 64 AO: 2(0–10) V dc



High-Power Diode Laser

PSLMH808D1200X

DESCRIPTION

During a laser hair removal treatment, light passes through the skin and is absorbed by the melanin in the hair shaft. This absorption raises the temperature of the hair follicle and thermally destroys the cells responsible for regrowth. 808nm diode laser enables the light to penetrate deeper into skin and is safer than other lasers because it can avoid the melanin pigment in the skin's epidermis. We can use it for permanent hair reduction of all color hairs on all 6 skin types, including tanned skin or dark skin.

ADVANTAGES

- 808nm diode laser allows fast repetition rates up to 10HZ, with in-motion treatment, ensures fast hair removal for the big area treatment.
- Handpiece built in with excellent contact cooling technology, ensures PAIN-FREE hair removal.
- Highest energy density handpiece in 10*10mm.
- Safe hair removal on 6 skin types.

THERAPEUTIC APPLICATIONS

Hair removal/hair reduction/depilation/epilation for men and women, any unwanted hairs on areas like face, arms, armpits, chest, back, bikini, legs, ...

SUPPORT FEATURES

- One-year warranty and full after-sales.
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL DATA

Laser type	Diode laser
Wavelength	808nm
Laser Power	1200W
Spot size	10*10 mm ²
Pulse width	2-120ms
Energy	1-120 J / cm ²
Frequency	0.5-10 Hz
Cooling	water + air + semiconductor
Temperature of probe	0-3°C
Dimension of machine	59 cm x 59 cm x 146cm
Dimension of package	70 cm x 70 cm x 126cm
Net weight	54KG
Voltage	AC 220V / 50Hz; AC 110V / 60Hz
Packing	Aluminum alloy case
Display	15"

Q-Switched Nd:YAG laser

PSLMT1064QXXXX



DESCRIPTION

The Q-switched Nd:YAG laser takes specific wavelengths light in high energy, which are absorbed by the pigment and shatters the pigment into particles, breaking them into very small fragments, some parts will consequently bounce out of the skin and the other parts will spilt even further into minute particles which eventually will be engulfed by the phagocytes and ultimately gets eliminated by the lymphatic system.

ADVANTAGES

- Convenient and easy operation.
- Single pulse energy 400mj, multi-pulses energy 1600mj.
- Double wavelength for a multi-functional treatments.
- Long continual working time.
- Water flow and water temperature detection ensures machine safety and long lifespan.

ACCESSORY

- carbon peel probe

THERAPEUTIC APPLICATIONS

- Tattoo Removal
- Carbon Peel & Skin Rejuvenation
- Pigmented Lesions

SUPPORT FEATURES

- One-year warranty and full after-sales.
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL DATA

Laser type	Nd:YAG Q-Switch Laser
Wavelength	Double wavelength 1064nm&532nm
Controller	7.4" color touch LCD display
Energy	1600mj
Width of Pulses	10-20ns
Frequency	1-6Hz
Spot Size	1-8mm
Indicator of aiming light	650nm diode laser
Cooling manner	Closed-off water circulation + air
Voltage	220V/110V

Fractional CO₂ Laser

PSLMF10600C10X



DESCRIPTION

Fractional CO₂ laser skin resurfacing is one of the most popular non-surgical cosmetic treatments available. Traditional, ablative, non-fractional lasers—once the standard for helping to treat sun damage, fine lines, and acne scars—can offer excellent results relatively quickly; however, treatments are typically painful, harsh on the skin. The fractional CO₂ laser provides a quicker recovery, reduced discomfort, and long-lasting gradual improvement. Fractional CO₂ laser skin resurfacing is designed to stimulate natural collagen production in the skin of the face, neck, chest, and hands, leading to steady rejuvenation over several months and lasting up to several years. Additionally, laser resurfacing can be used in combination with aesthetic facial surgery, such as a facelift or neck lift, to achieve the best results possible.

ADVANTAGES

- Convenience of working with laser device for doctor
- Ultimate accuracy and delicacy in laser irradiation on tissue
- Significant reduction in operating time compared to traditional methods
- No need for anesthesia and the ability to perform surgery under local anesthesia
- Minimal heat damage to surrounding tissues
- The least pain for the patient
- Suitable for all skin types
- Short recovery period after laser surgery
- Minimal postoperative complications such as skin blemishes, redness and scars

ACCESSORY

- Surgery head (incision)
- Scanner head

THERAPEUTIC APPLICATIONS

- Skin rejuvenation and smoothing
- Treatment of scars (scars caused by acne, burns or surgery)
- Treatment of skin aging and wrinkles around the eyes

- Treatment of skin cracks in the abdomen and body
- Treat open skin pores
- Clarifies skin damaged by light
- Treatment of skin tightening
- Treatment and cleansing of pimples
- Cleansing skin blemishes caused by aging

SUPPORT FEATURES

- One-year warranty and full after-sales.
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL DATA

Laser type	RF Excited CO ₂ Laser		
Wavelength	10.6um		
Power to Tissue	10W		
Aiming Beam	Red Laser Diode, 5mW – adjustable		
User Interface	Color Touch Screen		
Output mode	CW or Ultra pulse		
Fractional type	Scanning or surgery		
under the scanning mode	Energy: 0.1–200mJ Spot size: 5–30mm/spaced 5 Density: 30dots/cm		
under surgery mode	Energy: 0.1–12mJ each dot energy) Duration: 1–999us/spaced	(with energy) Dura- tion: 20	20
Spot density	25–1600spot/cm ²		
Max scanning area	30x30mm ²		
Scan pattern	Square, rectangle, round, triangle		
Electrical Requirements	230V / 3.7A (max) / 50–60Hz		
Dimension (WxDxH)	45cmx37cmx10cm		
Weight	12kg		

Fractional CO₂ Laser

PSLMF10600C60X



DESCRIPTION

Fractional CO₂ laser skin resurfacing is one of the most popular non-surgical cosmetic treatments available. Traditional, ablative, non-fractional lasers—once the standard for helping to treat sun damage, fine lines, and acne scars—can offer excellent results relatively quickly; however, treatments are typically painful, harsh on the skin. The fractional CO₂ laser provides a quicker recovery, reduced discomfort, and long-lasting gradual improvement. Fractional CO₂ laser skin resurfacing is designed to stimulate natural collagen production in the skin of the face, neck, chest, and hands, leading to steady rejuvenation over several months and lasting up to several years. Additionally, laser resurfacing can be used in combination with aesthetic facial surgery, such as a facelift or neck lift, to achieve the best results possible.

ADVANTAGES

- Convenience of working with laser device for doctor
- Ultimate accuracy and delicacy in laser irradiation on tissue
- Significant reduction in operating time compared to traditional methods
- No need for anesthesia and the ability to perform surgery under local anesthesia
- Minimal heat damage to surrounding tissues
- The least pain for the patient
- Suitable for all skin types
- Short recovery period after laser surgery
- Minimal postoperative complications such as skin blemishes, redness and scars

ACCESSORY

- Surgery head

THERAPEUTIC APPLICATIONS

- Skin rejuvenation and smoothing
- Treatment of scars (scars caused by acne, burns or surgery)
- Treatment of skin aging and wrinkles around the eyes
- Treatment of skin cracks in the abdomen and body
- Treat open skin pores
- Clarifies skin damaged by light
- Treatment of skin tightening
- Treatment and cleansing of pimples
- Cleansing skin blemishes caused by aging

SUPPORT FEATURES

- One-year warranty and full after-sales.
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL DATA

Co2 Laser Source	RF laser tube (Coherent)
Wavelength	10600nm
Output power	60W
Scan Pattern	Square, rectangle, Round, Triangle, Oval, 6-Diamond Shape, line
Scan Pattern Size	0.1*0.1mm-20*20mm
Scan Modo	Free Scan, Sequence Scan, Maximum distance Scan;
Spot Size	0.01-0.07mm
Pulse Duration	0.1-2.6ms adjustable
Pulse Energy (power)	1mj to 100mj adjustable
Interval Between Scan	0-6s
Laser Apparatus	Sealed off laser device stimulated by direct current
Aiming beam	635nm infrared arm
Cooling System	Air
Beam Transport Device	7 Articular arm



Holmium Urology Laser

PSLMU2100PH40X

DESCRIPTION

Holmium laser is a solid-state and pulsed laser, usually abbreviated as ho:YAG laser. This laser emits light at a wavelength of 2.1um, and can transmit through optical fibers which makes holmium laser highly suitable for endoscopic surgery in many clinical specialties, and currently mostly used are in urology for treatment of stones, BPH and tumors. In recent years, holmium laser treatment has spread out to many other specialties like Gastroenterology, Neurology, Pulmonology, Orthopedics, Hemorrhoid and etc. The holmium laser, with a wavelength of 2.1um, is highly absorbed by water and has a very shallow penetration depth of approximately 0.4 mm. As a pulsed laser, it reduces deeper thermal effects which are much more prevalent in continuous wave lasers. The shallow penetration depth minimizes the coagulation zone and collateral damage to sensitive surrounding tissue, so it can achieve clean and precise incision and tissue ablation. The controlled penetration depth together with the water absorption characteristics reduce the energy to non-targeted tissue. Hemostasis is achieved through modulating laser parameters and focal distance. Meanwhile, the thermal effect, created by laser energy that is absorbed by the water contained in the stones, as well as the stone composites, can be used to break stones of any size or composition, making holmium lasers the best choice for laser lithotripsy.

ADVANTAGES

- Turning stones into very small particles suspended in water that can be easily and painlessly removed from the body.
- Effective for all urinary tract stones regardless of the dimensions and different types of stones.
- Minimal stone rejection during operation and without damage to surrounding tissues during stone destruction.
- Lithotripsy without bleeding and the best option for patients sensitive to bleeding.
- Can be used as a delicate surgical knife to cut body tissues and open narrow tract without bleeding or very minor bleeding.

- Ability to clot and stop bleeding during surgery.
- No need for general anesthesia in most cases.

ACCESSORY

- Laser Fiber
- Cutter and Stripper
- Protective Glass

THERAPEUTIC APPLICATIONS

- Urology
- Lithotripsy
- Treatment of urinary tract stenosis
- Correction, restoration and surgery of tissue

SUPPORT FEATURES

- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

TECHNICAL DATA

Laser type	Pulsed Holmium Laser
Wavelength	2100 nm
Cavity Power	Up to 40W
Energy per pulse	0.1–5.5 J/Pulse
Pulse width	150–550 us FWHM
Repetition rate	1–15 Hz
Aiming Beam	532nm, 5mW
Beam Delivery	Fiber 550 um
Cooling System	Chiller
Laser Activation	Foot switch
Electrical requirements	220V AC/Single phase/16A
User Interface	LCD Touch panel
Dimension (WxDxH)	66cmx70cmx125cm
Weight	200kg

Low Power Laser Therapy

PSLML850D740mW



DESCRIPTION

Low power laser therapy (LPLT), also known as “cold” laser therapy, refers to a wide variety of procedures involving several laser types and treatment methods. LPLT uses red beam or near infrared nonthermal lasers with a wavelength between 600 and 1000 nanometers and from 5 to 500 milliwatts. In contrast, lasers used for surgery typically use 300 watts. When applied, the lasers penetrate the surface of the skin without a heating (burning) effect, produce no sensation and do not damage the skin. It is believed that due to the low skin absorption and no side effects, the laser light can penetrate deeply into tissues and can reach the site of damage or injury.

ADVANTAGES

- Automatic detection of probe type (with two types of probes)
- Ability to add different probes up to five (as needed)
- Can be used portably (using battery and city electricity)
- Easy to maintain and transport (light and compact)
- Includes protective lock
- Ability to define different applications

THERAPEUTIC APPLICATIONS

- Diseases of the joints, muscles and bones: (arthritis, discopathies, chondritis, strain and sprain of tendons, tendonitis, osteomyelitis, rheumatoid arthritis, fibromyalgia, osteochondrosis of the vertebrae in the recurrent stage, ...).
- Cardiovascular diseases: (hypertension, myocardial ischemia and coronary artery disease, varicose veins, thrombophlebitis and angiopathies, etc.).
- Lung diseases: (asthma, bronchitis, bronchopneumonia, empyema, pleurisy, etc.).
- Endocrine and metabolic diseases: (diabetes, obesity, uric acid, etc.).
- Ear, nose and throat diseases: (rhinitis, sinusitis, otitis, pharyngitis, laryngitis, tinnitus, oral plague, lip herpes, geographical tongue, etc.).
- Gynecological diseases: (Chronic pelvic pain, pelvic adhesions after surgery and endometriosis, salpingitis, vaginal ulcers, Cold-tempered, Bartholin, infertility, etc.).
- Surgery: (burn, colloid, postoperative pain, rapid return of organ function after surgery, accelerate wound healing, reduce inflammation and infection, increase the life of skin grafts, etc.).
- Pediatric diseases: (pneumonia, otitis, pharyngitis, laryngitis, burns, pain, etc.).
- Gastrointestinal diseases: (gastric and duodenal ulcers, gastritis, colitis, hepatitis, pancreatitis, hemorrhoids, etc.).
- Skin diseases: (acne, eczema, alopecia and hair loss, dandruff, vitiligo, psoriasis, striae, lightening and rejuvenation of the skin, etc.).
- Kidney diseases: (pyelonephritis, cystitis, urticaria, prostatitis, etc.).
- Neurological diseases: (radiculopathies, neuropathies, nerve repair, myopathies, migraines, carpal tunnel syndrome, etc.).

SUPPORT FEATURES

- One-year warranty and full after-sales
- Product delivery with installation.
- Complete training with safety tips by expert trainers.
- Maintenance of all products in case of technical issues.
- Product guide with detail explanation.

PROP1 SPECIFICATION

Prop Model	Single
Laser Type	Laser Diode 850 nm
Output Power	1×200mW
Divergence	8×15°
Pulse Width	200ns
Duty Cycle	9%
Exposure Area	0.25 cm ²
Intensity	0.4(W/cm ²)

PROP2 SPECIFICATION

Prop Model	Complex
Laser Type	Laser Diode 660 nm, LED 670 nm
Output Power	5×100mW + 4×10mW
Divergence	(Laser Diode) – 8×15°& (LED)12°
Pulse Width	(Laser Diode) 200ns & (LED) 45us–450ms
Duty Cycle	9% (Diode Laser) & 90% (LED)
Exposure Area	5 cm ²
Intensity	0.1 (W/cm ²)

Device Specifications

User Interface	LCD
Electrical Requirements	Chargeable by 220V AC/single phase<1A
Dimension (W×D×H)	40cmx26cmx9cm
Weight	2.2kg



A large field of solar panels under a clear blue sky. The panels are arranged in rows, stretching towards the horizon. The foreground shows the grass and the bottom of the panel frames.

Renewable Enrtygy

ABOUT US

In July 2008, we noticed about the absence of solar technology and applications in the Iranian market. After the primary research, AriaSolar was established by Dr. Jamshid Sabbaghzadeh, intending to enter the Iranian solar market.

AriaSolar is well-known for its extensive activities. Having high expertise and various experiences made us the best option for the country's unique projects in the field of installation and design of solar projects. As a member of the Iranian Electricity Syndicate, the company has become a suitable and trusted advisor to the government.

In May 2021, the board members decided to join the Danial Moj company as a subset intending to extend its knowledge and vision of power for larger projects.

The Founders

Dr Jamshid Sabbaghzadeh was born in Birjand, a sunny and southern city of Iran, in January 1960. He got his master's degree in electronic engineering from university of Texas at Austin and got his PhD in laser physics from the same university in 1994. He came back to Iran at the same year and established a very famous and big center in laser science and technology, for what he became internationally famous as a nominated scientist in this field. He published more than 150 papers in laser, nanotechnology, and Nano-solar materials.

Due to continuous growth of solar energy market in the world, and the large benefit of this kind of energy to human being, he became one of the big supporters of solar energy in Iran. He talked to many famous authorities in the country, such as the president of Iran, and the minister of electricity, to encourage them to know and support this kind of energy versus others.

Now, he deeply understands that solar energy will become very cheap, easily available, and will bring a brilliant future for market-oriented people, as well as for clean environmental supporters. Therefore, he found a private company in his hometown, in Birjand, and stop to have any job, but solar energy.

ABOUT ARIASOLAR

AriaSolar as a Manufacturer of solar panels with the aim of the supplying of interior needs And with the prospect of exporting to regional countries (Iraq, Afghanistan, Central Asia and ...) was established in January 2009 And inaugurated in the second six months of the 2009 after machinery installing in a land with area of 5800 square meters with Employing over 60 people In Iran, Southern Khorasan province, Birjand with Producing panels from 10 watts to 200 watts and has started to work . potential Capacity of this factory is 10 MW per year, and it is possible to expand to 30 MW (with Starting 2nd phase of factory soon) And at a development of factory, personals number will be expandable to 150 employees. manufactured Panels of company by selecting of advanced and mechanized machinery have global standard quality and are compositable with foreign samples and some European ones. The company utilizes the young professionals and skilled personals, operate the entire design, installation, and implementation process of all solar systems (residential, industrial, agricultural and ...).

AriaSolar Factory achieves standards such as Iranian national standard with the number of 29/70/001.

Coordination and participation of different companies with AriaSolar, has eliminated the need for using foreign products, and the process of design, installation and equipment is completely based in Iran.

Daniel Moj Company can design and produce solar packages for home, industrial, agricultural, military and lighting applications by using precision engineering software. Creating a bal-

ance between nature, man and technology is the company's main goal in developing a culture of renewal.

As a member of IEIS (Iran Electrical Industry Syndicate) and IREA (Iran Renewable Energy Association), along with partners from other companies, we had an active role in providing solutions for suitable vision of new energies in governmental programs.

Our main activities were:

- Supervisory on designing modern systems in optimizing energy consumption.
- Supervisory in solar panels manufacturing.
- Supervisory and designing solar applications.
- Design, installation, and analysis of solar power plants.

Familiarity of the company's experts with world-renowned brands and obtaining the opinions of foreign experts in systems design has caused this company to be considered as a trusted expert in many government offices and supervisory companies. With good customer service and reasonable prices, the company has always tried to retain customers and satisfy them.

AriaSolar Manufacturing Group is very proud that in situations of fossil fuels declines, and even is not enough for next generation is active using knowledge and technology and try to use new energy. we are producing photovoltaic solar panels, using clean and unique (solar) energy that is one of the greatest god's gifts and we are achieved to customize this energy in our country and human society and by this way we play important role in achieving clean and free of pollutants air.

OUR SERVICES

We offer our services in four main fields:

- Clean Energy School: Ready to provide any kind of specialized software training and basic concepts of solar energy to those interested.
- Providing portable solar packages: Portable solar power supply suitable for areas away from the grid, to supply electricity.
- Providing solar lighting systems: Replacing existing lighting systems, without the need for grid electricity to illuminate passages, roads and points away from the grid.
- Supply of solar power plant equipment: Supply of all equipment, including panel, inverter, charge controller and accessories.

Goals and Visions

- Improving the quality of team services in all areas of activity to gain first place.
- Upgrading the supply of equipment and training with the aim of gaining the position of the top brand in the market.
- Gaining a prestigious position in international markets.
- Attracting foreign investors and creating new capacities.
- Continuous improvement of the customer service system.
- Offering new products at competitive prices.

PROJECTS

The most major projects that our companies have done in this past three years are mentioned as below.

Name	Location	Contracted with	Notes
42 KW solar park	Mashhad	AriaSolar	Designed by DATIIS
1 KW Khaghani Park	Tabriz	DATIIS	
12 KW solar Park	Tehran	AriaSolar	Design & installation by DATIIS
Solar lightning	Tehran	Sorena	
Solar Water Pump	Arak	Sorena	Designed by DATIIS
1 KW solar plant	Kerman	Sorena	
Sarayan Village	Birjand	AriaSolar	

42 KW on Grid

Power:	42 Kwatt
System:	On Grid Photovoltaic system
Location:	Mashhad, Iran
Ordered:	Khorasan Regional Electric company
Contract date:	4 April 2011
Ending date:	28 June 2011
Solar Panel:	AriaSolar AS-M200
Charge Controller:	NA
Inverter:	SMA Sunny Boy 7000TL
Data Logger:	SMA Sunny Webbox
Tracker:	Lorentz ETA 1500

This project which was placed in Mashhad is now the largest solar power plant in Iran. It is not so big due to the world scale, but in this country, it can be a good start for trust. This project will soon be expanded into 110 Kw.

15KW Birjand University

Power:	15 Kwatt
System:	On Grid Photovoltaic system
Location:	Birjand, Mashhad, Iran
Ordered:	Birjand University
Contract date:	18 August 2012
Ending date:	10 September 2012
Solar Panel:	AriaSolar AS-M200
Charge Controller:	NA
Inverter:	SMA Tripower 15000TL
Data Logger:	SMA Sunny Webbox
Tracker:	NA

This project was designed and constructed for the purpose of education and research of students and academics of Birjand with the funding of the Vice Chancellor for Research.

15KW Arak University

Power:	15 Kwatt
System:	On Grid Photovoltaic system
Location:	Markazi, Arak
Ordered:	Arak University
Contract date:	14 January 2013
Ending date:	11 March 2013
Solar Panel:	AriaSolar AS-M200
Charge Controller:	NA
Inverter:	SMA Sunny Boy 7000TL
Data Logger:	SMA Sunny Webbox
Tracker:	NA

Arak Water Pump

Power:	1920 Watt
System:	Solar Water Pump
Location:	Markazi State, Arak
Ordered:	Markazi Water and Waste company
Contract date:	11 December 2010
Ending date:	27 December 2010
Solar Panel:	Lorentz LA80
Controller:	Lorentz
Water Pump:	Lorentz PC1800 CSJ12
Well depth:	25 meters
Water needed:	50-meter square per day

This project was located near arak to supply the water of a village. This water pump was installed in three days by the Sorena team.

Kerman Project

Power:	960 Watt
System:	On Grid Photovoltaic
Location:	Kerman
Ordered:	University of Kerman
Contract date:	28 December 2010
Ending date:	11 February 2011
Solar Panel:	Lorentz LA80
Charge Controller:	EPIP603 – 60A
Inverter:	Cotek 700 watt
Battery:	Optima 12V-45A
Tracker:	Lorentz ETA400

Due to the request made by the Kerman University, this system was designed and installed as a pilot system for student activities and studies. They needed this system not to produce electricity, but to study on how to improve solar systems in that territory.

12 KW Azad Universities

Power:	12 Kwatt
System:	Off Grid Photovoltaic
Location:	Tehran
Ordered:	Islamic Azad University – Science and research branch
Contract date:	16 January 2010
Ending date:	28 August 2010
Solar Panel:	AriaSolar AS-M120
Charge Controller:	Steca Power Tarom 4140
Inverter:	Steca
Data Logger:	None
Tracker:	None

This project was the company's first project and was designed for a case study for university students. The interesting point is that this power plant with 12.9 kW was the largest power plant outside of Iran at that time.

Sarayan Village

Power:	14 Kwatt
System:	Photovoltaic for villages
Location:	South Khorasan State – Khooshnari village
Ordered:	Khorasan Regional Electric company
Contract date:	19 December 2010
Ending date:	19 March 2011
Solar Panel:	AriaSolar AS-M90
Charge Controller:	EPIP602 60A
Inverter:	Cotek 1500W
Data Logger:	NA
Battery:	Optima 12V 200A

This village was chosen by the government to be solar powered. Since this village was in the Khorasan state, the government decided to supply the applications from the AriaSolar Company.

Khaghani Park

Power:	1 Kwatt
System:	Photovoltaic – Off grid with backup
Location:	Tabriz
Ordered:	Tabriz municipality
Contract date:	2 September 2010
Ending date:	26 January 2011
Solar Panel:	AriaSolar AS-M100
Charge controller:	EPIP602 – 40A
Inverter:	Morning Star
Battery:	Faran 200A
Data logger:	EPIP

This Park uses approximately 400 watts for the luminaries. And it's all used by 400 pcs of 1 Watt Power LED. A 1 KW system, due to the weather conditions, is just enough for turning the lights on.

Saba Battery Solar lightning

Power:	2040 Watt
System:	Solar Lighting
Location:	Saba City
Ordered:	Saba Battery manufacturing
Contract date:	17 September 2010
Ending date:	29 January 2011
Solar Panel:	AriaSolar AS-M60
Charge Controller:	EPSolar 10A
Lamp:	LVD Venus 40 Wdc
Lamp height:	4 Meter

Saba Battery is one of the well-known battery manufacturers in Iran which is authorized under the governmental organizations. This project was asked on their request for supplying the lightning of the street ways inside the factory area.

Solar Conex

Power:	900 Watt
System:	Photovoltaic – Off Grid
Location:	Birjand, South Khorasan
Ordered:	AriaSolar
Contract date:	–
Ending date:	–
Solar Panel:	AriaSolar AS-M80
Charge Controller:	EPIP603 – 60A
Inverter:	300 Watt
Data Logger:	EPIP
Battery:	Optima 12v

This is a full DC caravan designed by DATIIS Company. This caravan is supplied by applications such as refrigerator, television, fan, telecommunication etc. Which all use DC voltage and this caravan are free of inverter.

Solar Villa

Power:	800 Watt
System:	Photovoltaic – Off Grid
Location:	Damavand, Tehran
Ordered:	Mr. Ghomizadeh
Contract date:	–
Ending date:	–
Solar Panel:	AriaSolar AS-M100
Charge Controller:	EPIP30
Inverter:	MorningStar
Data Logger:	EPIP
Battery:	Optima 100Ah

In Iran some villa owners love to use solar systems, even if they are near the electric grid. It was so surprising that Mr. Ghomizadeh in Damavand, as an old local citizen is so eager in using these applications.

Michinak Hybrid Water Pump

Power:	7.8 KW
System:	Solar Water Pump
Location:	Michinak, Saveh
Ordered:	Arak Water Company
Contract date:	–
Ending date:	–
Solar Panel:	AriaSolar AS-M200
Charge Controller:	Erodyne
Water Pump:	Lorentz PS4000
Wind Turbine:	Longbow 1Kw
Well Depth:	25 meters
Water:	80 square meter per day

This is the first hybrid water pump in Iran. The situation for designing a hybrid system was difficult since there were no documents about an experience like this. Therefore, a special regulator was designed by Erodyne Company.

Dargaz Water Pump

Power:	7.8 Kw
System:	Solar Water Pump
Location:	Dargaz, Khorasan State
Ordered:	Mashhad Water Company
Contract date:	–
Ending date:	–
Solar Panel:	AriaSolar AS-M200
Charge Controller:	Lorentz
Water Pump:	Lorentz PS4000
Well Depth:	45 meters
Water:	40 square meter per day

Tehran University Water Pump

Power:	640 Watt
System:	Solar water pump
Location:	Karaj
Ordered:	Tehran University
Contract date:	-
Ending date:	-
Solar Panel:	Lorentz LA80
Controller:	Lorentz
Water Pump:	Lorentz Boost 150
Well depth:	20 meters
Water pumped:	2-meter square per day

This project was a study case for the agriculture department of the Tehran University.

Solar House

Power:	810 Watt
System:	Photovoltaic – Off Grid
Location:	Tehran
Ordered:	Mr. MoadabShoar
Contract date:	-
Ending date:	-
Solar Panel:	AriaSolar AS-M90
Charge Controller:	Steca
Inverter:	Morning Star
Data Logger:	EPIP
Battery:	Optima 12V

ARIASOLAR SALES

AriaSolar has supplied many projects in Iran that the largest projects that have been supplied can be named as bellow.

These projects have been installed or starting to install, but they are the biggest projects that have been founded in Iran.ۛ

Buyer	Buying Amount
1 Renewable Energy Organization of Iran	18 Kw solar Panel
2 Khorasan Regional Electric company	42 Kw solar Panel
3 Mabna Company	28 Kw solar Panel
4 Mobtakeran Company	20 Kw solar Panel
5 Fardis Power of Company	158 Kw solar Panel
6 Hafez Afzar Company	20 Kw solar Panel
7 Kan passway of Tehran	680 solar light poles

Participator	Club name	post
DATIIS	Iran's Power Industry Syndicate	Association board member of renewable energy
AriaSolar	Coordinating Center for the use of solar cells	Junior Member

Date	Exhibition	Place	Participator	Brand
Jan 2011	Localization and self-sufficiency industrial exhibition	Tehran	AriaSolar	AriaSolar
Mar 2010	The first specialized exhibition and conference on renewable energy	Tehran	AriaSolar	AriaSolar
Mar 2010	The first specialized exhibition and conference on renewable energy	Tehran	DATIIS	Lorentz
Oct 2009	Third specialized exhibition of water and electricity and gas industry	Birjand	AriaSolar	AriaSolar
Apr 2010	Exhibition on export capabilities of Iran	Birjand	AriaSolar	AriaSolar
Nov 2009	Biennial Exhibition of Electricity	Tehran	AriaSolar	AriaSolar
Jul 2011	Energy saving fair	Tehran	SORENA	AriaSolar

SOLAR EXHIBITIONS

Till now three solar exhibitions with the major of renewable energy or energy were held in Iran which our team has participated in all of them. In March 2010, this company had two booths in the Solar Exhibition, one for AriaSolar products and another for Lorentz products and the important thing in this event was that for the first time, an Outboard company (Lorentz) had its own booth in the solar and renewable energy exhibition in Iran.

Lorentz booth

After this exhibition many companies, including small and large ones, have been attended toward Lorentz Company and the capability of its applications. The attention was so obvious that most of the governmental and private companies tried to import the Lorentz applications on their own. But in this case Sorena has imported and advertised more than any company in Iran and most of the governmental companies know Sorena as the only sales distributor of Lorentz in Iran.

Eng. Morteza Sabbaghzadeh can be named as the most well-known selling adviser for the Lorentz applications. One of the companies that have used Morteza's advising in installing a solar pump is the Faran Company which installed a solar water pump in Arak too. The design was given to the government by Sorena Company.

AriaSolar booth

AriaSolar as the biggest solar panel producer in Iran participated in this exhibition better and more powerful than any year. 2 Exhibitions in one year, was just the advertising chance that we needed to gather some attention toward AriaSolar and the solar technology.

GOLD 100KW

DMSPPONGOL100K



DESCRIPTION

This system converts sunlight into electrical energy using special solar panels. The electricity generated in this system is converted to the desired and standard voltage by a DC to AC converter (inverter) and injected into the distribution network. With this system, it is possible for you to earn money from the sale of electricity. Also, with the use of hybrid inverters and Deep Cycle batteries, it is possible to use electricity for you in case of power outage.

OUTSTANDING CHARACTERS

- Easy installation, easy to use
- No need for fuel, very low maintenance cost
- Has electrical protection capability
- No pollution and noise
- Return on investment less than 5 years
- Equipped with MPPT system and maximum efficiency
- Ability to monitor using a special application

APPLICATIONS

- Free electricity supply required from solar energy
- Possibility to earn money from selling electricity
- Power supply required in the event of a power outage

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2 year
- Battery warranty 1 year (if available)
- Support 24/7
- Service (repair / replacement) 3 years

TOOLS AND EQUIPMENT

- Structure (depending on the installation location)
- DC cable
- AC cable
- Connections required
- DC Box
- DC and AC switchgear
- Hybrid system (optional)
- Battery (optional)
- Protection systems
- Monitoring software

INVERTER SPECIFICATIONS

Inverter brand	Top Brand Inverter
Inverter power (KW)	25
Number of inverters used	4

PANEL SPECIFICATIONS

Panel dimensions (mm)	1956 x 992 x 40
Panel power (W)	390
Number of panels	256
Panel type	Mono

GOLD 50KW

DMSPPONGOL050K



50KW

ON GRID

DESCRIPTION

This system converts sunlight into electrical energy using special solar panels. The electricity generated in this system is converted to the desired and standard voltage by a DC to AC converter (inverter) and injected into the distribution network. With this system, it is possible for you to earn money from the sale of electricity. Also, with the use of hybrid inverters and Deep Cycle batteries, it is possible to use electricity for you in case of power outage.

OUTSTANDING CHARACTERS

- Easy installation, easy to use
- No need for fuel, very low maintenance cost
- Has electrical protection capability
- No pollution and noise
- Return on investment less than 5 years
- Equipped with MPPT system and maximum efficiency
- Ability to monitor using a special application

APPLICATIONS

- Free electricity supply required from solar energy
- Possibility to earn money from selling electricity
- Power supply required in the event of a power outage

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2 year
- Battery warranty 1 year (if available)
- Support 24/7
- Service (repair / replacement) 3 years

TOOLS AND EQUIPMENT

- Structure (depending on the installation location)
- DC cable
- AC cable
- Connections required
- DC Box
- DC and AC switchgear
- Hybrid system (optional)
- Battery (optional)
- Protection systems
- Monitoring software

INVERTER SPECIFICATIONS

Inverter brand	Top Brand Inverter
Inverter power (KW)	25
Number of inverters used	2

PANEL SPECIFICATIONS

Panel dimensions (mm)	1956 × 992 × 40
Panel power (W)	390
Number of panels	128
Panel type	Mono

GOLD 20KW

DMSPONGOL020K



DESCRIPTION

This system converts sunlight into electrical energy using special solar panels. The electricity generated in this system is converted to the desired and standard voltage by a DC to AC converter (inverter) and injected into the distribution network. With this system, it is possible for you to earn money from the sale of electricity. Also, with the use of hybrid inverters and Deep Cycle batteries, it is possible to use electricity for you in case of power outage.

OUTSTANDING CHARACTERS

- Easy installation, easy to use
- No need for fuel, very low maintenance cost
- Has electrical protection capability
- No pollution and noise
- Return on investment less than 5 years
- Equipped with MPPT system and maximum efficiency
- Ability to monitor using a special application

APPLICATIONS

- Free electricity supply required from solar energy
- Possibility to earn money from selling electricity
- Power supply required in the event of a power outage

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2 year
- Battery warranty 1 year (if available)
- Support 24/7
- Service (repair / replacement) 3 years

TOOLS AND EQUIPMENT

- Structure (depending on the installation location)
- DC cable
- AC cable
- Connections required
- DC Box
- DC and AC switchgear
- Hybrid system (optional)
- Battery (optional)
- Protection systems
- Monitoring software

INVERTER SPECIFICATIONS

Inverter brand	Top Brand Inverter
Inverter power (KW)	25
Number of inverters used	1

PANEL SPECIFICATIONS

Panel dimensions (mm)	1956 x 992 x 40
Panel power (W)	380
Number of panels	53
Panel type	Mono

GOLD 10KW

DMSPPONGOL010K



DESCRIPTION

This system converts sunlight into electrical energy using special solar panels. The electricity generated in this system is converted to the desired and standard voltage by a DC to AC converter (inverter) and injected into the distribution network. With this system, it is possible for you to earn money from the sale of electricity. Also, with the use of hybrid inverters and Deep Cycle batteries, it is possible to use electricity for you in case of power outage.

OUTSTANDING CHARACTERS

- Easy installation, easy to use
- No need for fuel, very low maintenance cost
- Has electrical protection capability
- No pollution and noise
- Return on investment less than 5 years
- Equipped with MPPT system and maximum efficiency
- Ability to monitor using a special application

APPLICATIONS

- Free electricity supply required from solar energy
- Possibility to earn money from selling electricity
- Power supply required in the event of a power outage

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2 year
- Battery warranty 1 year (if available)
- Support 24/7
- Service (repair / replacement) 3 years

TOOLS AND EQUIPMENT

- Structure (depending on the installation location)
- DC cable
- AC cable
- Connections required
- DC Box
- DC and AC switchgear
- Hybrid system (optional)
- Battery (optional)
- Protection systems
- Monitoring software

INVERTER SPECIFICATIONS

Inverter brand	Top Brand Inverter
Inverter power (KW)	5
Number of inverters used	2

PANEL SPECIFICATIONS

Panel dimensions (mm)	1644 x 992 x 35
Panel power (W)	270
Number of panels	39
Panel type	Mono

GOLD 5KW

DMSPPONGOL05KX



5KW

ON GRID

DESCRIPTION

This system converts sunlight into electrical energy using special solar panels. The electricity generated in this system is converted to the desired and standard voltage by a DC to AC converter (inverter) and injected into the distribution network. With this system, it is possible for you to earn money from the sale of electricity. Also, with the use of hybrid inverters and Deep Cycle batteries, it is possible to use electricity for you in case of power outage.

OUTSTANDING CHARACTERS

- Easy installation, easy to use
- No need for fuel, very low maintenance cost
- Has electrical protection capability
- No pollution and noise
- Return on investment less than 5 years
- Equipped with MPPT system and maximum efficiency
- Ability to monitor using a special application

APPLICATIONS

- Free electricity supply required from solar energy
- Possibility to earn money from selling electricity
- Power supply required in the event of a power outage

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2 year
- Battery warranty 1 year (if available)
- Support 24/7
- Service (repair / replacement) 3 years

TOOLS AND EQUIPMENT

- Structure (depending on the installation location)
- DC cable
- AC cable
- Connections required
- DC Box
- DC and AC switchgear
- Hybrid system (optional)
- Battery (optional)
- Protection systems
- Monitoring software

INVERTER SPECIFICATIONS

Inverter brand	Top Brand Inverter
Inverter power (KW)	5.5
Number of inverters used	1

PANEL SPECIFICATIONS

Panel dimensions (mm)	1956 × 992 × 40
Panel power (W)	395
Number of panels	16
Panel type	Mono

RELAX 10KW

DMSPPOFREL10KX



DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to use the required equipment and tools according to the power of the system

OUTSTANDING CHARACTERS

- Fast installation, easy to use
- No need for fuel, very low maintenance cost
- Long lifespan of solar panel
- Intelligent control of battery charge and system status
- Has electrical protection capabilities
- Low price to performance
- No pollution and noise, environmentally friendly
- Ability to charge batteries by other energy-hybrid sources (optional)

APPLICATIONS

- Urban planning and road construction complexes and equipping workshops
- Electricity to remote and deprived rural areas
- Electricity supply to residential units away from the network and without electricity
- Electricity supply to villas and gardens outside the scope of the national distribution network

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2year
- Battery warranty 1 year
- Support 24/7

OVERVIEW

Daily power output (W)	10000
Charging time (h)	8
Space required (m2)	26
Battery capacity (kW)	2.3
Days cloudy (day)	2

ELECTRICAL SPECIFICATION

Inverter model	Top Brand Inverter
Inverter power (W)	4000
Charger controller model	MPPT
Charge controller (A)	60
Charge Controller (V)	48

SOLAR & BATTERY SPECIFICATION

Panel dimensions	1964 × 992 × 35 mm
Number of panels	12
Panel model (W)	330 Mono
Battery voltage (V)	12
Battery storage (Ah)	200
Number of batteries (AH)	16* 100
Battery type	Lead acid

USABLE TOOLS

The device	Power (W)	Number	Hour
Small hotel refrigerator	420	1	12
Lamps LED:	9	20	10
Fan:	55	1	5
TV LED:	100	1	4
CCTV:	2	2	24
Water Cooler:	700	1	6
water pump:	1000	1	4
Laptop:	45	1	4

* The use of high-consumption appliances such as air conditioners, kettles, microwave ovens, irons and electric heaters is not allowed.

RELAX 3KW

DMSPPOFREL03KX



DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to use the required equipment and tools according to the power of the system

OUTSTANDING CHARACTERS

- Fast installation, easy to use
- No need for fuel, very low maintenance cost
- Long lifespan of solar panel
- Intelligent control of battery charge and system status
- Has electrical protection capabilities
- Low price to performance
- No pollution and noise, environmentally friendly
- Ability to charge batteries by other energy-hybrid sources (optional)

APPLICATIONS

- Urban planning and road construction complexes and equipping workshops
- Electricity to remote and deprived rural areas
- Electricity supply to residential units away from the network and without electricity
- Electricity supply to villas and gardens outside the scope of the national distribution network

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2year
- Battery warranty 1 year
- Support 24/7

OVERVIEW

Daily power output	Winter 4 kWh / Summer 7.6KWh
Charging time (h)	8
Space required (m2)	10
Battery capacity (Ah)	1600
Days cloudy (day)	3

ELECTRICAL SPECIFICATION

Inverter model	Top Brand Inverter
Inverter power (W)	4000
Charger controller model	MPPT
Charge controller (A)	80
Charge Controller (V)	48

SOLAR & BATTERY SPECIFICATION

Panel dimensions	35 × 990 × 1960 mm
Number of panels	5
Panel model	330 Mono
Battery voltage (V)	48
Battery storage (kWh)	19
Number of batteries (Ah)	16* 100
Battery type	Lead acid

USABLE TOOLS

device	Power (W)	Number	Hour
Small hotel refrigerator	420	1	12
LED Lamps:	15	10	5
Fan:	55	1	4
LED TV:	100	1	3
Camera:	25	5	24
Water Cooler:	1000	1	4
water pump:	600	1	2
Laptop:	45	1	2

* The use of high-consumption appliances such as air conditioners, kettles, microwave ovens, irons and electric heaters is not allowed.

RELAX 2KW

DMSPPOFRELO2KX



DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to use the required equipment and tools according to the power of the system

OUTSTANDING CHARACTERS

- Fast installation, easy to use
- No need for fuel, very low maintenance cost
- Long lifespan of solar panel
- Intelligent control of battery charge and system status
- Has electrical protection capabilities
- Low price to performance
- No pollution and noise, environmentally friendly
- Ability to charge batteries by other energy-hybrid sources (optional)

APPLICATIONS

- Urban planning and road construction complexes and equipping workshops
- Electricity to remote and deprived rural areas
- Electricity supply to residential units away from the network and without electricity
- Electricity supply to villas and gardens outside the scope of the national distribution network

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2year
- Battery warranty 1 year
- Support 24/7

OVERVIEW

Daily power output (W)	2000
Charging time (H)	6
Space required (m2)	4
Battery capacity (Ah)	620
Days cloudy (days)	1

ELECTRICAL SPECIFICATION

Inverter model	Top Brand Inverter
Inverter power (W)	2000
Charger controller model	MPPT
Charge controller (A)	30
Charge Controller (V)	24

SOLAR & BATTERY SPECIFICATION

Panel dimensions	1940 × 980 × 40 mm
Number of panels	2
Panel model	330 Mono
Battery voltage (V)	12
Battery storage (Ah)	155
Number of batteries (Ah)	4 *100
Battery type:	Lead acid

USABLE TOOLS

Device	Power (W)	Number	Hour
Small hotel refrigerator	70	1	12
LED Lamps:	6	10	8
Fan:	-	-	-
LED TV:	100	2	4
Camera:	20	2	24
Water Cooler:	50	1	3
Water pump:	-	-	-
Laptop:	45	1	2

* The use of high-consumption appliances such as air conditioners, kettles, microwave ovens, irons and electric heaters is not allowed.

RELAX 1KW

DMSPPOFRELO1KX



DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to use the required equipment and tools according to the power of the system

OUTSTANDING CHARACTERS

- Fast installation, easy to use
- No need for fuel, very low maintenance cost
- Long lifespan of solar panel
- Intelligent control of battery charge and system status
- Has electrical protection capabilities
- Low price to performance
- No pollution and noise, environmentally friendly
- Ability to charge batteries by other energy-hybrid sources (optional)

APPLICATIONS

- Urban planning and road construction complexes and equipping workshops
- Electricity to remote and deprived rural areas
- Electricity supply to residential units away from the network and without electricity
- Electricity supply to villas and gardens outside the scope of the national distribution network

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2year
- Battery warranty 1 year
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

Daily power output:	Winter 2.3 kWh / Summer 4.4KWh
Charging time (H)	6
Space required (m2)	4
Battery capacity (Ah)	600
Bays cloudy: (day)	2

ELECTRICAL SPECIFICATION

Inverter model	Top Brand Inverter
Inverter power (W)	2000
Charger controller model	MPPT
Charge controller (A)	30
Charge Controller (V)	24

SOLAR & BATTERY SPECIFICATION

Panel dimensions	1964 × 992 × 35 mm
Number of panels	2
Panel model	330 Mono
Battery voltage (V)	12
Battery storage (kWh)	7.2
Number of batteries (Ah)	6* 100
Battery type	Lead acid

USABLE TOOLS

device	Power (W)	Number	Hour
Small hotel refrigerator	350	1	12
LED Lamps:	9	10	8
Fan:	-	-	-
LED TV:	100	1	2
Camera:	-	-	-
Water Cooler:	-	-	-
water pump:	350	1	1
Laptop:	45	1	2

* The use of high-consumption appliances such as air conditioners, kettles, microwave ovens, irons and electric heaters is not allowed.

RELAX 600W

DMSPPOFREL600W



DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to use the required equipment and tools according to the power of the system

OUTSTANDING CHARACTERS

- Fast installation, easy to use
- No need for fuel, very low maintenance cost
- Long lifespan of solar panel
- Intelligent control of battery charge and system status
- Has electrical protection capabilities
- Low price to performance
- No pollution and noise, environmentally friendly
- Ability to charge batteries by other energy-hybrid sources (optional)

APPLICATIONS

- Urban planning and road construction complexes and equipping workshops
- Electricity to remote and deprived rural areas
- Electricity supply to residential units away from the network and without electricity
- Electricity supply to villas and gardens outside the scope of the national distribution network

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2year
- Battery warranty 1 year
- Support 24/7

OVERVIEW

Daily power output	Winter 1.3 kWh / Summer 1.9 kWh
Charging time (h)	5
Space required (m2)	3.5
Battery capacity (Ah)	400
Days cloudy (day)	36

ELECTRICAL SPECIFICATION

Inverter model	Top Brand Inverter
Inverter power (W)	700
Charger controller model	MPPT / PWM
Charge controller (A)	20
Charge Controller (V)	12 or 24

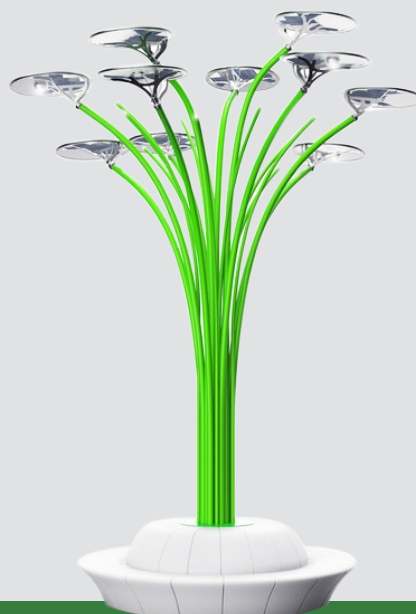
SOLAR & BATTERY SPECIFICATION

Panel dimensions	1650 * 992 * 35 mm
Number of panels	2
Panel model	270 Poly
Battery voltage (V)	12
Battery storage (kWh)	4.8
Number of batteries (Ah)	4 * 100
Battery type	Lead acid

USABLE TOOLS

device	Power (W)	Number	Hour
Small hotel refrigerator	100	1	12
LED Lamps:	5	5	6
Fan:	-	-	-
LED TV:	30	1	2
Camera:	-	-	-
Water Cooler:	-	-	-
water pump:	-	-	-
Laptop:	45	1	2

* The use of high-consumption appliances such as air conditioners, kettles, microwave ovens, irons and electric heaters is not allowed.



ROSE

DMSAPELTREROXX

Description

DanialMoj Company has turned a work of art using solar panels into a solar technology that can be used for various purposes. This product is a biotechnology-based structure, including solar energy, which has various capabilities as well as unique beauty.

Outstanding Characters

- Lighting using LED
- No pollution and noise, environmentally friendly
- No need for fuel, maintenance
- Easy installation
- Intelligent control
- Free energy source for charging mobile appliances
- USB output
- Wireless charging
- WIFI Router (optional)
- Reduction of 9400kg of CO₂ production per year

Applications

- Urban Elements (Beautiful City)
- Beaches and recreation centers
- Airports and train stations
- Parks and Gardens
- Universities and schools
- Exhibitions and sales centers
- Towns and large residential complexes
- Outdoor hospitals

Support and Warranty

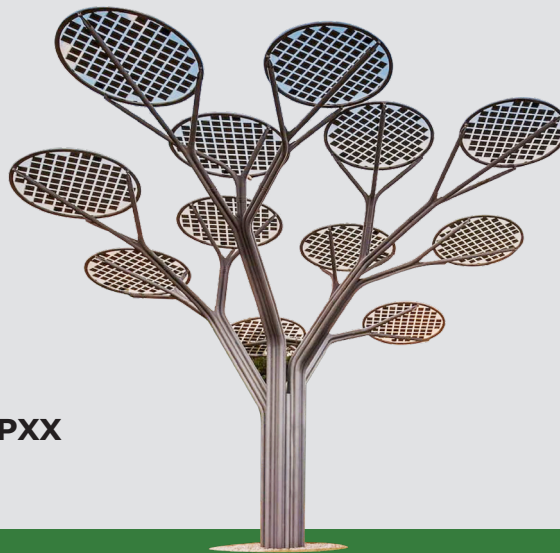
- Solar panel warranty 10 years
- Battery warranty 1 years
- Support 24/7
- Services (repair/replacement) 3 years

Overview

Solar Panel size (mm)	770
Heads Solar	6
Heads LED	4
Stems LED	8
Maximum height (m)	6.35
Seat diameter (m)	3.1
Maximum width (m)	4.6
Structural material	Stainless steel
Bench material	Fiberglass
Number of seats	17-18

Electrical Specification

Power (W)	800
Solar Power	75W/12V
USB output	5
Power Stems LED (W)	1
Power Heads LED (W)	30
Protection	Waterproof / Short circuit
Sensor	Motion / Light
Battery Volt (V)	12
Battery Type	Lead-Acid
Battery Power (Ah)	240
Charger controller (A)	10
Charging time (h)	8



SPACE

DMSAPELTRESPXX

Description

The space solar tree is a grid-connected power plant designed and built to supply and inject energy. This tree comes to the aid of power generation plants using large cross-section solar panels with high power, and by producing 4000 watts of electricity, it is possible to supply the required electricity to each area permanently during the day, and to ensure the reliability of the network. Raises the energy needed by residents and consumers

Outstanding Characters

- Production of clean solar energy
- No pollution and noise
- Eco-friendly
- No need for fuel, maintenance
- Easy and fast installation
- Intelligent Control Protection
- Low maintenance costs
- Generates 3000 kWh of energy per year

Applications

- Urban Elements (Beautiful City)
- Beaches and recreation centers
- Beaches and recreation centers
- Airports and train stations
- Parks and Gardens
- Universities and schools
- Exhibitions and sales centers
- Small towns and villages
- Outdoor hospitals

Support and Warranty

- Solar panel warranty 10 years
- Support 24/7
- Services (repair/replacement) 3 years

Overview

Solar Panel size (mm)	2200
Heads Solar	12
Maximum height (m)	10
Required space (m2)	15
Structural material	Stainless steel

Electrical Specification

Daily power output (KWh)	8
Num Solar Panel	12
Power Panel (W)	340
Generated power (W)	4100
Panel Cell	89 Cell 3.8V
Protection	All protection standards
Inverter	On-Grid 5KW



WING

DMSAPELTREWIXX

Description

DanialMoj Company has turned a work of art using solar panels into a solar technology that can be used for various purposes. This product is a biotechnology-based structure, including solar energy, which has various capabilities as well as unique beauty.

Outstanding Characters

- Lighting using LED
- No pollution and noise, environmentally friendly
- No need for fuel, maintenance
- Easy installation
- Intelligent control
- Free energy source for charging mobile appliances
- USB output
- Wireless charging
- WIFI Router (optional)
- Reduction of 7600kg of CO2 production per year

Applications

- Urban Elements (Beautiful City)
- Beaches and recreation centers
- Airports and train stations
- Parks and Gardens
- Universities and schools
- Exhibitions and sales centers
- Towns and large residential complexes
- Outdoor hospitals

Support and Warranty

- Solar panel warranty 10 years
- Battery warranty 1 years
- Support 24/7
- Services (repair/replacement) 3 years

Overview

Solar Panel size (mm)	600*920
Heads Solar	18
Heads LED	18
Maximum height (m)	4
Seat diameter (m)	2.2
Maximum width (m2)	3.8
Structural material	Stainless steel
Bench material	stainless steel pipe
Number of seats	10-12

Electrical Specification

Power (W)	810
Solar Power	45W/6V
USB output	6
Power Heads LED (W)	1
Protection	Waterproof / Short circuit
Sensor	Motion / Light
Battery Volt	12V*2
Battery Type	AGM or Lead-Acid
Battery Power (Ah)	150
Charger controller (A)	15
Charging time (h)	6



ALPHA

DMSAPELBENALXX

Description

With the advancement of solar cell technology, it has made it possible for them to be used anywhere. This product combines a solar system and a bench to provide many capabilities to users in installed locations.

Outstanding Characters

- Ambient lighting
- No pollutants and environmentally friendly
- No need for fuel, maintenance
- Easy and fast installation
- intelligent control
- Free energy for mobile charging
- USB output
- Wireless charging & WIFI router (optional)
- Thermometer and hygrometer (optional)

Applications

- Urban Elements (Beautiful City)
- Beaches and recreation centers
- Airports and train stations
- Universities and schools
- Exhibitions and sales centers
- Towns and large residential complexes
- Outdoor hospitals
- Cycling line and Walking pathway

Support and Warranty

- Solar panel warranty 10 years
- Battery warranty 1 year
- Support 24/7
- Services (repair/replacement) 3 years

Overview

Solar panel size (mm)	500*800 2pcs
Length (mm)	1800
Width (mm)	600
Height (mm)	500
Material	stainless steel
Number of seats	2-3

Electrical Specification

Power (W)	120
Solar power	60W/10V
USB Output	4
LED Power (W)	1
Number LED	4
Protection	Waterproof / Short circuit
Battery Voltage (V)	12
Battery Type	Li-ion
Battery Power (Ah)	72
Controller (A)	10
Time Charge (h)	5

Perfect

DMSAPSLSTRPEXX



DESCRIPTION

The Perfect series is a full-fledged version of the street light sample, designed and built with the latest technology and unique features for use anywhere. The most important feature of this model is the pack of all the equipment in the lamp itself, which has caused the installation of the battery and the panel to be removed separately. Another feature is the automatic robotic cleaner that automatically cleans the installed solar panel from dirt without having to spend money on cleaning.

OUTSTANDING CHARACTERS

- Convenient and easy installation
- No need for wiring and ancillary costs
- Long-term performance without the need for maintenance and service
- Intelligent battery charge control
- Lifetime of solar panel
- Eco-friendly
- ✓ Automatic cleaning of solar panel
- Low operating costs
- Very low consumption using LED lamps
- Uniform and standard lighting

APPLICATIONS

- Use Street & Roadway & pathway Private road
- Use in Public square & Sidewalk
- Use in parks & Parking Lot

SUPPORT & WARRANTY

- Solar panel warranty 10 years
- Structural warranty 5 years
- battery warranty 2 year
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

LED base height: (M)	4-14
Lamp base diameter: (Cm)	10-15
Lamp base material:	stainless steel

Solar and battery specifications

Panel power:(W/V)	35-100/16 Mono
Panel dimensions: (Cm)	According to the power
Battery power:(Wh)	220-720
Battery voltage: (V)	li-ion or LifePO4
Cloudy day:	4-7

Lighting specifications

Total power: (W)	40-120
Voltage: (V)	16-18
Brightness: (lm)	4000-12000
Operating temperature:	-25-60
Material:	Aluminum Alloy
Dimensions:	Length: 904 to 1957 Width: 410 Height: 104
Angle adjustment:	45 °
Protection:	IP65

SPEED

DMSAPSLSTRSPXX



DESCRIPTION

This series of manufactured lighting products is designed and manufactured for use in places that require medium to large lighting. Used places such as highways and intercity roads, passages and parking lots.

OUTSTANDING CHARACTERS

- Convenient and easy installation
- No need for wiring and ancillary costs
- Long-term performance without the need for maintenance and service
- Intelligent battery charge control
- Lifetime of solar panel
- Eco-friendly
- Low operating costs
- Very low consumption using LED lamps
- Uniform and standard lighting
- Standard IP65

APPLICATIONS

- Use in a big way
- Use in passages
- ✓Use on intercity roads
- Use in large parking lots

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Structural warranty 5 years
- battery warranty 1 year
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

LED base height: (M)	7.9
Lamp base diameter: (Cm)	10 – 17
Lamp base material:	Steel

SOLAR AND BATTERY SPECIFICATION

Panel power:	110 – 180
Panel dimensions: (Cm)	120*68 – 150*68
Panel weight: (Kg)	10 – 14
Battery power:(Ah)	120 – 150
Battery voltage: (V)	12V lead acid
Cloudy day:	According to need

* Battery and panel will be added according to the number of cloudy days.

LIGHTING SPECIFICATION

Total power: (W)	30 – 80
Voltage: (V)	12 – 24
Brightness: (lm)	3950 – 9500
Weight: (Kg)	8
Material:	Aluminum is die-casting

CURVED

DMSAPSLPARCUX



DESCRIPTION

This product uses solar panels and built-in batteries to beautify and illuminate the paths of parks and urban parking lots. Due to the use of solar system and solar panels, there is no need for any wiring to supply the required power of LED lamps. Also, the material of the metal structure is made of stainless steel and has a long life and is painted with static anti-scratch paints.

OUTSTANDING CHARACTERS

- No need for wiring and ancillary costs
- Long-term performance without the need for maintenance and service
- Intelligent brightness control and battery charge
- Lifetime of solar panel
- Low operating costs
- Beautiful design and high efficiency
- Very low consumption using LED lamps
- Uniform and standard lighting
- Standard IP65

APPLICATIONS

- Use in parks
- Use in green spaces
- Use in parking lots
- Use in villas and private gardens
- Cycling and hiking trails
- Farm houses

SUPPORT & WARRANTY

- Solar panel warranty 10 years
- battery warranty 1 year
- support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

LED base height: (M)	6.2
Lamp base diameter: (Cm)	10-17
Lamp base material:	stainless steel

SOLAR AND BATTERY SPECIFICATION

Panel power:	110-180
Panel dimensions: (Cm)	150*68 - 120*68
Panel weight: (Kg)	10-13
Battery power: (Ah)	120-150
Battery voltage:	12 lead acid
Cloudy day:	According to need

* A battery must be added for each cloudy day

LIGHTING SPECIFICATION

Total power: (W)	30-40
Voltage: (V)	12-24
Brightness:	4000-5200
Weight: (Kg)	9
Material:	Aluminum is die-casting
sensor*:	Lighting / Motion

* Sensor will be custom designed.



PORTA

DMSAPSLPORPOXX

DESCRIPTION

Solar energy and solar cell technology have removed the constraints on lighting projects. This product is the only portable lighting product that is designed and presented for temporary projects of several months or several years (2 to 4 years). This is the best option in places where digging and designing a concrete base is not ideal.

OUTSTANDING CHARACTERS

- Convenient and easy installation without concreting and landscaping
- No need for wiring and ancillary costs
- Long-term performance without the need for maintenance and service
- Unique holder base design (portable forklift)
- Lifetime of solar panel
- Very low consumption using LED lamps
- Uniform and standard lighting

APPLICATIONS

- Temporary Street lights
- Temporary construction sites
- Seasonal external locations
- exhibitions
- Temporary roads
- Rental properties and places
- Drilling sites
- Music festivals
- Resorts

SUPPORT & WARRANTY

- Solar panel warranty 10 years
- battery warranty 1 year
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

LED base height: (M)	6
Lamp base diameter: (Cm)	10
Lamp base material:	Stainless steel
Platform dimensions: (Cm)	27 * 43 * 43
Platform weight: (Kg)	160

SOLAR AND BATTERY SPECIFICATION

Panel power:	110 Mono
Panel dimensions: (Cm)	120 * 68
Panel weight: (Kg)	13
Battery power: (Ah)	150
Battery voltage: (V)	12 Lead acid
Cloudy day:	According to need

* Battery and panel will be added according to the number of cloudy days.

LIGHTING SPECIFICATION

Total power: (W)	30
Voltage: (V)	12
Brightness:	3900 lm
Weight: (Kg)	8.2
Material:	Aluminum is die-casting
Sensor*:	Lighting / Motion

* Sensor will be custom designed.



LUMINA

DMSAPSLPARLMXX

DESCRIPTION

This product with a beautiful design of DanialMoj, using solar panels and a built-in battery, provides lighting for parks and urban parking lots and residential complexes. Due to the use of solar system and solar panels, there is no need for any wiring to supply the required power to the lamp. Also, the material of the metal structure is made of stainless steel and has a long life and is painted with static anti-scratch paints.

OUTSTANDING CHARACTERS

- Convenient and easy installation
- No need for wiring and ancillary costs
- Long-term performance without the need for maintenance and service
- Intelligent brightness control and battery charge
- Lifetime of solar panel
- Low operating costs
- Beautiful design and high efficiency
- Very low consumption using LED lamps
- Uniform and standard lighting
- Standard IP65

APPLICATIONS

- Use in parks
- Use in green spaces
- Use in parking lots
- Use in villas and private gardens
- Cycling and hiking trails

SUPPORT & WARRANTY

- Solar panel warranty 10 years
- battery warranty 1 year
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

LED base height: (M)	6.2
Lamp base diameter: (Cm)	10 / 20
Lamp base material:	stainless steel

SOLAR AND BATTERY SPECIFICATION

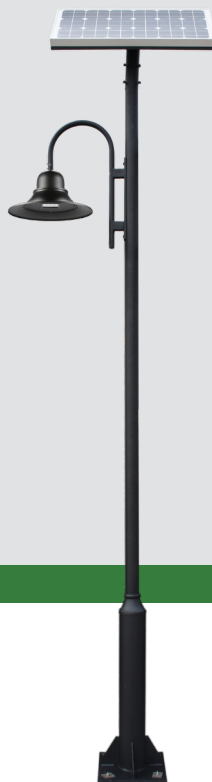
Panel power:	110-180
Panel dimensions: (Cm)	150*68 - 120*68
Panel weight: (Kg)	10-13
Battery power: (Ah)	120-150
Battery voltage: (V)	12 lead acid
Cloudy day:	According to need

* A battery must be added for each cloudy day

LIGHTING SPECIFICATION

Total power: (W)	30~80
Voltage: (V)	12-24
Brightness: (lm)	2300-7800
Weight:	8-12
Material:	Aluminum is die-casting
sensor*:	Lighting / Motion

* Sensor will be custom designed.



LUX

DMSAPSLPARLUX

DESCRIPTION

This product with a beautiful design of DanialMoj, using solar panels and a built-in battery, provides lighting for parks and urban parking lots and residential complexes. Due to the use of the solar system, there is no need for any wiring to supply the required power to the lamp. Also, the material of the metal structure is made of stainless steel and has a long life and is painted with static anti-scratch paints.

OUTSTANDING CHARACTERS

- Convenient and easy installation
- No need for wiring and ancillary costs
- Long-term performance without the need for maintenance and service
- Intelligent brightness control and battery charge
- Lifetime of solar panel
- Low operating costs
- Beautiful design and high efficiency
- Very low consumption using LED lamps
- Uniform and standard lighting
- standard IP65

APPLICATIONS

- Use in parks
- Use in green spaces
- Use in villas and private gardens
- walking

SUPPORT & WARRANTY

- Solar panel warranty 10 years
- battery warranty 1 year
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

LED base height: (M)	4.3
Lamp base diameter: (Cm)	10 / 20
Lamp base material:	stainless steel

SOLAR AND BATTERY SPECIFICATION

Panel power:	110 Mono
Panel dimensions: (Cm)	120 * 68
Panel weight: (Kg)	10
Battery power: (Ah)	80
Battery voltage: (V)	12 lead acid
Cloudy day:	According to need

* Battery and panel will be added according to the number of cloudy days.

LIGHTING SPECIFICATION

Total power: (W)	20
Voltage: (V)	12
Brightness:	2009
Weight: (Kg)	5
Material:	Aluminum is die-casting
sensor*:	Lighting / Motion

* Sensor will be custom designed.

CLASSIC

DMSAPSLPARCLXX



DESCRIPTION

This product with a beautiful and creative design has created a perfect balance between integrated and classic appearance using the latest technology of solar panels and batteries, the best combination for lighting sidewalks, parks and special urban spaces with classic street lights. experience.

OUTSTANDING CHARACTERS

- Convenient and easy installation
- No need for wiring and ancillary costs
- Long-term performance without the need for maintenance and service
- Intelligent battery charge control
- Lifetime of solar panel
- Low operating costs
- Beautiful and exclusive design
- Very low consumption using LED lamps
- Uniform and standard lighting
- Standard IP65

APPLICATIONS

- Use in parks
- Use in green spaces
- Special urban places
- walking

SUPPORT & WARRANTY

- Solar panel warranty 10 years
- battery warranty 1 year
- support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

LED base height:(M)	6.2
Lamp base diameter: (Cm)	20
Lamp base material:	stainless steel

SOLAR AND BATTERY SPECIFICATION

Panel power:	40W Mono 8pcs
Panel dimensions: (Cm)	165 * 20
Panel weight: (Kg)	5
Battery power: (Ah)	150
Battery voltage: (V)	12 lead acid
Cloudy day:	According to need

* -Battery and panel will be added according to the number of cloudy days.

LIGHTING SPECIFICATION

Total power: (W)	30
Voltage: (V)	12
Brightness:	3000 Lm
Weight: (Kg)	5
Material:	Aluminum is die-casting

B 360

DMSAPSLPARBOXX



DESCRIPTION

Solar columns (solar barriers) are suitable for residential and commercial applications. It is provided through a specially designed solar panel and also LED lighting with the appropriate power for lighting and safety of the desired path. Due to the easy installation and without wiring, there is no need for additional costs.

OUTSTANDING CHARACTERS

- Convenient and easy installation without concreting and landscaping
- No need for wiring and ancillary costs
- Long-term performance without the need for maintenance and
- Lifetime of solar panel
- Free electricity
- Beautiful design and high efficiency
- Eco-friendly
- Very low consumption using LED lamps
- Uniform and eye-catching 360 C
- P65 standard

APPLICATIONS

- Use in parks
- Use in green spaces
- Private roads
- Input lighting
- Yards and gardens
- Farms
- Light the fence

SUPPORT & WARRANTY

- Solar panel warranty 10 years
- battery warranty 6 month
- support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

LED base height: (Cm)	90
Lamp base diameter: (Cm)	15
Lamp base material:	Stainless steel

PANEL AND BATTERY SPECIFICATION

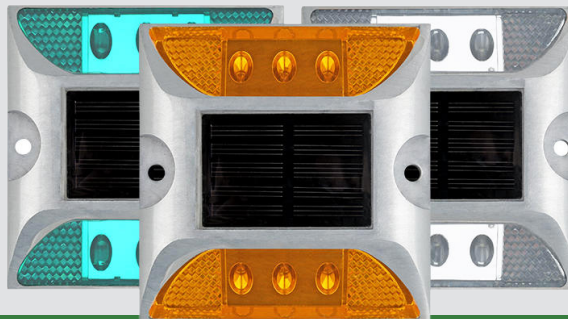
Panel power:	3.5W Mono
Panel dimensions: (CM)	22
Battery power: (Ah)	2.5
Battery voltage: (V)	12 lithium ion
Cloudy day:	According to need

LIGHTING SPECIFICATION

Total power: (W)	3.5
Voltage: (V)	12
Brightness:	356 Lm
Weight: (Kg)	6.3
Material:	Stainless steel
Lighting time: (H)	10

STUD T1

DMSAPSLSTUT1XX



Description

Road stud (cat eye lamp) is a very versatile and practical tool for use on urban and interurban roads as well as airport runways. This device is used in standard dimensions and different designs and colors for the specified uses. The body is made of aluminum, completely waterproof and resistant to pressure and corrosion, with a very long life is designed and made.

Outstanding Characters

- Easy installation
- No need for wiring
- Long-term operation without service
- Long life solar panel
- Beautiful design and high efficiency
- Eco-friendly
- Very low energy with led light
- Standard lighting in different colors
- Resistant to water, oil, corrosion, pressure and oxidize
- IP65 standard

Applications

- Use of urban and interurban roads
- Use on walking and cycling roads
- Coastal roads and harbor
- Roads and runways of airports
- Tunnels
- Parking

Support and Warranty

- Solar panel warranty 10 years
- Battery warranty 1 years
- Support 24/7
- Services (repair/replacement) 3 years

Overview

Dimension (mm)	105*105*20
Material	Aluminum
Working temperature (C)	-30 ~ +50
Tolerable weight	12 Tons

Solar & Battery Specification

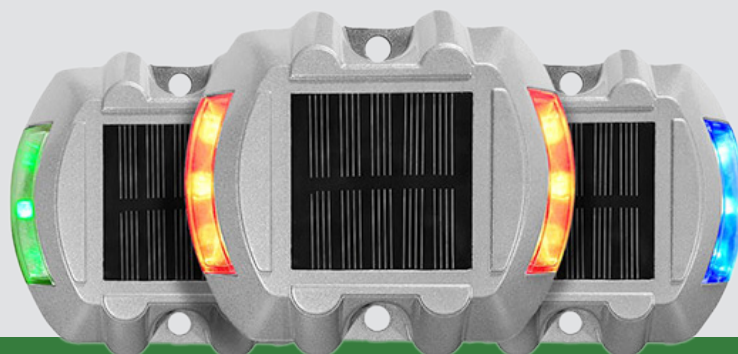
Power panel (W)	0.3
Dimension panel (Cm)	3*6
Battery power (Ah)	600m
Battery voltage (V)	2
Charging time (h)	6-8

Light Specification

Number of LED	6
LED power (W)	0.24
Brightness (lm)	160
Weight (g)	450
Lighting time (day)	15
Lighting viewing distance (m)	500
Color	Red, Blue, Yellow, White, Green

STUD T2

DMSAPSLSTUT2XX



Description

Road stud (cat eye lamp) is a very versatile and practical tool for use on urban and interurban roads as well as airport runways. This device is used in standard dimensions and different designs and colors for the specified uses. The body is made of aluminum, completely waterproof and resistant to pressure and corrosion, with a very long life is designed and made.

Outstanding Characters

- Easy installation
- No need for wiring
- Long-term operation without service
- Long life solar panel
- Beautiful design and high efficiency
- Eco-friendly
- Very low energy with led light
- Standard lighting in different colors
- Resistant to water, oil, corrosion, pressure and oxidize
- IP65 standard

Applications

- Use of urban and interurban roads
- Use on walking and cycling roads
- Coastal roads and harbor
- Roads and runways of airports
- Tunnels
- Parking

Support and Warranty

- Solar panel warranty 10 years
- Battery warranty 1 years
- Support 24/7
- Services (repair/replacement) 3 years

Overview

Dimension (mm)	110*97*24
Material	Aluminum
Working temperature (C)	-30 ~ +50
Tolerable weight	13 Tons

Solar & Battery Specification

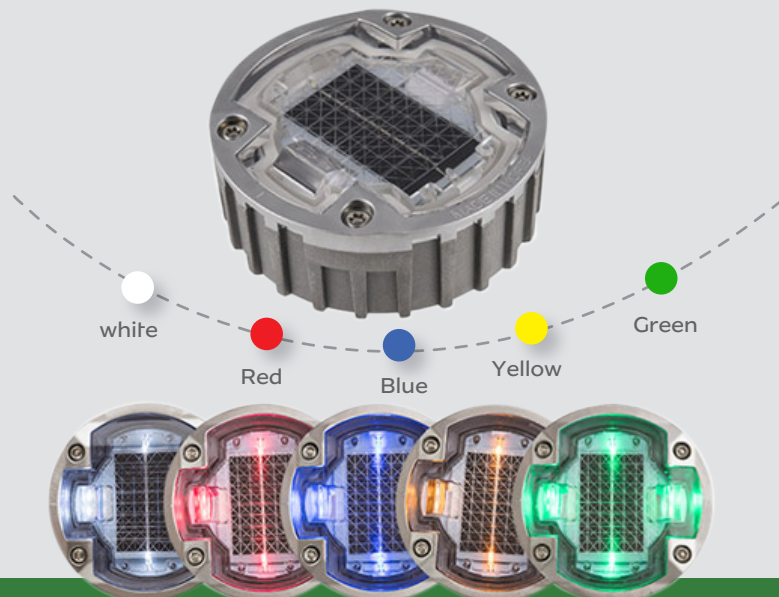
Power panel (W)	0.25
Dimension panel (Cm)	4*4
Battery power (Ah)	600m
Battery voltage (V)	1.2
Charging time (h)	6-8

Light Specification

Number of LED	6
LED power (W)	0.24
Brightness (lm)	160
Weight (g)	500
Lighting time (day)	15
Lighting viewing distance (m)	800
Color	Red, Blue, Yellow, White, Green

STUD T3

DMSAPSLSTUT3XX



Description

Road stud (cat eye lamp) is a very versatile and practical tool for use on urban and interurban roads as well as airport runways. This device is used in standard dimensions and different designs and colors for the specified uses. The body is made of aluminum, completely waterproof and resistant to pressure and corrosion, with a very long life is designed and made.

Outstanding Characters

- Easy installation
- No need for wiring
- Long-term operation without service
- Long life solar panel
- Beautiful design and high efficiency
- Eco-friendly
- Very low energy with led light
- Standard lighting in different colors
- Resistant to water, oil, corrosion, pressure and oxidize
- IP65 standard

Applications

- Use of urban and interurban roads
- Use on walking and cycling roads
- Coastal roads and harbor
- Roads and runways of airports
- Tunnels
- Parking

Support and Warranty

- Solar panel warranty 10 years
- Battery warranty 3 years
- Support 24/7
- Services (repair/replacement) 3 years

Overview

Dimension (mm)	65*40
Material	Aluminum
Working temperature (C)	-30 ~ +50
Tolerable weight	30 Tons

Solar & Battery Specification

Power panel (W)	0.25
Dimension panel (Cm)	3*5
Battery power (Ah)	600m
Battery voltage (V)	1.2
Charging time (h)	6-8

Light Specification

Number of LED	6
LED power (W)	0.24
Brightness (lm)	160
Weight (g)	600
Lighting time (day)	15
Lighting viewing distance (m)	500
Color	Red, Blue, Yellow, White, Green

KING 3000W

DMSAPPTKIN3KXX



DESCRIPTION

KING series of products. have high capacity and power to use in different applications. The electricity generated in this system is stored in batteries and allows the consumer to charge and use her laptop, mobile phone and other low-consumption and high-consumption electrical equipment anywhere. Also, by using multiple outputs according to the product model, the lighting and connection of DC and AC devices with low power can be used.

OUTSTANDING CHARACTERS

- portable and easy to use
- Use monitor and LED to display device and battery status
- Long lifespan of solar panel
- Smart battery charge control
- Use smart guard circuits
- Low price to performance
- Low weight and small dimensions Folding panel design
- Wide range of required outputs
- No pollution and sound
- No need for fuel, Repair and maintenance

APPLICATIONS

- Use in suburban trips
- Travel and mountaineering camps
- Herders, beekeepers and nomads
- Charging electrical equipment (mobile, tablet)
- Charging drones and small rechargeable devices
- Emergency lighting
- Natural disasters and accidents

SUPPORT & WARRANTY

- Machine warranty 2 years
- Battery warranty 6 month
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

Solar panel (W/V)	2*200/36
Battery type	Lithium iron phosphate (LiFePO4)
Battery capacity (Ah/V)	32/48
Charge cycle (T)	2000
Charge Controller (A)	10/MPPT
Charging time (h)	7 ~ 8
Charging input	Solar panel / Electricity of city / Car lighter
Monitor	Battery status / warning
Weight (Kg)	30
Dimensions (Cm)	42 x 24 x 38

ELECTRICAL SPECIFICATIONS

Generated power (W)	3000
Power of moment (W)	6000
220V output	4 Pure sin wave
12V output (A)	2*10
12 lighter output (A)	1*10
USB output (A)	2*2.4
QC output (A)	1*5
Type C output	1
Accessories	Charging adapter + charger Cable
Internal LED lamp (W/LM)	2* 2 /1400
Charging temperature (°C)	0 ~ 45
Protection	Charging too much , Excessive discharge , Overload. short circuit . Reverse battery connection

KING 2000W

DMSAPPTKIN2KXX



DESCRIPTION

KING series of products, have high capacity and power to use in different applications. The electricity generated in this system is stored in batteries and allows the consumer to charge and use her laptop, mobile phone and other low-consumption and high-consumption electrical equipment anywhere. Also, by using multiple outputs according to the product model, the lighting and connection of DC and AC devices with low power can be used.

OUTSTANDING CHARACTERS

- portable and easy to use
- Use monitor and LED to display device and battery status
- Long lifespan of solar panel
- Smart battery charge control
- Use smart guard circuits
- Low price to performance
- Low weight and small dimensions Folding panel design
- Wide range of required outputs
- No pollution and sound
- No need for fuel, Repair and maintenance

APPLICATIONS

- Use in suburban trips
- Travel and mountaineering camps
- Herders, beekeepers and nomads
- Charging electrical equipment (mobile, tablet)
- Charging drones and small rechargeable devices
- Emergency lighting
- Natural disasters and accidents

SUPPORT & WARRANTY

- Machine warranty 2 years
- Battery warranty 6 month
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

Solar panel (W/V)	2*200/36
Battery type	Lithium iron phosphate (LiFePO4)
Battery capacity (Ah/V)	32-48
Charge cycle (T)	2000
Charge Controller (A)	10 / MPPT
Charging time (h)	5~6
Charging input	Solar panel / Electricity of city / Car lighter
Monitor	Battery status / Warning
Weight (Kg)	22
Dimensions (Cm)	39 x 22 x 32

ELECTRICAL SPECIFICATIONS

Generated power (W)	2000
Power of moment (W)	4000
220V output	4 Pure sin wave
12V output (A)	2*10
12 lighter output (A)	1*10
USB output (A)	2*2.4
QC output (A)	1*5
Type C output	1
Accessories	Charging adapter + Charger Cable
Internal LED lamp (W/LM)	2/140 2pcs
Charging temperature (°C)	-10 ~ 60
Protection	Charging too much . Excessive discharge . Overload. short circuit . Reverse battery connection



KING 1000W

DMLMU2100PH40X

DESCRIPTION

KING series of products. have high capacity and power to use in different applications. The electricity generated in this system is stored in batteries and allows the consumer to charge and use her laptop, mobile phone and other low-consumption and high-consumption electrical equipment anywhere. Also, by using multiple outputs according to the product model, the lighting and connection of DC and AC devices with low power can be used.

OUTSTANDING CHARACTERS

- portable and easy to use
- Use monitor and LED to display device and battery status
- Long lifespan of solar panel
- Smart battery charge control
- Use smart guard circuits
- Low price to performance
- Low weight and small dimensions Folding panel design
- Wide range of required outputs
- No pollution and sound
- No need for fuel, Repair and maintenance

APPLICATIONS

- Use in suburban trips
- Travel and mountaineering camps
- Herders, beekeepers and nomads
- Charging electrical equipment (mobile, tablet)
- Charging drones and small rechargeable devices
- Emergency lighting
- Natural disasters and accidents

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Machine warranty 2 years
- Battery warranty 6 month
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

Solar panel (W/V)	2*200/36
Battery type	Lithium iron phosphate (LiFePO4)
Battery capacity (Ah/V)	20 / 48
Charge cycle (T)	2000
Charge Controller (A)	8/MPPT
Charging time (h)	3-4
Charging input	Solar panel / Car lighter / Electricity of city
monitor	Battery status / Warning
Weight (Kg)	17
Dimensions (Cm)	39 x 22 x 29

ELECTRICAL SPECIFICATIONS

Generated power (W)	1000
Power of moment (W)	2000
220V output	2 Pure sin wave
12V output (A)	2*10
12 lighter output (A)	1*10
USB output (A)	2*2.4
QC output (A)	1*5
Type C output	1
Accessories	Charging adapter + charger Cable
Internal LED lamp (W/LM)	2*2- 140
Charging temperature (°C)	0~45
Protection	Charging too much , Excessive discharge , Overload , short circuit , Reverse battery connection



LINK 400W

DMSAPPTLIN400X

DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to charge his laptop, mobile phone and other small electrical equipment anywhere. Also, by using multiple outputs according to the product model, the lighting and connection of DC and AC devices with low power can be used.

OUTSTANDING CHARACTERS

- Portable and Light
- Convenient and easy to use
- Use monitor and LED to display device and battery status
- Long lifespan of solar panel
- Smart battery charge control
- Protected against short circuit, overload and voltage
- Low price to performance
- Low weight and small dimensions Folding panel design
- Output 12 volts and 220 volts
- No pollution and sound
- No need for fuel, Repair and maintenance

APPLICATIONS

- Use in suburban trips
- Travel and mountaineering camps
- Herders, beekeepers and nomads
- Charging electrical equipment (mobile, tablet)
- Charging drones and small rechargeable devices
- Emergency lighting
- Natural disasters and accidents

SUPPORT & WARRANTY

- Machine warranty 2 years
- Battery warranty 6 months
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

Solar panel (W/V)	100/20
Battery type	Li-Po Lithium polymer
Battery capacity (Ah/V)	40/11.1
Charging cycle (T)	Up 500
Controller recharge (A)	7
Charging time (h)	7-8 Hour
Recharge input	Solar Panel / Electricity of city / Car lighter
Monitor	Battery status
Weight (Kg)	5
Dimensions (Cm)	18x 13 x 30

ELECTRICAL SPECIFICATIONS

Generated power (W)	400
Power of moment (W)	450
220V output	2
12V output (A)	2*10
Cigarette Lighter 12V (A)	1*1.5
USB output (A)	3*2.1
Output QC	-
Type C output	-
Accessories	Charging adapter+Car charging cable
Internal LED lamp	-
Charging temperature	-10~45 °C
Protection	Charging too much . Excessive discharge . Overload . short circuit . Reverse battery connection



LINK 100W+

DMSAPPTLIN100P

DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to charge his laptop, mobile phone and other small electrical equipment anywhere. Also, by using multiple outputs according to the product model, the lighting and connection of DC and AC devices with low power can be used.

OUTSTANDING CHARACTERS

- Portable and light
- Convenient and easy to use
- Use monitor and LED to display device and battery status
- Long lifespan of solar panel
- Smart battery charge control
- Protected against short circuit, overload and voltage
- Low price to performance
- Low weight and small dimensions Folding panel design
- Output 12 volts and 220 volts
- No pollution and sound
- No need for fuel, Repair and maintenance

APPLICATIONS

- Use in suburban trips
- Travel and mountaineering camps
- Herders, beekeepers and nomads
- Charging electrical equipment (mobile, tablet)
- Charging drones and small rechargeable devices
- Emergency lighting
- Natural disasters and accidents

SUPPORT & WARRANTY

- Machine warranty 2 years
- Battery warranty 6 months
- Support 24/7
- service (repair / replacement) 3 years

OVERVIEW

Solar Panel (W/V)	40/20
Battery type	Lithium ion (Li-ion)
Battery capacity (Ah/V)	20/11.1
Charging cycle (T)	Up 500
Controller recharge (A)	3
Charging time (h)	8-10
Recharge input	Solar Panel / Electricity of city / Car lighter
Monitor	Battery status / Output connection status / Warning
Weight (Kg)	2
Dimensions (Cm)	21 × 16 × 10

ELECTRICAL SPECIFICATIONS

Generated power (W)	100
Power of moment (W)	150
220V output	1
12V output (A)	3*10
USB output (A)	2*2.4
Output QC (A)	1*5
Type C output	1
Accessories	Charging adapter+Car charging cable
Internal LED lamp	1/70
Charging temperature	-10 ~ 45 °C
Protection	Charging too much , Excessive discharge , Overload , short circuit , Reverse battery connection



LINK 100W

DMSAPPTLIN100X

DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to charge his laptop, mobile phone and other small electrical equipment anywhere. Also, by using multiple outputs according to the product model, the lighting and connection of DC and AC devices with low power can be used.

OUTSTANDING CHARACTERS

- Portable and Light
- Convenient and easy to use
- Use monitor and LED to display device and battery status
- Long lifespan of solar panel
- Smart battery charge control
- Protected against short circuit, overload and voltage
- Low price to performance
- Low weight and small dimensions Folding panel design
- Output 12 volts and 220 volts
- No pollution and sound
- No need for fuel, Repair and maintenance

APPLICATIONS

- Use in suburban trips
- Travel and mountaineering camps
- Herders, beekeepers and nomads
- Charging electrical equipment (mobile, tablet)
- Charging drones and small rechargeable devices
- Emergency lighting
- Natural disasters and accidents

SUPPORT & WARRANTY

- Machine warranty 2 years
- Battery warranty 6 months
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

Solar panel (W/V)	50/20
Battery type	Lithium ion (Li-ion)
Battery capacity (Ah/V)	14/11.1
Charging cycle (T)	Up 500
Controller recharge (A)	3
Charging time (h)	8-9
Recharge input	Solar Panel / Electricity of city / Car lighter
Monitor	Battery status / Output connection status / Warning
Weight (Kg)	1.7
Dimensions (Cm)	18 x 10 x 20

ELECTRICAL SPECIFICATIONS

Generated power (W)	100
Power of moment (W)	150
220V output	1
12V output (A)	3*10
USB output (A)	2 *2.4
Output QC (A)	1*5
Type C output	1
Accessories	Charging adapter+Car charging cable
Internal LED lamp	2*2W/140 lm
Charging temperature	-10 ~ 45 °C
Protection	Charging too much . Excessive discharge . Overload . short circuit . Reverse battery connection

QUEEN 600W

DMSAPPTQUE600W



DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to charge his laptop, mobile phone and other small electrical equipment anywhere. Also, by using multiple outputs according to the product model, the lighting and connection of DC and AC devices with low power can be used.

OUTSTANDING CHARACTERS

- Easy to carry using designed wheels
- Convenient and easy to use
- Use monitor and LED to display device and battery status
- Long lifespan of solar panel
- Smart battery charge control
- Use smart guard circuits
- Low price to performance
- Low weight and small dimensions Folding panel design
- Output 12 volts and 220 volts
- No pollution and noise, compatible with environment
- No need for fuel, Repair and maintenance

APPLICATIONS

- Use in suburban trips
- Travel and mountaineering camps
- Herders, beekeepers and nomads
- Charging electrical equipment (mobile, tablet)
- Charging drones and small rechargeable devices
- Emergency lighting
- Natural disasters and accidents

SUPPORT & WARRANTY

- Machine warranty 2 years
- Battery warranty 6 month
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

Panel Power (W/V)	200/18
Battery type	Sealed lead acid
Battery capacity (Ah)	100
Controller recharge(A)	15 / PWM
Charging time (h)	8-9
Charging input:	Solar Panel/ Car lighter/ Electricity of city
Monitor	Battery status / Panel connection /Warning
Operating temperature (°C)	-35~65
Weight (Kg)	37
Dimensions (Cm)	40 x 21 x 48

ELECTRICAL SPECIFICATIONS

Generated power (W)	600
Power of moment (W)	800
220V output	2
12V output	8
USB output	2*2.1
Accessories	4*led Lamps 7w+ Charging adapter
Protection	Charging too much . Excessive discharge . Overload . short circuit . Reverse battery connection

QOQNUS 50W

DMSAPPTQUQ50WX



DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to charge his laptop, mobile phone and other small electrical equipment anywhere. Also, by using multiple outputs according to the product model, the lighting and connection of DC and AC devices with low power can be used.

OUTSTANDING CHARACTERS

- Portable and Light
- Convenient and easy to use
- Use monitor and LED to display device and battery status
- Long lifespan of solar panel
- Smart battery charge control
- Use smart guard circuits
- Low price to performance
- Low weight and small dimensions Folding panel design
- 12 volt output and USB
- No pollution and sound, environmentally friendly
- No need for fuel, Repair and maintenance

APPLICATIONS

- Use in suburban trips
- Travel and mountaineering camps
- Herders, beekeepers and nomads
- Charging electrical equipment (mobile, tablet)
- Charging drones and small rechargeable devices
- Emergency lighting
- Natural disasters and accidents

SUPPORT & WARRANTY

- Machine warranty 2 years
- Battery warranty 6 month
- Support 24/7
- After-sales service (repair / replacement) 3 years

OVERVIEW

Solar panel (W/V)	50/18
Battery type	Sealed lead acid
Battery capacity (Ah/V)	26 /12
Controller recharge (A)	5/ PWM
Charging time (h)	6-7
Recharge input	Solar panel / Car lighter / Electricity of city
Monitor	Battery status / Panel connection /Warning
Operating temperature (°C)	-35~65
Weight (Kg)	10
Dimensions (Cm)	23 x 13 x 22

ELECTRICAL SPECIFICATIONS

Generated power (W)	50
220V output	-
12V output	6
USB output (A)	2*2.1
Accessories	2*LED Lamps 7W+ Charging adapter + Versatile charging cable
Protection	Charging too much . Excessive discharge . Overload . short circuit . Reverse battery connection

QOQNUS 20W

DMSAPPTQUQ20WX



DESCRIPTION

This product generates electricity using solar panels. The electricity generated in this system is stored in batteries and allows the consumer to charge his laptop, mobile phone and other small electrical equipment anywhere. Also, by using multiple outputs according to the product model, the lighting and connection of DC and AC devices with low power can be used.

OUTSTANDING CHARACTERS

- Portable and Light
- Convenient and easy to use
- Use monitor and LED to display device and battery status
- Long lifespan of solar panel
- Smart battery charge control
- Use smart guard circuits
- Low price to performance
- Low weight and small dimensions Folding panel design
- 12 volt output and USB
- No pollution and sound, environmentally friendly
- No need for fuel, Repair and maintenance

APPLICATIONS

- Use in suburban trips
- Travel and mountaineering camps
- Herders, beekeepers and nomads
- Charging electrical equipment (mobile, tablet)
- Charging drones and small rechargeable devices
- Emergency lighting
- Natural disasters and accidents

SUPPORT & WARRANTY

- Machine warranty 2 years
- Battery warranty 6 month
- Support 24/7
- Service (repair / replacement) 3 years

OVERVIEW

Solar panel (W/V)	20/18
Battery type	Sealed lead acid
Battery capacity (Ah/V)	7/12
Controller recharge (A)	3/ PWM
Charging time (h)	4
Recharge input	Solar panel / Car lighter / Electricity of city
Monitor	Battery status / Panel connection / Warning
Operating temperature	-35~65 °C
Weight (Kg)	3
Dimensions (Cm)	15 x 11 x 20

ELECTRICAL SPECIFICATIONS

Generated power (W)	20
220V output	-
12V output	4
USB output (A)	2*2.1
Accessories	2*Led Lamps 7W + Charging adapter
Protection	Charging too much . Excessive discharge . Overload . short circuit . Reverse battery connection

H3

DMSAPWP SUBMH03



DESCRIPTION

A solar water pump is a device that converts electrical energy from solar radiation into driving energy to pump water through solar panels. Solar water pump product is one of the most widely used products that can be used in all deprived areas or areas far from the main power grid. This type of pump is floating and can be used in deep wells.

OUTSTANDING CHARACTERS

- Easy installation
- Longer life and high reliability
- Reduce wiring costs and start-up costs
- Long-term performance without the need for periodic maintenance and service
- Mechanically simple and efficient
- More economic savings in the long run
- High water transfer speed
- No need for fuel and removal of environmental pollutants
- Protected against high current and voltage and short circuit
- IP68 standard pump and IP54 controller
- Self-cleaning and corrosion resistant

APPLICATIONS

- Gardens and greenhouses
- Fish breeding centers
- Desert and wilderness
- Livestock and poultry breeding centers
- Use on agricultural farms
- Areas outside the national grid
- Deprived and remote areas

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Pump warranty 6 Month
- Support 24/7
- Services (repair/replacement) 3 years

ELECTRICAL SPECIFICATION

Controller Power (W)	700
Controller Model	P600 MPPT
Input Voltage (V)	48-72
Voc (V)	150
Battery connectivity	Yes
Battery Voltage (V)	48
Controller dimensions (mm)	396*176
Controller weight (Kg)	4.5
Operating temperature (C)	-30-50
Solar Panel (W)	300-480
Ability	Water shortage and source filling / remote control
Protection	Reverse connection / over-load / high temperature
Pump Power (W)	700
Pumping height (m)	0-120
Pump current (A)	Max 13
Pump type	Floating
Body Material	Steel
Rotor type and material	Spiral, chrome plated steel
Outlet pipe diameter (Inch)	1.25
Pump diameter	4
Maximum immersion depth	150
Maximum water flow (m ³ /h)	0.45
Fluid type	Clean water
Pump temperature (C)	Max 50
Motor type	BLDC
Motor speed (rpm)	900-3300
Pump dimensions (mm)	96*780
Pump weight (Kg)	12

H4

DMSAPWP SUBMH04



DESCRIPTION

A solar water pump is a device that converts electrical energy from solar radiation into driving energy to pump water through solar panels. Solar water pump product is one of the most widely used products that can be used in all deprived areas or areas far from the main power grid. This type of pump is floating and can be used in deep wells.

OUTSTANDING CHARACTERS

- Easy installation
- Longer life and high reliability
- Reduce wiring costs and start-up costs
- Long-term performance without the need for periodic maintenance and service
- Mechanically simple and efficient
- More economic savings in the long run
- High water transfer speed
- No need for fuel and removal of environmental pollutants
- Protected against high current and voltage and short circuit
- IP68 standard pump and IP54 controller
- Self-cleaning and corrosion resistant

APPLICATIONS

- Gardens and greenhouses
- Fish breeding centers
- Desert and wilderness
- Livestock and poultry breeding centers
- Use on agricultural farms
- Areas outside the national grid
- Deprived and remote areas

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Pump warranty 6 Month
- Support 24/7
- Services (repair/replacement) 3 years

ELECTRICAL SPECIFICATION

Controller Power (W)	700
Controller Model	P600 MPPT
Input Voltage (V)	48~72
Voc (V)	150
Battery connectivity	Yes
Battery Voltage (V)	48
Controller dimensions (mm)	396*176
Controller weight (Kg)	4.5
Operating temperature (C)	-30~50
Solar Panel (W)	300~480
Ability	Water shortage and source filling / remote control
Protection	Reverse connection / over-load / high temperature
Pump Power (W)	700
Pumping height (m)	0-80
Pump current (A)	Max 13
Pump type	Floating
Body Material	Steel
Rotor type and material	Spiral, chrome plated steel
Outlet pipe diameter (Inch)	1.25
Pump diameter	4
Maximum immersion depth	250
Maximum water flow (m³/h)	0.72
Fluid type	Clean water
Pump temperature (C)	Max 50
Motor type	BLDC
Motor speed (rpm)	900~3300
Pump dimensions (mm)	96*780
Pump weight (Kg)	12

H7

DMSAPWP SUBMH07



DESCRIPTION

A solar water pump is a device that converts electrical energy from solar radiation into driving energy to pump water through solar panels. Solar water pump product is one of the most widely used products that can be used in all deprived areas or areas far from the main power grid. This type of pump is floating and can be used in deep wells.

OUTSTANDING CHARACTERS

- Easy installation
- Longer life and high reliability
- Reduce wiring costs and start-up costs
- Long-term performance without the need for periodic maintenance and service
- Mechanically simple and efficient
- More economic savings in the long run
- High water transfer speed
- No need for fuel and removal of environmental pollutants
- Protected against high current and voltage and short circuit
- IP68 standard pump and IP54 controller
- Self-cleaning and corrosion resistant

APPLICATIONS

- Gardens and greenhouses
- Fish breeding centers
- Desert and wilderness
- Livestock and poultry breeding centers
- Use on agricultural farms
- Areas outside the national grid
- Deprived and remote areas

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Pump warranty 6 Month
- Support 24/7
- Services (repair/replacement) 3 years

ELECTRICAL SPECIFICATION

Controller Power (W)	700
Controller Model	P600 MPPT
Input Voltage (V)	48-72
Voc (V)	150
Battery connectivity	Yes
Battery Voltage (V)	48
Controller dimensions (mm)	396*176
Controller weight (Kg)	4.5
Operating temperature (C)	-30-50
Solar Panel (W)	420-900
Ability	Water shortage and source filling / remote control
Protection	Reverse connection / over-load / high temperature
Pump Power (W)	700
Pumping height (m)	40-90
Pump current (A)	Max 13
Pump type	Floating
Body Material	Steel
Rotor type and material	Spiral, chrome plated steel
Outlet pipe diameter (Inch)	1.25
Pump diameter	4
Maximum immersion depth	250
Maximum water flow (m ³ /h)	1.3
Fluid type	Clean water
Pump temperature (C)	Max 50
Motor type	BLDC
Motor speed (rpm)	900-3300
Pump dimensions (mm)	147*771
Pump weight (Kg)	12.5

H10

DMSAPWP SUBMH10



DESCRIPTION

A solar water pump is a device that converts electrical energy from solar radiation into driving energy to pump water through solar panels. Solar water pump product is one of the most widely used products that can be used in all deprived areas or areas far from the main power grid. This type of pump is floating and can be used in deep wells.

OUTSTANDING CHARACTERS

- Easy installation
- Longer life and high reliability
- Reduce wiring costs and start-up costs
- Long-term performance without the need for periodic maintenance and service
- Mechanically simple and efficient
- More economic savings in the long run
- High water transfer speed
- No need for fuel and removal of environmental pollutants
- Protected against high current and voltage and short circuit
- IP68 standard pump and IP54 controller
- Self-cleaning and corrosion resistant

APPLICATIONS

- Gardens and greenhouses
- Fish breeding centers
- Desert and wilderness
- Livestock and poultry breeding centers
- Use on agricultural farms
- Areas outside the national grid
- Deprived and remote areas

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Pump warranty 6 Month
- Support 24/7
- Services (repair/replacement) 3 years

ELECTRICAL SPECIFICATION

Controller Power (W)	700
Controller Model	P600 MPPT
Input Voltage (V)	48-72
Voc (V)	150
Battery connectivity	Yes
Battery Voltage (V)	48
Controller dimensions (mm)	396*176
Controller weight (Kg)	4.5
Operating temperature (C)	-30-50
Solar Panel (W)	420-900
Ability	Water shortage and source filling / remote control
Protection	Reverse connection / over-load / high temperature
Pump Power (W)	700
Pumping height (m)	30-60
Pump current (A)	Max 13
Pump type	Floating
Body Material	Steel
Rotor type and material	Spiral, chrome plated steel
Outlet pipe diameter (Inch)	1.25
Pump diameter	4
Maximum immersion depth	250
Maximum water flow (m ³ /h)	2
Fluid type	Clean water
Pump temperature (C)	Max 50
Motor type	BLDC
Motor speed (rpm)	900-3300
Pump dimensions (mm)	147*771
Pump weight (Kg)	12.5

H3

DMSAPWPSPUBPH03



DESCRIPTION

A solar water pump is a device that converts electrical energy from solar radiation into driving energy to pump water through solar panels. Solar water pump product is one of the most widely used products that can be used in all deprived areas or areas far from the main power grid. This type of pump is floating and can be used in deep wells.

OUTSTANDING CHARACTERS

- Easy installation
- Longer life and high reliability
- Reduce wiring costs and start-up costs
- Long-term performance without the need for periodic maintenance and service
- Mechanically simple and efficient
- More economic savings in the long run
- High water transfer speed
- No need for fuel and removal of environmental pollutants
- Protected against high current and voltage and short circuit
- IP68 standard pump and IP54 controller
- Self-cleaning and corrosion resistant

APPLICATIONS

- Gardens and greenhouses
- Fish breeding centers
- Desert and wilderness
- Livestock and poultry breeding centers
- Use on agricultural farms
- Areas outside the national grid
- Deprived and remote areas

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Pump warranty 6 Month
- Support 24/7
- Services (repair/replacement) 3 years

ELECTRICAL SPECIFICATION

Controller Power (W)	1200
Controller Model	P1200 MPPT
Input Voltage (V)	72-96
Voc (V)	200
Battery connectivity	Yes
Battery Voltage (V)	96
Controller dimensions (mm)	396*176
Controller weight (Kg)	4.5
Operating temperature (C)	-30-50
Solar Panel (W)	350-480
Ability	Water shortage and source filling / remote control
Protection	Reverse connection / over-load / high temperature
Pump Power (W)	1700
Pumping height (m)	0-140
Pump current (A)	Max 9.5
Pump type	Floating
Body Material	Steel
Rotor type and material	Spiral, chrome plated steel
Outlet pipe diameter (Inch)	1.25
Pump diameter	4
Maximum immersion depth	150
Maximum water flow (m ³ /h)	0.5
Fluid type	Clean water
Pump temperature (C)	Max 50
Motor type	BLDC
Motor speed (rpm)	900-3300
Pump dimensions (mm)	96*780
Pump weight (Kg)	12

H4

DMSAPWP SUBPH04



DESCRIPTION

A solar water pump is a device that converts electrical energy from solar radiation into driving energy to pump water through solar panels. Solar water pump product is one of the most widely used products that can be used in all deprived areas or areas far from the main power grid. This type of pump is floating and can be used in deep wells.

OUTSTANDING CHARACTERS

- Easy installation
- Longer life and high reliability
- Reduce wiring costs and start-up costs
- Long-term performance without the need for periodic maintenance and service
- Mechanically simple and efficient
- More economic savings in the long run
- High water transfer speed
- No need for fuel and removal of environmental pollutants
- Protected against high current and voltage and short circuit
- IP68 standard pump and IP54 controller
- Self-cleaning and corrosion resistant

APPLICATIONS

- Gardens and greenhouses
- Fish breeding centers
- Desert and wilderness
- Livestock and poultry breeding centers
- Use on agricultural farms
- Areas outside the national grid
- Deprived and remote areas

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Pump warranty 6 Month
- Support 24/7
- Services (repair/replacement) 3 years

ELECTRICAL SPECIFICATION

Controller Power (W)	1200
Controller Model	P1200 MPPT
Input Voltage (V)	72-96
Voc (V)	200
Battery connectivity	Yes
Battery Voltage (V)	96
Controller dimensions (mm)	395*178
Controller weight (Kg)	4.5
Operating temperature (C)	-30-50
Solar Panel (W)	350-480
Ability	Water shortage and source filling / remote control
Protection	Reverse connection / over-load / high temperature
Pump Power (W)	1700
Pumping height (m)	0-80
Pump current (A)	Max 9.5
Pump type	Floating
Body Material	Steel
Rotor type and material	Spiral, chrome plated steel
Outlet pipe diameter (Inch)	1.25
Pump diameter	4
Maximum immersion depth	250
Maximum water flow (m ³ /h)	0.8
Fluid type	Clean water
Pump temperature (C)	Max 50
Motor type	BLDC
Motor speed (rpm)	900-3300
Pump dimensions (mm)	96*780
Pump weight (Kg)	12

H7

DMSAPWPSPUBPH07



DESCRIPTION

A solar water pump is a device that converts electrical energy from solar radiation into driving energy to pump water through solar panels. Solar water pump product is one of the most widely used products that can be used in all deprived areas or areas far from the main power grid. This type of pump is floating and can be used in deep wells.

OUTSTANDING CHARACTERS

- Easy installation
- Longer life and high reliability
- Reduce wiring costs and start-up costs
- Long – term performance without the need for periodic maintenance and service
- Mechanically simple and efficient
- More economic savings in the long run
- High water transfer speed
- No need for fuel and removal of environmental pollutants
- Protected against high current and voltage and short circuit
- IP68 standard pump and IP54 controller
- Self-cleaning and corrosion resistant

APPLICATIONS

- Gardens and greenhouses
- Fish breeding centers
- Desert and wilderness
- Livestock and poultry breeding centers
- Use on agricultural farms
- Areas outside the national grid
- Deprived and remote areas

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Pump warranty 6 Month
- Support 24/7
- Services (repair/replacement) 3 years

ELECTRICAL SPECIFICATION

Controller Power (W)	1200
Controller Model	P1200 MPPT
Input Voltage (V)	72-96
Voc (V)	200
Battery connectivity	Yes
Battery Voltage (V)	96
Controller dimensions (mm)	395*178
Controller weight (Kg)	4.5
Operating temperature (C)	-30-50
Solar Panel (W)	420-1200
Ability	Water shortage and source filling / remote control
Protection	Reverse connection / over-load / high temperature
Pump Power (W)	1700
Pumping height (m)	40-140
Pump current (A)	Max 9.5
Pump type	Floating
Body Material	Steel
Rotor type and material	Spiral, chrome plated steel
Outlet pipe diameter (Inch)	1.25
Pump diameter	4
Maximum immersion depth	250
Maximum water flow (m ³ /h)	1.3
Fluid type	Clean water
Pump temperature (C)	Max 50
Motor type	BLDC
Motor speed (rpm)	900-3300
Pump dimensions (mm)	96*780
Pump weight (Kg)	12

H10

DMSAPWP SUBPH10



DESCRIPTION

A solar water pump is a device that converts electrical energy from solar radiation into driving energy to pump water through solar panels. Solar water pump product is one of the most widely used products that can be used in all deprived areas or areas far from the main power grid. This type of pump is floating and can be used in deep wells.

OUTSTANDING CHARACTERS

- Easy installation
- Longer life and high reliability
- Reduce wiring costs and start-up costs
- Long-term performance without the need for periodic maintenance and service
- Mechanically simple and efficient
- More economic savings in the long run
- High water transfer speed
- No need for fuel and removal of environmental pollutants
- Protected against high current and voltage and short circuit
- IP68 standard pump and IP54 controller
- Self-cleaning and corrosion resistant

APPLICATIONS

- Gardens and greenhouses
- Fish breeding centers
- Desert and wilderness
- Livestock and poultry breeding centers
- Use on agricultural farms
- Areas outside the national grid
- Deprived and remote areas

SUPPORT & WARRANTY

- Solar panel warranty 25 years
- Pump warranty 6 Month
- Support 24/7
- Services (repair/replacement) 3 years

ELECTRICAL SPECIFICATION

Controller Power (W)	1200
Controller Model	P1200 MPPT
Input Voltage (V)	72~96
Voc (V)	200
Battery connectivity	Yes
Battery Voltage (V)	96
Controller dimensions (mm)	395*178
Controller weight (Kg)	4.5
Operating temperature (C)	-30~50
Solar Panel (W)	420~1200
Ability	Water shortage and source filling / remote control
Protection	Reverse connection / over-load / high temperature
Pump Power (W)	1700
Pumping height (m)	30~80
Pump current (A)	Max 9.5
Pump type	Floating
Body Material	Steel
Rotor type and material	Spiral, chrome plated steel
Outlet pipe diameter (Inch)	1.25
Pump diameter	4
Maximum immersion depth	250
Maximum water flow (m³/h)	2.1
Fluid type	Clean water
Pump temperature (C)	Max 50
Motor type	BLDC
Motor speed (rpm)	900~3300
Pump dimensions (mm)	147*771
Pump weight (Kg)	12

Solar inverter (5kW)

DMISIONSPSSTXX

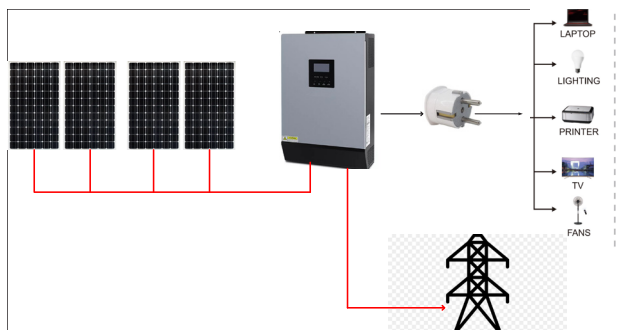


Introduction

5kW inverter cost-effectively converts the direct current generated by solar panels into high-quality alternating current that can be fed into the utility grid. These transformer-less, single-phase inverters are suitable for small and medium-sized photovoltaic systems connected to the public electricity network. The inverter offers a high conversion and MPPT tracking efficiency in all conditions. The high maximum DC voltage allows more photovoltaic modules to be connected in series which results in a higher string power for the same current. This helps reduce cabling power losses and also cabling size and cost.

Features

- Pure sine wave output
- Easy to use
- smart control unit with graphical display
- Compact design
- Wide photovoltaic voltage range
- Dual MPP followers
- Safe and reliable
- Support backup function
- High efficiency
- Transformerless & Low noise technique



Specifications

Product

INPUT(DC)

Max. Input power	5500W
MPPT input port quantity	2
Max. Input voltage	550V
Grid voltage	220V
Rated input voltage	360V
MPPT voltage range	90V~580V
Full load MPPT voltage range	250V~520V
Max. input current	11A / 11A
Input terminal type	MC4 / H4

OUTPUT(AC)

Max. AC power	5000VA
Nominal AC voltage range	180V~276V
Power network frequency range	54~66Hz
Max. Output current	22.8A
Total harmonic component (current)	<3%
Power factor	1 (+/-0.8 adjustable)

FUNCTION

Efficiency	92.5%
Night power consumption	<1W
Initial power	50W
MPPT efficiency	>95.9%

General Data

Ambient temperature range	25°C~+60°C (Reduced load over 45°C)
Topology	No transformer
Protection level	IP65
Max. Working altitude	4000m
Noise	<25dB
Cooling method	Natural convection



Internet of Things

ABOUT US

As one of the leading companies in development and supplying the latest solutions and technologies for the Internet of Things, Danial Moj International knowledge-based company, has achieved strategic findings and advanced technological solutions for various occupations and industries.

Daniel Moj Industrial Group's intelligent management could create a cohesive and young group of advanced technology systems unparalleled specialists.

Daniel Moj is one of Iranian leading companies in research, development, production and IoT equipment use. The provided products and services by IoT team meet a very wide range of industries and business needs. By investing in its research and development unit, the company has produced equipment and devices regarding Internet of Things, optical telecommunication, industry, automation, etc. by using the world latest technology.

Daniel Moj specialists following a research process for more than one year, also have prepared a cloud substrate which architecture is designed to be used in an IoT platform. The cloud layer automatic control structures allow the platform to be automatically scalable and intelligent. The cloud IoT solution can provide all businesses with a wide range of facilities. Daniel Moj long background in launching communication platforms paves the way for testing the platform performance on various communication substrates.

Daniel Moj has always sought to enter into international markets and establish close economic relations with global companies. It is also ready for fundraising and investing in the technological ideas to meet the market future needs. At the same time, it will welcome the country's elites and artisans in its group with open arms.

OUR TEAM

HISTORY

The term “Internet of Things” is prevalent in information and communication technology world now. Smart energy, smart agriculture, smart animal husbandry, smart home and building, smart transportation, smart health, and smart city and environment in general are terms that attract many politicians, managers, professionals, and businesses around the world to the unique features of this new technological emergence. The Internet of Things through its intelligent solutions, has been applied in all aspects of human life and promises a productive, pleasant and comfortable future.

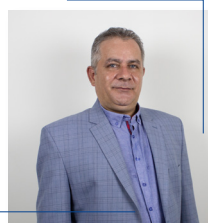
The Internet of Things includes a collection of intelligent web-based devices that use embedded processors, sensors, and communication hardware to collect, transmit, and process the received data from the environment. The collected data by the sensors is transmitted to the cloud by connecting to a port or edge device for analysis, or analyzed locally. Sometimes, these devices communicate with other related devices and act according to the information received from each other. These devices do most of the tasks without human intervention. Of course, people can interact with the devices, for example, they can adjust or instruct them, or access the data.

Daniel Moj Company Internet of Things Department was established in 2019 with the aim of developing and localizing the technology. Active presence in domestic and international exhibitions, hardware and software equipment design and development by a strong technical team and unparalleled products after-sales services, shows the efforts and perseverance of Daniel Moj group to spread the culture of supporting national production in the IoT.

Daniel Moj Company, consisting of experienced specialists with brilliant background in the Internet of Things, is ready to provide services and expand knowledge in all areas of intelligence.



Dr. Samad Samadiani
Founder & CEO



Dr. Farhad Puladi
Director of IoT Department



Emran Vahedi
IoT platform manager

VISION

In addition to focusing on telecommunication systems, Daniel Moj Company has started its activity in the field of Internet of Things in order to propel the country to the domestic products use.

The Internet of Things encourages companies to revise in their business approach, industry, and market, and improve their business strategies through using effective tools.

We use the full potential of skilled forces to increase productivity so as to be a leading company in technology development in the Middle East. Our extensive experience and expertise have enabled us to technologically cooperate with companies and organizations in the international arena. In wide range knowledge, we seek technological solutions development in order to solve the industry problems. In the meantime, our R&D team has collaborated with domestic reputable and high-level universities and is also interested in collaborating with knowledge-based collections.

Providing high-quality products, Environmental protection, Preservation of internal scientific values, Improving the employees health and performance, and creating responsibility and safety in the workplace are of Daniel Moj social commitment and entrepreneurship main pillars. Our performance is based on global standards, and persistent development and promotion of advanced domestic technology is one of Daniel Moj ethical commitments.

SERVICE & SUPPORT

Support and after-sales service

Daniel Moj services designing is in a way that you can make the most profit in the shortest time. We can support you during the project deployment and management and implement specific industrial scenarios based on your needs.

The Daniel Moj platform supports multiple communication channels, and if there are a large number of verticals with different brands and different communication channels, all can be connected to the platform at the same time.

To ensure the entire platform security, the related measures have been taken in several different layers and areas. Some of these are as follows:

- The possibility to Encrypt edge layer and downstream devices communication, and edge layer, cloud, cloud layer services and upstream systems communication
- Multi-layered and separate access tool for each user level
- Intelligent security warning data mining tool
- Multi-level authentication and validation of IoT packages

Thanks to the ongoing trend, Daniel Moj guarantees the long lasting unique and efficient quality of its products, as well as full customer satisfaction.

Our experts are always ready to accelerate your success process and will help you commercialize your brand.

PRODUCT

Our research and development team experts designed and developed various practical products as regards smart city solutions, smart ports, smart agriculture and animal husbandry, smart mines, smart home, smart hospital and smart parking. The company can best meet all IoT software and hardware needs for home, commercial and industrial applications.

The provided services and products by the IoT unit are as follows:

Software section:

- Daniel Moj comprehensive IoT platform
- Convergent IoT solution in public safety
- The smart chain stores solution
- Smart home app.
- Smart ports solution
- Smart hospital solution
- Smart parking solution
- Smart agriculture solution
- Intelligent transportation
- Intelligent energy management

Hardware section:

- IoT training kit
- I / O and communication different modules
- Smart survival sensor module
- Smart mine sensor module
- Smart home sensor module
- Smart farm modules
- Smart parking set
- Smart socket
- Telecommunication rack control module
- Danial Moj tracking device

Tracker

DMISCARTMHMXXX



Introduction

A compact precise location tracker which provides real-time location information to the server and end user using the cellular network. This product can be used in a wide range of applications including:

- Real-time fleet tracking
- Smart livestock to track the location of the cattle
- Location tracking collars for domestic pets
- Health wearables for elderly people, especially suffering from Alzheimer, to track their real-time location

MCU

Product Range	STM32 Family STM32F1 Series Microcontrollers
Architecture	ARM Cortex-M3
No. of Bits	32bit
CPU Speed	72MHz
Program Memory Size	256KB, 256KB
RAM Memory Size	64KB
No. of Pins	100Pins
MCU Case Style	LQFP
No. of I/O's	80I/O's
Embedded Interface Type	CAN ENET I2C SPI UART USB
Supply Voltage Min	2V
Supply Voltage Max	3.6V
MCU Family	STM32
MCU Series	STM32F1
RoHS Phthalates Compliant	Yes
MSL	MSL 3 - 168 hours
SVHC	No SVHC (17-Dec-2015)
Clock Frequency	72MHz

Controller Family/Series	STM32
Flash Memory Size	256KB
IC Generic Number	32F107VCT
MPU Core Size	32bit
No. of ADC Inputs	16
No. of PWM Channels	16
No. of Timers	10
Operating Temperature Max	85°C
Operating Temperature Min	-40°C
Operating Temperature Range	-40°C to +85°C
Oscillator Type	External Internal
Peripherals	ADC DAC DMA PWM Timer
Supply Voltage Range	2V to 3.6V
Termination Type	Surface Mount Device

GPS module

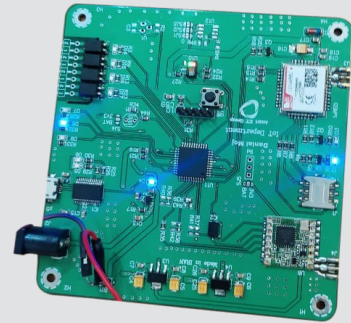
- TTL level, compatible with 3.3V/5V systems
- Baud rate 9600 only
- Operating voltage: 2.7V-5.0V (VCC input)
- Operating current: 35mA

Sim800 GSM/GPRS module

- Frequency Bands: 850/900/1800/1900MHz
- GPRS multi-slot class: 12/10
- Supply Voltage: 3.4V ~ 4.4V
- Operation temperature: -40°C ~ +85°C
- GPRS mobile station: class B
- Interface: USART
- GPRS class 12: Uplink/Downlink up to 85.6Kbps
- PBCCH support
- Embedded TCP/UDP protocol
- FTP/HTTP/POP3/SMTP
- (U)SIM card (1.8V/3V)

Remote Guarding System

DMIHSRUPIBTXXX



DESCRIPTION

This smart IoT-based hardware can be used in different remote guarding and monitoring applications. Taking advantage of cutting-edge communication technologies, and thanks to its precise and smart sensors, this hardware can replace human security guards and guarantees the safety of the protected place. This hardware measures the information about the temperature, humidity, smoke, light, movement, and vibration in the guarding place and sends any changes and unauthorized activities to the server and mobile applications. Also, this motherboard can be used in places with no internet connection thanks to its powerful low-power LoRa radio module which can communicate data with other similar nodes that are kilometers away.

List of components

- LoRa radio – RFM95W-433S2
- SIM800
- Smoke detector – MAX30105
- Accelerometer – ADXL345
- PIR module
- Temperature sensor – DS18B20
- Humidity sensor
- MCU – PIC18F46k40
- USB to serial – FT232RL
- Battery charger – MAX155
- Light sensor – LDR

MCU specifications

- Weight: 1.7g
- Speed: 64MHz
- Core Size: 8-bit
- Dimensions: 10 × 10 × 1 mm
- Base Product Number: PIC18F46K40
- Package: 44-TQFP
- Operating Temperature: -40°C ~ 85°C (TA)
- Voltage – Supply (VCC/Vdd): 2.3V ~ 5.5V

★ Smoke Detector sensor

- Tiny 5.6mm × 3.3mm × 1.55mm 14-Pin Optical Module
- -40°C to +85°C Operating Temperature Range
- Capable of Operating at High Ambient Levels
- Excellent Ambient Rejection Capability
- SPI protocol support
- 1.8V supply voltage
- Ultra-Low Power Operation
 - Programmable Sample Rate and LED Current for Power Savings
 - Ultra-Low Shutdown Current (0.7μA, typ)

★ Accelerometer

- Supply voltage range: 2.0 V to 3.6 V
- Ultralow power: as low as 23 μA in measurement mode and 0.1 μA in standby mode at VS = 2.5V (typical)
- SPI (3- and 4-wire) and I2C digital interfaces
- Free-fall detection
- Wide temperature range (-40°C to +85°C)
- Full resolution, where resolution increases with g range, up to 13-bit resolution at ±16 g
- Single tap and double tap detection capability
- small and thin: 3 mm × 5 mm × 1 mm LGA package

★ PIR Module

- Supply voltage range: 4.5 V to 20 V
- Shutdown current: less than 50 μA
- Output voltage: 0 V / 3.3 V
- Maximum detection range: 7m (max)
- Maximum angle: 120°
- Temperature range: -15°C to 70°C
- Dimension: 24 mm × 32 mm

★ Temperature sensor

- Can be powered from data line. Power supply range is 3.0V to 5.5V
- Multidrop capability simplifies distributed temperature sensing applications
- Requires no external components
- Sensing Temperature: -55°C ~ 125°C
- Accuracy - Highest (Lowest): ±0.5°C (±2°C)

- Output Type: 1-Wire
- Operating Temperature: -55°C ~ 125°C
- Thermometer resolution is programmable from 9 to 12 bits
- User-definable, nonvolatile temperature alarm settings

★ MAX1555

- Battery chemistry: Lithium Ion
- Number of cells: 1
- Charge current (Max): 340mA
- Battery pack voltage: 4.2V
- Voltage -supply (Max): 7V
- Interface: USB
- Operating Temperature: -40°C ~ 85°C (TA)
- Error protection

★ LoRa Transceiver

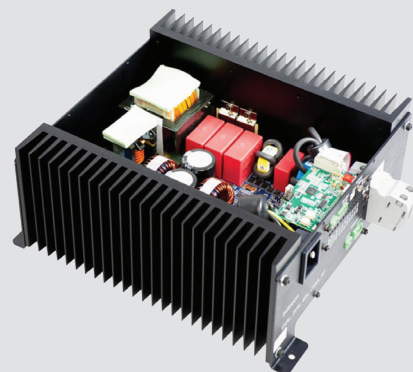
- Modulation: FSK, GFSK, GMSK, MSK, OOK
- Frequency: 433MHz
- Data Rate: 300kbps
- Power - Output: 14dBm
- Sensitivity: -148dBm
- Voltage - Supply: 1.8V ~ 3.7V
- Current - Receiving: 10.8mA ~ 12.1mA
- Current - Transmitting: 20mA ~ 120mA
- Operating Temperature: -20°C ~ 70°C
- Serial Interfaces: SPI
- Dimension: 16×16mm

★ Sim800 GSM/GPRS module

- Frequency Bands: 850/900/1800/1900MHz
- GPRS multi-slot class: 12/10
- Supply Voltage: 3.4V ~ 4.4V
- Operation temperature: -40°C ~ +85°C
- GPRS mobile station: class B
- Interface: USART
- GPRS class 12: Uplink/Downlink up to 85.6Kbps
- PBCCH support
- Embedded TCP/UDP protocol
- FTP/HTTP/POP3/SMTP
- (U)SIM card (1.8V/3V)

Battery charger (2kW–6kW)

DMIREC48V2KXXX



Introduction

Single-phase AC input battery chargers are available with ratings at 2kW which can be increased up to 7.5kW. Its comprehensive LCD offers user-configurable easy-accessible button operation such as battery charging current, charge timing program, and acceptable input voltage based on different applications. Cooling is carried out by high quality built-in fans and conduction via the base plate. The fans draw air into the unit. All heat-generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate.

Features

- Electronic Power Factor Correction (PFC)
- Rugged, industrial quality
- High efficiency
- Cooling by built-in fans
- Fully protected

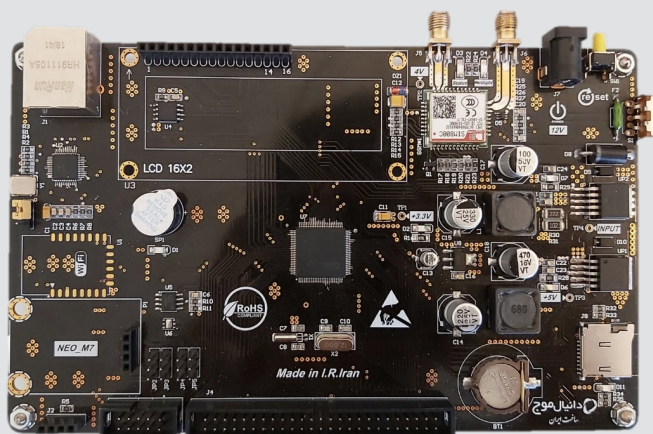


Specifications

Product	
Max. Input power	2000W
Input voltage	200–240 VAC
Input current	10
Input frequency	50HZ
Switching operating frequency	100kHz
Line and load regulation	3%
Input protection	Inrush current limit-fuse 15A
Input terminal type	MC4 / H4
Output voltage	48V
Output protection	Short circuit-over load-over voltage
Operating temperature	25°C~+60°C (Reduced load over 45°C)
Max. Output current	40A per module-120A overall
isolation	Output – P.E.: 500VDC
Total harmonic component (current)	<3%
Power factor	1 (+/-0.8 adjustable)
Efficiency	92.5%
Hold up time	10ms
Start-up time	1s
Communication	
Max. Working altitude	4000m
Noise	<25dB
Cooling method	PWM FAN

Motherboard

DMITRAR3GMXXXX



Introduction

This is a multi-purpose powerful motherboard that can easily be configured for any IoT-based application. Having equipped with all necessary and mostly-used communicative ICs and peripherals, this motherboard can address all you need to implement your smart IoT ideas. It can also be used as an evaluation board for the R&D and prototyping phases. Thanks to its powerful 32-bit MCU, it can perform complicated tasks as a standalone unit.

Features

- Character LCD
- SD-card slot for event logging
- Precise onboard temperature sensor
- Onboard humidity sensor
- Backup battery
- GPS
- Powerful ARM (32bit) microprocessor
- Wi-Fi(esp8266) module for wireless communications
- GPS and GPRS module for communications via SMS, Internet, or phone calls
- Bluetooth data transfer
- Network connection via Ethernet or Wi-Fi module
- Deploying different network protocols including SNMP, FTP, UDP, TCP/IP, HTTP, HTTPS

Wi-Fi and Bluetooth module

- Low cost, compact and powerful
- Power Supply: +3.3V
- Current Consumption: 100mA
- I/O Voltage: 3.6V (max)
- I/O source current: 12mA (max)
- Built-in low power 32-bit MCU @ 80MHz
- 512kB Flash Memory
- Can be used as Station or Access Point or both combined
- Supports Deep sleep (<10μA)
- Supports serial communication hence compatible with many development platforms like Arduino
- Can be programmed using Arduino IDE or AT-commands or Lua Script

Character LCD

- Operating Voltage is 4.7V to 5.3V
- Current consumption is 1mA without backlight
- Alphanumeric LCD display module, meaning can display alphabets and numbers
- Consists of two rows and each row can print 16 characters.
- Each character is built by a 5x8 pixel box
- Can work on both 8-bit and 4-bit mode
- It can also display any custom generated characters
- Available in Green and Blue Backlight

MCU

Product Range	STM32 Family STM32F1 Series Microcontrollers
Architecture	ARM Cortex-M3
No. of Bits	32bit
CPU Speed	72MHz
Program Memory Size	256KB, 256KB
RAM Memory Size	64KB
No. of Pins	100Pins
MCU Case Style	LQFP
No. of I/O's	80I/O's
Embedded Interface Type	CAN ENET I2C SPI UART USB
Supply Voltage Min	2V
Supply Voltage Max	3.6V
MCU Family	STM32
MCU Series	STM32F1
RoHS Phthalates Compliant	Yes
MSL	MSL 3 - 168 hours
SVHC	No SVHC (17-Dec-2015)
Clock Frequency	72MHz
Controller Family/Series	STM32
Flash Memory Size	256KB
IC Generic Number	32F107VCT

MPU Core Size	32bit
No. of ADC Inputs	16
No. of PWM Channels	16
No. of Timers	10
Operating Temperature Max	85°C
Operating Temperature Min	-40°C
Operating Temperature Range	-40°C to +85°C
Oscillator Type	External Internal
Peripherals	ADC DAC DMA PWM Timer
Supply Voltage Range	2V to 3.6V
Termination Type	Surface Mount Device

Ethernet Port

Data Rate	100Mbps
Ethernet Type	IEEE 802.3u
Supply Voltage Min	3V
Supply Voltage Max	3.6V
Controller IC Case Style	LQFP
No. of Pins	48Pins
IC Interface Type	MII RMII Serial
Operating Temperature Min	0°C
Operating Temperature Max	70°C
Product Range	DP83848C/I/VYB/YB PHYTER
Automotive Qualification Standard	-
MSL	MSL 3 - 168 hours
SVHC	No SVHC (27-Jun-2018)
No. of Channels	1Channels
No. of Ports	1Ports
Operating Temperature Range	0°C to +70°C
Supply Current	92mA
Supply Voltage Range	3V to 3.6V
Termination Type	Surface Mount Device

GPS Module

- TTL level, compatible with 3.3V/5V systems
- Baud rate 9600 only
- Operating voltage: 2.7V-5.0V (VCC input)
- Operating current: 35mA

Humidity sensor

Size	3 x 3 x 1.1 mm
Output	I ² C digital, PWM, SDM
Supply voltage range	2.1 to 3.6 V
Energy consumption	3.2μW (at 8-bit, 1 measurement/s)
RH operating range	0 - 100% RH
T operating range	-40 to +125°C (-40 to +257°F)
RH response time	8 sec (tau63%)

Temperature sensor

- Operating Voltage: 3.5V to 5.5V.
- Operating current: 0.3mA (measuring) 60uA (standby)
- Output: Serial data.
- Temperature Range: -40°C to 80°C.
- Humidity Range: 0% to 100%
- Resolution: Temperature and Humidity both are 16-bit.
- Accuracy: ±0.5°C and ±1%

Memory

- Package Type: SOIC
- Operating Temperature Range: -40° C to +85° C
- Interface Type: Serial, I2C
- Base Number: 24
- Memory capacity: 2K bit
- Memory Type: EEPROM
- Memory Configuration: 256 x 8 b
- Supply Voltage Range: 2.7 V - 5.5 V
- Chip label: 24C02
- Mounting Type: Surface Mount



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بسمه تعالی

سندیکای صنعت مخابرات ایران
Iranian Telecommunication Industries Syndicate

شماره ثبت: ۱۳۲، اتاق بازرگانی صنایع و معادن ایران
تأسیس: سال ۱۳۷۷

«گواهی عضویت»

شرکت دانیال موج

شماره عضویت: ۲۳۸

حوزه فعالیت

طراح و سازنده تجهیزات اکتیو نوری
(CWDM, DWDM)

حسین رواغی
رئیس هیئت مدیره

فرامرز رستگار
دبیر و عضو هیئت مدیره

سندیکای صنعت مخابرات ایران
شماره ۱۳۷۷

اعتبار این کارت تا پایان سال ۹۹ می باشد.

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