

# Fiber Optic Network Solutions

High-performance Data Transmission from the Edge to the Core



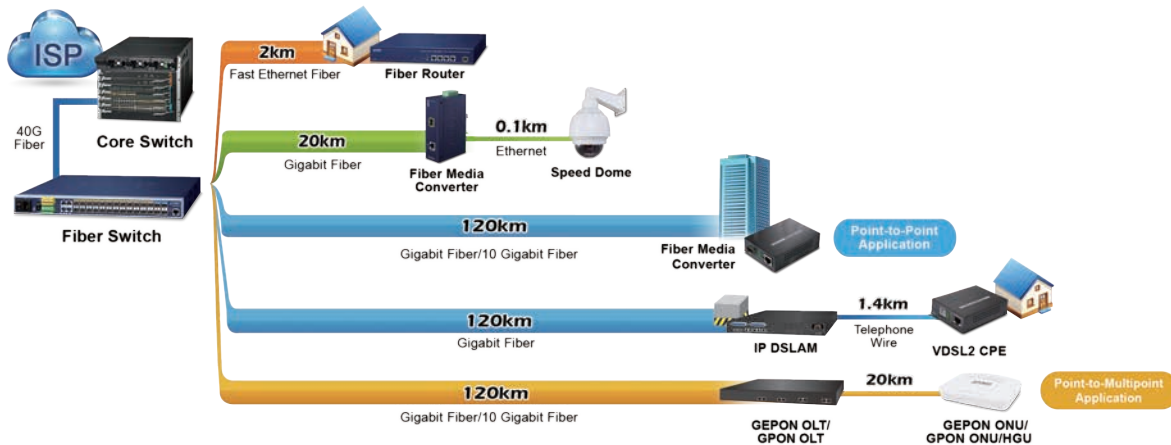
- Metro Ethernet
- xPON
- Media Conversion
- Industrial Fiber
- VDSL2





# Broadband - Fiber Optic & Last Mile

In the broadband communication, fiber optic technology has become the mainstream for communities and telecom transmission deployment as it fulfills the cloud application, high-demanding multimedia streaming needs and a transmission distance of up to 120km. To satisfy the demand of the FTTx infrastructure, PLANET has come out with a complete product line of Fiber Switches, Fiber Routers, Metro Fiber Switches, Commercial and Industrial Media Converters, GPON/ GEPON OLT, GPON/ GEPON ONU, and PoE Media Converters. PLANET also provides a combined CO and CPE VDSL2 solution to meet the last mile transmission requirements.

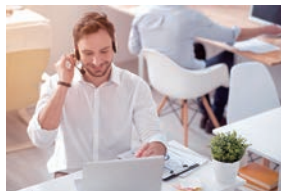


## FTTx / Metro Ethernet

To improve the technology of Optical Fiber Ethernet with highly-flexible, highly-extendable and easy-to-install features, the data exchange speed of Optical Fiber Ethernet is up to 100Gbps and the distance of Gigabit Optical Fiber is up to 120km. PLANET provides many kinds of Point-to-Multi Point Managed Fiber Switches and CPE especially for Metro Ethernet applications. The benefits of Metro Ethernet Switches include not only professional Internet Management Technology, such as IPv6/IPv4 Dual-Stack, Q-in-Q VLAN, Multicast, QoS, Security and High Availability, but also Optical Ethernet Internet Architecture up to 100Gbps to meet the needs of high-bandwidth multi-media. PLANET Metro Ethernet Switch Solution is the best choice to connect the enterprise, community and campus in the metropolitan area to backbone network for service providers.

PLANET Last Mile Transmission Solution includes 3 different kinds of technologies, such as VDSL2, GPON/ GEPON, and Fiber for various applications. For each technology, PLANET provides not only CO (Central Office) side of equipment for ISP but also CPE (Customer Premises Equipment) side of device for end users. PLANET Last Mile CO equipment including GPON/ GEPON OLT, Fiber Switches and CPE devices including VDSL2 Routers, GPON/ GEPON ONU, and Fiber Routers enable long distance IP Surveillance deployment and many multimedia services to be realized on local high speed Internet, such as:

- IPTV/HDTV
- VoD (Video on Demand)
- Voice over IP
- On-line Game & Music
- Distance Education
- Video Conference/Video Phone
- Remote Work



PLANET Last Mile Transmission Solution with the combination of CO and CPE provides the excellent bandwidth to satisfy the triple play devices for home entertainment and communication.

## GPON/GEAPON

The PLANET GPON/ GEPON Solution delivers high-speed voice, data and video services to residential and business subscribers. Through the PON technology, PLANET GPON/ GEPON Solution offers competitive advantages including a long-term life expectancy of the fiber infrastructure, lower operating costs from the reduction of "active" components, supporting up to 20km distance between equipment nodes, easy installation and maintenance, and most importantly, providing much greater bandwidth. PLANET GPON/GEAPON Solution is the perfect solution for FTTx applications by offering benefits of cost-effectiveness, scalability and flexibility to network deployment.

# Metro Core Multi-Layer IPV6/IPV4 Routing Switches

Chassis Switch		Multi-Layer		Stackable	
Model	CS-6306R	Model	XGS3-24242	SGS-6310-16S8C4XR	SGS-6341-16S8C4XR

Product Image










Product Image











Chassis Slots	Total Number of Slots	6 ( 2 Management Modules + 4 Standard Modules )	Hardware	10/100BASE-TX	-	-	-
	Max. Management Module	2		10/100/1000BASE-T	8 combo	8 combo	8 combo
	Max. Standard Module	4		Mini-GBIC / SFP	24	24 (100X Compatible)	
	Management Module Redundancy	●		10G SFP+ Slot	4	4 (1000X Compatible)	
	Number of Power Supply Bays	3		Switch Fabric	128Gbps	128Gbps	128Gbps
Total Port Capacity	Max. 40G QSFP Slot	16	MAC Table	16K	16K	16K	
	Max. 10G XFP Slot	64	Jumbo Frame	10K	9K	10K	
	Max. 10/100/1000BASE-T	192	Memory Buffer	1.5MB	1.5MB	1.5MB	
	Max. 1000BASE-SX/LX SFP Slot	192	IP Interfaces	1K	64	1K	
Hardware Specifications	Switch Processing Scheme	Store-and-Forward	Layer 3 Features	Routing Tables	13K/3.2K	2K/256	1K/256
	Backplane Bandwidth	3Tbps	Routing Protocols	RIP, OSPFv2/v3, BGPv4/v4+ RIPvng, PIM-DM/SM/SSM, VRRP			
	Switching Capacity	2.56Tbps	Accelerated Hardware	●	●	●	
	MAC Table	Max.32K	Interface	Port Mirror	TX, RX, Both	TX, RX, Both	TX, RX, Both
	VLAN Table	4K	Link Aggregation	Port Trunk	●	●	●
	ACL Table	Ingress Filter: 2.5K Egress Filter: 1K	LACP	●	●	●	
	Routing Table	IPv4 Protocol: 16K IPv6 Protocol: 8K	VLAN	802.1Q VLAN	●/4K	●/4K	●/4K
	Layer 3 Interface	256 max.	Q-in-Q VLAN	●	●	●	
	Port Queues	8	Private VLAN	●	●	●	
	Jumbo Frame	9kbytes	Spanning Tree	802.1D	●	●	●
	Dimensions (W x D x H)	443.5 x 370 x 397 mm	802.1w	●	●	●	
	Power Input	AC: Input 100~240V, 50~60 Hz DC: Input 36-72V, 20A max.	802.1s	●	●	●	
	IPv4 Layer 3 Functions	IP Routing Protocol	Static Route, RIPv1/v2, OSPFv2, BGP4, Policy-based Routing (PBR), LPM Routing(MD5 authentication)	Rapid Data Recovery	E.R.P.S.	●	●
Multicast Routing Protocol		IGMP v1/v2/v3, DVMRP, PIM-DM/SM, PIM-SSM	Multicast	IGMP Snooping	v1, v2, v3	v1, v2, v3	v1, v2, v3
Layer 3 Protocol		VRRP, ARP, ARP Proxy	MVR	●	●	●	
Routing Interface		Per VLAN	802.1p Priority	●/8 queues	●/8 queues	●/8 queues	
IPv6 Layer 3 Functions	IP Routing Protocol	RIPvng, OSPFv3, BGP4+	Priority Mode	Strict/WRR	Strict/WRR	Strict/WRR	
	Layer 3 Protocol	Configured Tunnels, ISATAP, CIDR	IP TOS/DSCP	●	●	●	
Layer 2 Functions	Multicast	MLDv1/v2, MLD v1/v2 Snooping	Quality of Service	QoS Mode	Port-CoS, DSCP-CoS, L4 Port-Cos		
	Access Control List	Supports Standard and Expanded ACL, IP-based ACL / MAC-based ACL, Time-based ACL, ACL Pool can be used for QoS classification, Up to 1K entries	DiffServ Policy QoS	●	●	●	
	Security	IPv4 / IPv6 + MAC + Port Binding, IPv4/IPv6 + Port Binding, ARP Spoofing Prevention, ARP Scanning Prevention, IP Source Guard	Data Control	Ingress/Egress	●/●	●/●	●/●
	Authentication	IEEE 802.1x Port-based Network Access Control, AAA Authentication: IPv4 / IPv6 over RADIUS	Access Control List	IP-based	●	●	●
Management Function	System Configuration	Console, Telnet, SSH, Web Browser, SSL SNMPv1, v2c and v3	MAC-based	●	●	●	
	Management	United for IPv4/IPv6 HTTP and SSL, the user IP Security inspection for IPv4/IPv6 SNMP, IPv4/IPv6 NTP, IPv4 / IPv6 SSH, SNMP v1/v2c/v3, TACACS+, security IP Safety Net Management Function	Security	802.1x Port-based Authentication	●	●	●
Standards Conformance	Regulatory Compliance	FCC Part 15 Class A, CE	Port Security	●	●	●	
			IPV6/IPV4	●/●	●/●	●/●	
Physical			Console	●/RJ45	●/RJ45	●/RJ45	
			Telnet	●	●	●	
			Web Management	●	●	●	
			SNMP	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	
			RMON	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	
			SSH/SSL	●	●	●/●	
			Firmware Upgrade	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP	
		Configuration Backup/Recovery	●	●	●		
		Single IP Management	●	●	●		
		Syslog	●	●	●		
		Dimensions (W x D x H)	440 x 240 x 44 mm			440 x 240 x 44 mm	
		Power Supply	100~240V AC, 36-75V DC	Dual 100~240V AC		100~240V AC, 36-75V DC	
		EMI/Safety	FCC Class A, CE	FCC Class A, CE		FCC Class A, CE	

# Metro Core 10G Routing Switches

		100G/40G/10G		10G			40G/10G	
Model		XGS-6350-24X4C	XGS-6350-48X2Q4C	XGS-6350-12X8TR	XGS-6320-12X4TR	XGS-6320-8X8TR	XGS-6311-12X	XGS-5240-24X2QR
Product Image								
Hardware	10/100/1000BASE-T	-	-	8	-	-	-	-
	1000BASE-X SFP	-	-	-	-	-	-	-
	10GBASE-T	-	-	-	4 (Compatible with 100/1G/2.5G/5GBASE-T)	8 (Compatible with 100/1G/2.5G/5GBASE-T)	-	-
	10G SFP+ Slot	24 (Compatible with 1000BASE-SX/LX/BX SFP)	48	12 (Compatible with 1000BASE-X SFP)	12 (Compatible with 1G/2.5GBASE-X SFP)	8 (Compatible with 1G/2.5GBASE-X SFP)	12	24
	40G QSFP+ Slot	-	2	-	-	-	-	2
	100G QSFP28 Slot	4 (Compatible with QSFP+ 40G)	4	-	-	-	-	-
	Switch Fabric	800Gbps	2.56Tbps	256Gbps	320Gbps	320Gbps	240Gbps	640Gbps
	MAC Table	32K	16K	32K	32K	32K	32K	32K
	Jumbo Frame	9K	10K	9K	10K	10K	12K	9K
	Memory Buffer	4MB	9MB	3MB	32Mbits	32Mbits	16MB	4MB
Layer 3 Features	IP Interfaces	128	128	128	128	128	1024	64
	Routing Tables	16K	16K	128	Static: 512 Dynamic: 3072	Static: 512 Dynamic: 3072	12K	64
	Routing Protocols	Static routing, RIPv1/v2, OSPFv2/v3			RIPv1/v2, OSPFv2/v3, IPv6/IPv4 Static Routing			Static routing
	Accelerated Hardware	●	●	●	●	●	●	-
Interface	Port Mirror	TX, RX, Both	TX, RX, Both	TX, RX, Both	TX, RX, Both	TX, RX, Both	TX, RX, Both	TX, RX, Both
Link Aggregation	Port Trunk	●	●	●	●	●	●	●
	LACP	●	●	●	●	●	●	●
VLAN	802.1Q VLAN	●/4K	●/4K	●/4K	●/4K	●/4K	●/4K	●/4K
	Q-in-Q VLAN	●	●	●	●	●	●	●
	Private VLAN	●	●	●	●	●	●	●
Spanning Tree	802.1D	●	●	●	●	●	●	●
	802.1w	●	●	●	●	●	●	●
	802.1s	●	●	●	●	●	●	●
Rapid Data Recovery	E.R.P.S	●	●	●	●	●	●	-
Multicast	IGMP Snooping	v1, v2, v3	v1, v2, v3	v1, v2, v3	v1, v2, v3	v1, v2, v3	v1, v2, v3	v1, v2, v3
	MVR	●	●	●	●	●	●	●
Quality of Service	802.1p Priority	●/8 queues	●/8 queues	●/8 queues	●/8 queues	●/8 queues	●/8 queues	●/8 queues
	Priority Mode	Strict/WRR	Strict/WRR	Strict/WRR	Strict/WRR	Strict/WRR	Strict/WRR	Strict/WRR
	IP TOS/DSCP	●	●	●	●	●	●	●
	QoS Mode	Port-CoS, DSCP-CoS, L4 Port-CoS		Port-CoS, DSCP-CoS, L4 Port-CoS		Port-CoS, DSCP-CoS, L4 Port-CoS		
DiffServ Policy Qos	●	●	●	●	●	●	●	
Data Control	Ingress/Engress	●/●	●	●	●	●	●	●/●
Access Control List	IP-based	●	●/●	●/●	●/●	●/●	●/●	●
	MAC-based	●	●	●	●	●	●	●
Security	802.1x Port-based Authentication	●	●	●	●	●	●	●
	MAC Filtering	●	●	●	●	●	●	●
	Port Security	●	●	●	●	●	●	●
Management	IPv6/IPv4	●/●	●/●	●/●	●/●	●/●	●/●	●/●
	Console	●/RJ45	●/RJ45	●/RJ45	●/RJ45	●/RJ45	●/RJ45	●/RJ45
	Telnet	●	●	●	●	●	●	●
	Web Management	●	●	●	●	●	●	●
	SNMP	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3
	RMON	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9
	SSH/TLS	●/●	●/●	●/●	●/●	●/●	●/●	●/●
	Firmware Upgrade	●	●	●	●	●	●	●
	Configuration Backup/Recovery	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP
	Single IP Management	●	●	●	-	-	-	●
Syslog	●	●	●	●	●	●	●	
Physical	Dimensions (W x D x H)	442.5 x 364 x 44 mm	400 x 400 x 44mm	400 x 315 x 44mm	400 x 200 x 44mm	400 x 200 x 44mm	330 x 230 x 44mm	400 x 318 x 44 mm
	Power Supply	100-240V AC, 50/60Hz	Dual 100-240V AC, 50/60Hz		100-240V AC, 50/60Hz 36-60V DC		100-240V AC, 50/60Hz	100-240V AC, 50/60Hz Dual 36-72V DC
Regulatory	EMI/Safety	FCC Class A, CE	FCC Class A, CE	FCC Class A, CE	FCC Class A, CE	FCC Class A, CE	FCC Class A, CE	FCC Class A, CE

# Metro Core IPv6/IPv4 Routing Switches

		Metro Fiber Switches					Standalone		
Model	MGSD-10080F	MGS-6320-2T6S2X	MGSW-24160F	MGSW-28240F	IGS-6325-20S4C4X	GS-5220-16S8C GS-5220-16S8CR	GS-6320-46S2C4XR	GS-6311-16S8C4XR	
Product Image									
Hardware	10/100BASE-TX	-	-	-	-	-	-	-	-
	10/100/1000BASE-T	2	2 (combo)	8	4 (combo)	4 (combo)	8 (combo)	2 (combo)	8 (combo)
	Mini-GBIC / SFP	8 (100FX Compatible)	6 (100FX/1G/2.5G Compatible)	16 (100FX Compatible)	24 (100FX Compatible)	24 (100FX/1G/2.5G Compatible)	24	48	24
	10G SFP+ Slot	-	2 (1000X Compatible)	-	4 (1000X Compatible)		-	4 (1000X Compatible)	4
	Switch Fabric	26Gbps	68 Gbps	48Gbps	158Gbps	158Gbps	48Gbps	176Gbps	128Gbps
	MAC Table	8K	8K	8K	32K	32K	16K	32K	16K
	Jumbo Frame	9K	10K	9K	10K	10K	10K	10K	12K
	Memory Buffer	4Mbits	4Mbits	4Mbits	32Mbits	32Mbits	16Mbits	32Mbits	12Mbits
Layer 3 Features	IP Interfaces	8	32	8	128	128	128	128	1024
	Routing Tables	32	Static: 32 Dynamic: 1K	32	Static: 128 Dynamic: 4K	Static: 128 Dynamic: 4K	32	Static: 128 Dynamic: 4K	6K
	Routing Protocols	Static routing	Static routing, OSPFv2	Static routing	Static routing, OSPFv2		Static routing	Static routing, OSPFv2	RIPv1/v2, OSPFv2
Interface	Accelerated Hardware	-	●	-	●	●	-	●	●
	Port Configuration	●	●	●	●	●	●	●	●
	Port Mirror	TX, RX, Both	TX, RX, Both	TX, RX, Both	TX, RX, Both	TX, RX, Both	TX, RX, Both	TX, RX, Both	TX, RX, Both
Link Aggregation	DDM	●	●	●	●	●	●	●	●
	Port Trunk	5 Trunks / 8 Ports	5 Trunks / 10 ports	24 Trunks / 8 Ports	24 Trunks / 8 Ports	24 Trunks / 8 Ports	12 Trunks / 8 Ports	26 Trunks / 8 Ports	64 Trunks / 8 Ports
VLAN	LACP	●	●	●	●	●	●	●	●
	Port-based	●	●	●	●	●	●	●	●
	802.1Q VLAN	●/256	●/4K	●/256	●/4K	●/4K	●/256	●/4K	●/4K
	Protocol-based	-	●	-	●	●	●	●	●
Spanning Tree	GVRP	●	●	-	●	●	-	●	●
	802.1D	●	●	●	●	●	●	●	●
	802.1w	●	●	●	●	●	●	●	●
Multicast	802.1s	●	●	●	●	●	●	●	●
	IGMP Snooping	v1, v2, v3	v1, v2, v3	v1, v2, v3	v1, v2, v3	v1, v2, v3	v1, v2, v3	v1, v2, v3	v1, v2, v3
Quality of Service	MVR	●	●	●	●	●	●	●	●
	802.1p Priority	●/4 queues	●/8 queues	●/4 queues	●/8 queues	●/8 queues	●/8 queues	●/8 queues	●/8 queues
	Priority Mode	Strict/WRR	Strict/WRR	Strict/WRR	Strict/WRR	Strict/WRR	Strict/WRR	Strict/WRR	Strict/WRR
	IP TOS/DSCP	●	●	●	●	●	●	●	●
	QoS Mode	Port-COS, DSCP-COS, L4 Port-COS			Port-COS, DSCP-COS, L4 Port-COS		Port-COS, DSCP-COS, L4 Port-COS		
Data Control	DiffServ Policy QoS	●	●	●	●	●	●	●	●
Access Control List	Ingress / Egress	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
	IP-based	●	●	●	●	●	●	●	●
Security	MAC-based	●	●	●	●	●	●	●	●
	802.1x Port-based Authentication	●	●	●	●	●	●	●	●
	MAC Binding	●	●	●	●	●	●	●	●
	MAC Filtering	●	●	●	●	●	●	●	●
Management	Port Security	●	●	●	●	●	●	●	●
	IPv6 / IPv4	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
	Console (RS232)	RJ45 Console	RJ45 Console	RJ45 Console	RJ45 Console	RJ45 Console	RJ45 Console	RJ45 Console	RJ45 Console
	Telnet	●	●	●	●	●	●	●	●
	Web Management	●	●	●	●	●	●	●	●
	SNMP	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3	v1, v2c, v3
	RMON	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9	1, 2, 3, 9
	SSH/TLS	●/●	●/●	●/●	●/●	●/●	●/●	●/●	●/●
	Firmware Upgrade	HTTP, TFTP	HTTP	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP	HTTP, TFTP
	Configuration backup/recovery	●	●	●	●	●	●	●	●
Syslog	●	●	●	●	●	●	●	●	
Physical	Dimensions (W x D x H)	330 x 155 x 43.5 mm	330 x 133 x 44 mm	440 x 200 x 44 mm	440 x 200 x 44 mm	440 x 200 x 44 mm	440 x 200 x 44mm	440 x 300 x 44mm	440 x 260 x 44mm
	Power Supply	100-240V AC, 50/60Hz -48V DC RPS	100-240V AC 24-57V DC	100-240V AC, 50/60Hz -48V DC RPS			100-240V AC, 48V DC	100-240V AC, 36-60V DC	100-240V AC, 36-72V DC
	EMI/Safety	FCC Class A, CE			FCC Class A, CE		FCC Class A, CE		

# Industrial Fiber Switches & Media Converters

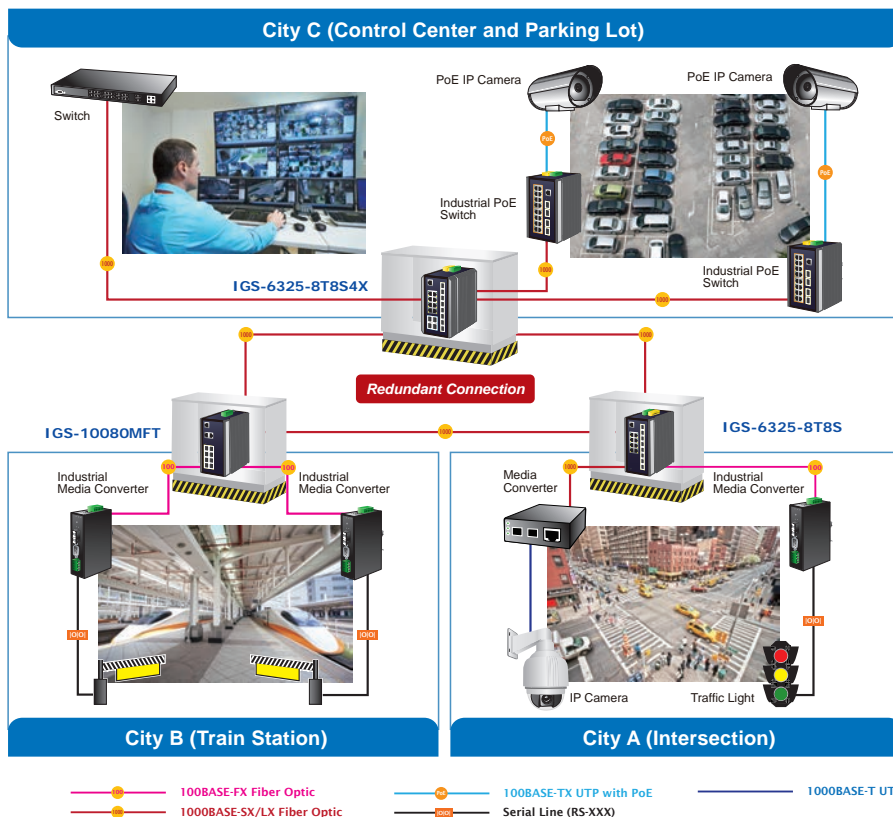


PLANET Industrial Ethernet Solution offers high reliability and security to ensure continuous industrial operation in harsh environments such as factory floors, outdoors, and places with extreme temperatures. The Industrial Ethernet upgrades the traditional, proprietary factory-floor networks to a low-cost, high-performance, and scalable architecture. PLANET Industrial Ethernet switches and converters integrate 100/1000 Fiber technology with highly-reliable and long-reach data transmission. PLANET provides suitable product portfolio for information level, control level, and device level in the Industrial Ethernet network.

Information Level	Control Level	Device Level
 <ul style="list-style-type: none"> <li>• Fiber Managed Switch</li> <li>• Metro Managed Switch</li> </ul>	 <ul style="list-style-type: none"> <li>• Switch with Ring function</li> <li>• Switch with PoE/ Gigabit/ Fiber function</li> <li>• Injector, converter, AP</li> </ul>	 <ul style="list-style-type: none"> <li>• Serial over Ethernet</li> <li>• Video over Ethernet</li> <li>• Splitter</li> </ul>

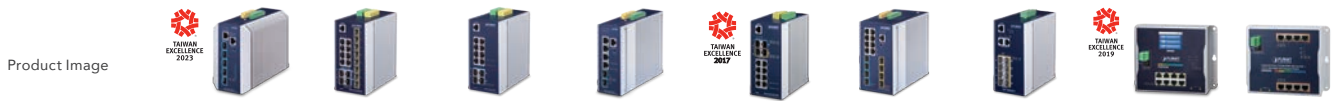
## Fiber-Optic Link Capability Extends the Range of Network Deployment

The SFP slots built in with PLANET Industrial Fiber Switches are compatible with 100BASE-FX or 1000BASE-SX/LX/WDM through SFP (Small Form Factor Pluggable) fiber-optic transceivers. The fiber-optic uplink capability guarantees the throughput to all nodes hooked into the network and the Gigabit Ethernet distance can be extended from 550 meters (Multi-mode fiber cable) up to 10/20/30/40/50/70/120 kilometers (Single-mode fiber or WDM fiber).










# Industrial Managed Switches









Managed										
Model	IGS-6325-5X1T	IGS-6325-8T8S4X IGS-6325-8T8S	IGS-6325-8T4X	IGS-6325-4T2X	IGS-5225-8T2S2X	TSN-6325-8T4S4X	IGS-10080MFT	WGS-5225-8T2SV	WGS-4215-8T2S	



Category	Feature	IGS-6325-5X1T	IGS-6325-8T8S4X IGS-6325-8T8S	IGS-6325-8T4X	IGS-6325-4T2X	IGS-5225-8T2S2X	TSN-6325-8T4S4X	IGS-10080MFT	WGS-5225-8T2SV	WGS-4215-8T2S	
Hardware	LCD	-	-	-	-	-	-	-	2.4" Color TFT touch screen	-	
	10/100/1000BASE-T	-	8	8	4 100/1G/ 2.5GBASE-T	8	8	2	8	8	
	1000BASE-X	-	8	-	-	2	Compatible	8	2	2	
	2500BASE-X	-	Compatible	-	-	Compatible	4	Compatible	Compatible	-	
	10G/5G/2.5G/1GBASE-T	1	-	-	-	-	-	-	-	-	
	10G SFP+ Slot	5	4/-	4	2	2	4	-	-	-	
	Switch Fabric	120Gbps	136Gbps	96Gbps	60Gbps	66Gbps	116Gbps	26Gbps	26Gbps	20Gbps	
	DI/DO	2/2	2/2	2/2	2/2	2/2	2/2	-	-	-	
Power	Inputs	Dual 9~48V DC or 24V AC	Dual 12~48V DC or 24V AC		Dual 9~48V DC or 24V AC	Dual 12~48V DC or 24V AC	Dual 9~48V DC or 24V AC	Dual 12~48V DC or 24V AC			
	Connector	6-pin terminal block				6-pin terminal block			3-pin terminal block, DC socket		
	Consumption	23 watts	Max. 38 watts Max. 29 watts	Max. 30 watts	12 watts	18 watts	38 watts	13.92 watts	12 watts	7.9 watts	
Mechanical	Dimensions (W x D x H)	80 x 135 x 135 mm	76 x 107 x 152 mm	76 x 107 x 152 mm	60 x 135 x 135 mm	76 x 107 x 152 mm	86 x 135 x 152 mm	76 x 107 x 152 mm	178 x 25 x 134 mm	178 x 25 x 134 mm	
	Enclosure	IP30 aluminum		IP30 aluminum		IP30 aluminum	IP30 aluminum	IP30 aluminum	IP30 metal	IP30 aluminum	
	Mounting	DIN-rail, wall-mountable		DIN-rail, wall-mountable		DIN-rail, wall-mountable			DIN-rail, wall-mountable and magnetic wall mount		
Environment	Operating Temperature	-40~75 degrees C		-40~75 degrees C		-40~75 degrees C			-20~70 degrees C	-40~75 degrees C	
	Operating Humidity	5%~95% RH (Non-condensing)		5%~95% RH (Non-condensing)		5%~70% RH (Non-condensing)			5% to 95% RH (Non-condensing)		
Regulatory	Emissions	FCC Class A, CE		FCC Class A, CE		FCC Class A, CE Class A			FCC Class A, CE Class A		
	Stability	IEC60068-2-32 (Free Fall), IEC60068-2-27 (Shock), EC60068-2-6 (Vibration)				IEC60068-2-32 (Free Fall), IEC60068-2-27 (Shock), EC60068-2-6 (Vibration)					
Layer 3 Features	IP Interfaces	128	128	128	32	128	128	8	8	-	
	Routing Tables	Static: 512 Dynamic: 3072	Static: 128 Dynamic: 1K	Static: 128 Dynamic: 1K	Static: 32 Dynamic: 1K	Static: 128 Dynamic: 4K	Static: 512 Dynamic: 3072	32	32	-	
	Routing Protocols	OSPFv2/v3, RIPv1/v2, IPv6/IPv4 Static Routing	IPv4 OSPFv2 dynamic routing		OSPFv2/v3, RIPv1/v2, IPv6/IPv4 Static Routing	IPv6/IPv4 Static Routing	OSPFv2/v3, RIPv1/v2, IPv6/IPv4 Static Routing	IPv6/IPv4 Static Routing	IPv6/IPv4 Static Routing	-	
	Accelerated Hardware	●	●	●	●	●	●	-	-	-	
Protocol	VLAN	Port-based VLAN/IEEE 802.1Q VLAN/Q-in-Q/Private VLAN/Mac-based VLAN/Protocol-based VLAN/Voice VLAN/MVR/GVRP			Port-based VLAN/IEEE 802.1Q VLAN/Q-in-Q/Private VLAN/Mac-based VLAN/Protocol-based VLAN/Voice VLAN/MVR/GVRP			802.1Q VLAN, Q-in-Q, Private VLAN, MAC-based VLAN, Protocol-based VLAN, Voice VLAN and MVR		802.1Q VLAN, Q-in-Q, Private VLAN, Protocol-based VLAN, Voice VLAN, GVRP	
	IGMP Snooping	v1/v2/v3/query	IPv4 IGMP (v1/v2/v3) IPv4 IGMP querier mode support		v1/v2/v3/query	v1/v2/v3/query	v1/v2/v3/query	v1/v2/v3/query	v1/v2/v3/query	v2/v3/query	
	Spanning Tree	802.1w/802.1s	802.1D/802.1w/802.1s		802.1w/802.1s	802.1w/802.1s	802.1w/802.1s	802.1w/802.1s	802.1w/802.1s	802.1w/802.1s	
	Data Redundancy	ERPS Ring < 10ms		ERPS Ring < 10ms		ERPS Ring < 10ms		ERPS Ring < 10ms		RSTP/MSTP/ERPS	
	QoS	Port-based/802.1P/IP DSCP Policy-based/Voice VLAN					Port-based/802.1P/IP DSCP Policy-based/Voice VLAN				
	Security	802.1x, Static MAC, MAC filter, Port Security and IP Security					802.1x, Static MAC, MAC filter, Port Security and IP Security				
	Traffic Control	In/out rate limit, storm control					In/out rate limit, storm control				
Management	Interface	Console, Web, Telnet, SSHv2 and TLSv1.2				Console, Web, Telnet, SSHv2 and TLSv1.2			Web, Telnet, SSH and TLS		
	SNMP	v1, v2c, v3, trap				v1, v2c, v3, trap			v1, v2c, v3, trap		
	Alarm	Power and Port alarm				Power and Port alarm			-	-	
	System Log	System Log and remote syslog				System Log and remote Syslog			System Log and remote Syslog		

# Industrial Media Converters








Fast Ethernet				Gigabit				
Model	IFT-802T	IFT-802TS15	IFT-805AT	IGT-2205AT	IGT-1205AT	IGT-900-1T1S IGS-900-2T2S	IGT-815AT	
Product Image								
Copper	Copper Interface	1 x 10/100BASE-TX port, RJ45, Auto-negotiation, Auto-MDI/MDI-X			2	2/1 x 10/100/1000BASE-T, RJ45, Auto-negotiation, Auto-MDI/MDI-x		
Fiber	Optical Interface	100BASE-FX port	100BASE-FX port	100BASE-FX port	100/1000/2500BASE-X			100/1000BASE-X
	Optical Connector	SC	SC	SFP	2 x SFP	2 x SFP	2/1 x SFP	1 x SFP
	Optical Mode	Multi-mode	Single mode	Vary on module	Vary on module			
	Max. Distance	2km	15km	Vary on module	Vary on module			
	Optic Wavelength	1310nm	1310nm	Vary on module	Vary on module			
	Fiber-optic cable	50/125µm or 62.5/125µm multi-mode fiber cable	9/125µm single mode cable	Vary on module	Vary on module			
Mechanical	Dimensions (W x D x H)	32 x 87.8 x 135 mm	32 x 87.8 x 135 mm	32 x 87.8 x 135 mm	32 x 87.8 x 135 mm	32 x 87.8 x 135 mm	32 x 87.8 x 135 mm	30 x 70 x 104 mm
	Weight	400g	400g	400g	420g	400g	IGT-900-1T1S: 273g IGS-900-2T2S: 390g	250g
	Enclosure	IP30 Metal	IP30 Metal	IP30 Metal	IP30 Metal	IP30 Metal	IP30 Metal	IP30 Metal
	Mounting	DIN-rail, Wall-mountable			DIN-rail, Wall-mountable			DIN-rail kit and wall-mount ear
Power	Inputs	Dual 12-48V DC	Dual 12-48V DC	Dual 12-48V DC	Dual 12-48V DC	Dual 12-48V DC	Dual 9-48V DC 24V AC	Dual 9-48V DC
	Connector	6-Pin Removable Terminal Block			6-Pin Removable Terminal Block			2-pin Removable Terminal Block
	Consumption	4.6 watts max.	4.6 watts max.	4.6 watts max.	7.5 watts max.	7.5 watts max.	AC: 10 watts max. DC: 6.5 watts max.	1.12 watts max.
Environment	Operating Temperature	-40~75 degrees C	-40~75 degrees C	-40~75 degrees C	-40~75 degrees C	-40~75 degrees C	-40~75 degrees C	-40~75 degrees C
	Operating Humidity	5% to 95% RH (Non-condensing)			5% to 95% RH (Non-condensing)			
Regulatory	Emissions	FCC Class A, CE Class A			FCC Class A, CE Class A			
	Stability	IEC60068-2-32 (Free Fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)						
Management		-	-	-	-	-	●*1	-

Gigabit PoE+				Gigabit PoE++				
Model	IGTP-805AT	IGTP-802T/IGTP-802TS	IGTP-815AT	IGTP-825AT	IGUP-805AT	IGUP-1205AT	IGUP-2205AT	
Product Image								
								
Copper	Copper Interface	1 x 10/100/1000BASE-T, RJ45, Auto-negotiation, Auto-MDI/MDI-X					2 x 10/100/1000BASE-T, RJ45, Auto-negotiation, Auto-MDI/MDI-x	
Fiber	Optical Interface	1000BASE-SX/LX	1000BASE-X	100/1000BASE-X	1000BASE-X	100/1000BASE-X	100/1000BASE-X	100/1000BASE-X
	Optical Connector	1 x SFP	IGTP-802T: SC IGTP-802TS: SC	1 x SFP	1 x SFP	1 x SFP	2 x 1000BASE-SX/LX/BX SFP Compatible with 100BASE-FX SFP	
	Optical Mode	Vary on module	IGTP-802T Multi-mode: 50/125µm or 62.5/125µm optic fiber IGTP-802TS Single-mode: 9/125µm optic fiber	Vary on module	Vary on module	Vary on module	Vary on module	Vary on module
	Max. Distance	Vary on module	IGTP-802T: 220m & 550m IGTP-802TS: 20km	Vary on module	Vary on module	Vary on module	Vary on module	Vary on module
	Optic Wavelength	Vary on module	IGTP-802T: 850nm IGTP-802TS: 1310nm	Vary on module	Vary on module	Vary on module	Vary on module	Vary on module
	Fiber-optic cable	Vary on module	please see the Optical Connector Field	Vary on module	Vary on module	Vary on module	Vary on module	Vary on module
Mechanical	Dimensions (W x D x H)	32 x 87 x 135 mm	32 x 87 x 135 mm	30 x 70 x 104 mm	150 x 44 x 73mm	32 x 87.8 x 135 mm	55 x 85 x 135 mm	
	Weight	500g	510g	250g	370g	500g	600g	650g
	Enclosure	IP30 Metal	IP30 Metal	Compact IP30 Metal	IP67 Metal	IP30 Metal	IP30 Metal	IP30 Metal
	Mounting	DIN-rail, Wall-mountable			Wall-mountable	DIN-rail kit and wall-mount ear		
Power	Inputs	12-48V DC; 24V AC		48-56V DC	24-56V DC	Dual 12-56V DC		
	Connector	6-Pin Removable Terminal Block		2-pin Removable Terminal Block		6-pin Removable Terminal Block		
	PoE	IEEE 802.3af/at PoE Injector, 36 watts max.				IEEE 802.3bt Injector, 90 watts max.		
	Consumption	24V:4.3watts/14BTU, 48V:4.8watts/16BTU(w/o PoE) 24V:33watts/112BTU, 48V:31watts/105BTU(w/ PoE)		43.12 watts max.		68W@12V 98W@48V	67W@12V 100W@48V	67.44W@12V 205W@48V
Environment	Operating Temperature	-40~75 degrees C		-40~75 degrees C		-40~75 degrees C		
	Operating Humidity	5% to 95% RH (Non-condensing)		5% to 95% RH (Non-condensing)		5% to 95% RH (Non-condensing)		
Regulatory	Emissions	FCC Class A, CE Class A		FCC Class A, CE Class A		FCC Class A, CE Class A		
	Stability	IEC60068-2-32 (Free Fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)						
Management		-	-	-	-	-	-	-

\*1. [IGT-900 Series] IP-based Web / SNMP v1, v2c / RMON / Out Bandwidth Control 802.1Q VLAN / Q-in-Q VLAN TOS / DSCP / 802.1p QoS TCP / UDP packet filter



# Industrial 10Gigabit Media Converters

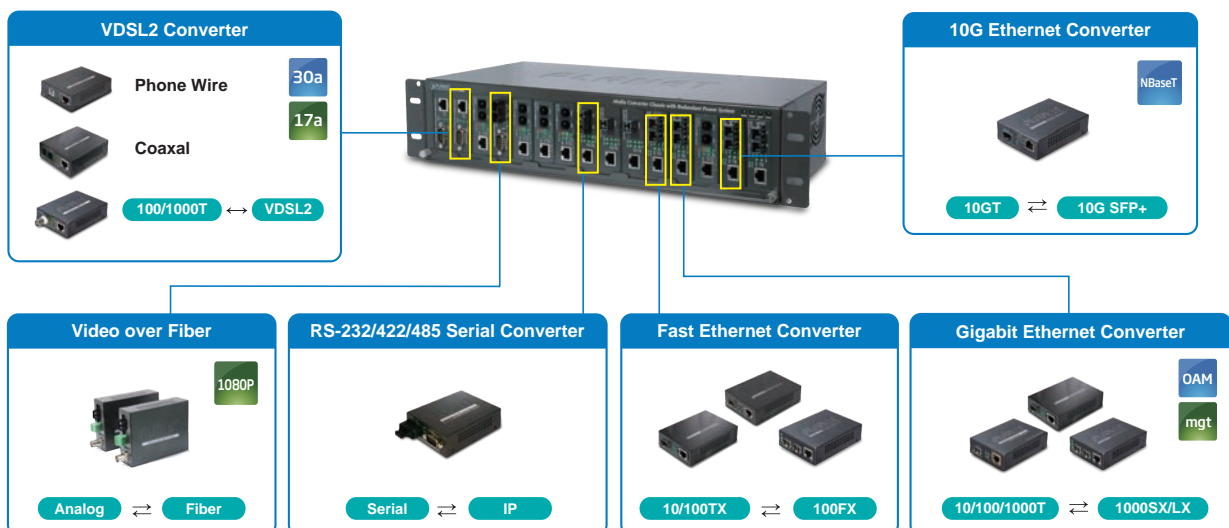
		Managed				10G PoE		Unmanaged
Model		IXT-900-2X	IXT-900-2X1T	IXT-900-2X1PD	IXT-900-1X1T	IXT-900-2X1UP	IXT-900-1X1UP	IXT-705AT
Product Image								
Copper	Ports	-	1	1	1	1	1	1
	Interface Capability	100/1G/2.5G/5G/10GBASE-T RJ45				100/1G/2.5G/5G/10GBASE-T RJ45		
Fiber	Ports	2	2	2	1	2	1	1
	Interface Capability	100/1G/2.5G/10GBASE-X SFP+				100/1G/2.5G/10GBASE-X SFP+		10GBASE-X SFP+
	Optical Mode	Vary on module				Vary on module		Vary on module
	Optical Wavelength	Vary on module				Vary on module		Vary on module
	Fiber-optic Cable	Vary on module				Vary on module		Vary on module
Mechanical	Dimensions(W x D x H)	50 x 87 x 135 mm				50 x 87 x 135 mm		32 x 87 x 135mm
	Weight	576g	609g	604g	578g	576g	578g	400g
	Enclosure	IP40 metal				IP40 metal		IP30 metal
Power	Mounting	DIN-rail, wall-mountable				DIN-rail, wall-mountable		DIN-rail, wall-mountable
	Inputs	Dual 9-48V DC, or 24V AC				Dual 12-54V DC		Dual 12-48V DC
	Connector	6-pin removable terminal block				6-pin removable terminal block		6-pin removable terminal block
Environment	PoE	-	-	PoE PD	-	95 watts 802.3bt PoE++		-
	Consumption	5.6 watts	11.5 watts	11.5 watts	10.7 watts	110 watts	109 watts	9 watts
Regulatory	Operating Temperature	-40~75 degrees C						
	Operating Humidity	5% to 95%RH (non-condensing)						
Management	Emissions	FCC Class A, CE						
	Stability	IEC60068-2-32 (Free Fall), IEC60068-2-27 (Shock), IEC60068-2-6 (Vibration)						
Management	Interface	Web, Telnet, SNMPv1/v2c/v3, RMON, SSHv2, TLSv1.2, PLANET CloudViewerPro App, PLANET NMS Central Management						-
	Features	802.1Q VLAN, LLDP, QoS, Bandwidth control, ERPS Ring, LFP, Access Security				802.1Q VLAN, LLDP, QoS, Bandwidth control, ERPS Ring, LFP, Access Security, PD alive check, PoE schedule		-

## Media Converters

Media conversion is a cost-effective solution to extending fiber networking rapidly rather than adopting optic fiber only. It also efficiently helps to solve the distance limit between the Ethernet and Local Area Network. With the feature-rich chassis provided by PLANET, at least 16 converters can easily expand the fiber-optic networks by simply plug and play. The wiring distance of PLANET media converter chassis is extendable from 2 to 120 kilometers and available upon request as well.



Building a network solution of FTTH (Fiber to the Home) or FTTC (Fiber to the Curb) for ISPs, the PLANET Managed family of chassis and FST/GST/XST series converters offer the multiple selections for FTTx deployment. The Managed family is a series of managed Media Conversion Center that provides hot plug and play slots for various types of converters. Through the management interface, the entire status of the converters could be remotely controlled within the chassis from on/off and status/statistics of ports, as well as the advanced features like redundant links.

### Multi-function Converter Chassis



# Managed Media Converter Chassis

The MC-1610MR series is ideal for telecom and corporate applications where a number of fiber links need to be managed and controlled from a central location. The management function provided by the MC-1610MR series enables network administrators to monitor media converter connection status and configure the converters remotely via web browser or locally. Through the management interface, the entire status of the converters such as link on/off or statistics of the port will be clearly demonstrated and monitored.

Managed Media Converter Chassis		
Model	MC-1610MR	MC-1610MR48
Product Image		
	<i>Managed</i>	<i>Managed</i>
Slots	16 converter open slots; 2 power slots (1 loaded)	
Dimensions (W x D x H)	440 x 350 x 88 mm; 2U	
Power Requirements	100 ~ 240V AC, 50/60Hz	-48V DC (-30 ~ -60V DC)
Power Consumption	120 watts (full load)	96 watts (full load)
Environment	Operating Temperature: 0 ~ 50 degrees C Humidity: 5% ~ 90% RH (non-condensing)	
Converter Modules	PLANET FST-80x, GST-80x series (Page 11), XST-705A	
Management	SNMP v1/v2C, Web, CLI, SSH	
Management Ports	1 x RS232 Console 1 x 10/100BASE-TX RJ45; Auto-MDI, Auto-Negotiation	
Features	System Temperature Threshold Protection, Slot Redundancy, Hot-swappable dual power system, SNMP trap	
Emission	CE, FCC class A	

### Web / SNMP Management



- ▶ OAM
- ▶ Device Control
- ▶ Redundant Link
- ▶ Link Status Monitoring
- ▶ SNMP Trap Alarm

### Hot-Swappable / Flexible Power Input



Dual AC





Dual DC

DC + AC

### Power Module

# Standard Media Converter Chassis

The MC-1500 series provides 15 slots for PLANET's full-ranging media converters, including Fast Ethernet, Gigabit Ethernet or VDSL2 Converters. The 15 slots in the 19" rack-mountable housing help to save more spaces for Fiber-Optic wiring, simplify the structure and ease the maintenance of media conversion. With an independent power supply on each slot of the MC-1500 series, any converter is hot-swappable without causing an interruption to other converters. Each bay of the media converter chassis can be populated with any of PLANET's media converter series, the FT, GT, VC-20x and ICS, to provide media conversion between fiber optic, phone wire, serial and copper lines, offering high flexibility in installation and cost-effective scalable solution.

Standard Media Converter Chassis				
Model	MC-700	MC-1500	MC-1500R	MC-1500R48
Product Image				
Slots	7 converter open slots	15 converter open slots	15 converter slots; 2 power slots (1 loaded)	
LED Indicators	Power x 1 Fan x 1	Power x 1 Fan x 2	Power x 2 Fan x 2	Power x 2 Fan x 2
Dimensions	217 x 140 x 88.5 mm 2U	440 x 180 x 103 mm 2.4U	440 x 180 x 103 mm 2.4U	440 x 180 x 103 mm 2.4U
Weight	2kg	5kg	5.5kg	5.5kg
Power Requirements	100 ~ 240V AC, 50/60Hz	100 ~ 240V AC, 50/60Hz	100 ~ 240V AC, 50/60Hz	-48V DC (-30 ~ -60V DC)
Power Consumption	40 watts (full load)	75 watts (full load)	90 watts (full load)	90 watts (full load)
Power Output per Slot	5V DC, 2A max.	5V DC, 2A max.	5V DC, 2A max.	5V DC, 2A max.
Environment	Operating Temperature: 0~50 degrees C Storage Temperature: -10~70 degrees C Humidity: 5~90% RH (Operating), 5~90% RH (Storage)		Operating Temperature: 0~50 degrees C Storage Temperature: -10~70 degrees C Humidity: 5~90% RH (Operating), 5~90% RH (Storage)	
Converter Modules	PLANET FT-80x, GT-80x, GT-91x, GT-1205A, XT-705A, VC-231, VC-231G, ICS-10x series, VF-10XG series, LRE series (Page 12)			
Emission	CE, FCC Class A	CE, FCC Class A	CE, FCC Class A	CE, FCC Class A
Installation	Rack Mounting	Rack Mounting	Rack Mounting	Rack Mounting

# Fiber Switches & Media Converters

Smart Gigabit Ethernet Media Converters								10G
Model	GST-802	GST-802S	GST-806A15	GST-806B15	GST-806A60	GST-806B60	GST-805A	XST-705A
Product Image								
Ports	1 x 10/100/1000BASE-T RJ45; Auto-MDI, Auto-Negotiation, 1 x 1000BASE-SX / LX							1 x 10G/5G/2.5G/1G 100 NBASE-T RJ45, 1x10G BASE-SR/LR
Optic Interface	MM SC	SM SC	SM WDM SC	SM WDM SC	SM WDM SC	SM WDM SC	SFP	10G SFP+
Wavelength	850nm	1310nm	TX: 1310nm RX: 1550nm	TX: 1550nm RX: 1310nm	TX: 1310nm RX: 1550nm	TX: 1550nm RX: 1310nm	Vary on module	Vary on module
Max Distance	220 / 550 m	20km	20km	20km	60km	60km	Vary on module	Vary on module
Dimensions (W x D x H)	94 x 81 x 26 mm	94 x 81 x 26 mm	94 x 81 x 26 mm	94 x 81 x 26 mm	94 x 81 x 26 mm	94 x 81 x 26 mm	94 x 81 x 26 mm	94 x 81 x 26 mm
Power	5V DC, 2A max.	5V DC, 2A max.	5V DC, 2A max.	5V DC, 2A max.	5V DC, 2A max.	5V DC, 2A max.	5V DC, 2A max.	5V DC, 2A max.
Power Consumption	8.5 watts max.	8.5 watts max.	8.5 watts max.	8.5 watts max.	8.5 watts max.	8.5 watts max.	8.5 watts max.	8.5 watts max.
Environment	Operating Temperature: 0 ~ 50 degrees C Humidity: 5% ~ 90% RH (non-condensing)							
DIP Switch	DIP 1: Fiber Forced Mode, DIP 2: Fiber LLC Enable / Disable							-
Features	9K Jumbo Frame; IEEE 802.3ah, TS-1000 OAM, In-band management, Remote loopback, Dying gasp event notification							-
Applied Chassis	MC-1610MR / MC-1610MR48	MC-1610MR / MC-1610MR48	MC-1610MR / MC-1610MR48	MC-1610MR / MC-1610MR48	MC-1610MR / MC-1610MR48	MC-1610MR / MC-1610MR48	MC-1610MR / MC-1610MR48	

Smart Fast Ethernet Media Converters									
Model	FST-801	FST-802	FST-802S15	FST-802S35	FST-802S50	FST-806A20	FST-806B20	FST-806A60	FST-806B60
Product Image									
Ports	1 x 10/100BASE-TX RJ45; Auto-MDI, Auto-Negotiation, 1 x 100BASE-FX								
Optic Interface	MM ST	MM SC	SM SC	SM SC	SM SC	SM WDM SC	SM WDM SC	SM WDM SC	SM WDM SC
Wavelength	1310nm	1310nm	1310nm	1310nm	1310nm	TX: 1310nm, RX: 1550nm	TX: 1550nm, RX: 1310nm	TX: 1310nm, RX: 1550nm	TX: 1550nm, RX: 1310nm
Max Distance	2km	2km	15km	35km	50km	20km	20km	60km	60km
Dimensions (W x D x H)	94 x 81 x 26 mm		94 x 81 x 26 mm		94 x 81 x 26 mm		94 x 81 x 26 mm		
Power	5V DC, 2A max.		5V DC, 2A max.		5V DC, 2A max.		5V DC, 2A max.		
Power Consumption	6.7 watts	6.7 watts	6.7 watts	6.7 watts	6.7 watts	6.7 watts	6.7 watts	6.7 watts	6.7 watts
Environment	Operating Temperature: 0 ~ 50 degrees C Humidity: 5% ~ 90% RH (non-condensing)								
DIP Switch	6; TP speed, TP negotiation, TP/FX duplex mode, LLC/F, LLR								
Features	Smart managed via MC-16xx for both FST-80x								
Applied Chassis	MC-1610MR / MC-1610MR48		MC-1610MR / MC-1610MR48		MC-1610MR / MC-1610MR48		MC-1610MR / MC-1610MR48		

PoE Gigabit / Fast Ethernet Media Converters					
Model	GTP-802	GTP-802S	GTP-805A	FTP-802	FTP-802S15
Product Image					
Ports	1x 10/100/1000BASE-T RJ45, Auto-negotiation, 1000BASE-SX/LX			1x 10/100BASE-TX RJ45, Auto-negotiation, 100BASE-FX	
Fiber Interface	MM SC	SM SC	SFP (LC)	MM SC	SM SC
Fiber Cable Wavelength	850nm	1310nm	Vary on SFP Module	850nm	1310nm
Max Distance	220m & 550m	20km	Vary on SFP Module	2km	15km
Dimensions (W x D x H)	97 x 70 x 26 mm			97 x 70 x 26 mm	
Power Requirements	52V DC, 0.6A max.			48V DC, 0.35A max.	
Power Consumption	36 Watts max. with PoE load			21 Watts max. with PoE load	
Environment	Operating Temperature: 0 ~ 50 degrees C Humidity: 5% ~ 90% RH (non-condensing)				
IEEE 802.3at / 802.3af PoE Port	1, End-Span, 1/2(+), 3/6(-)			1, End-Span, 1/2(+), 3/6(-), 802.3af only	
LFP DIP Switch	ON / OFF	ON / OFF	ON / OFF	ON / OFF	ON / OFF
Enclosure	Metal Case	Metal Case	Metal Case	Metal Case	Metal Case
Installation	DIN rail kit and wall mount ear			DIN rail kit and wall mount ear	

Dual SFP Fast / Gigabit Ethernet Media Converters	
Model	GT-1205A
Product Image	
Ports	1 10/100/1000BASE-T 2 100/1000BASE-X
Optic Interface	SFP
Wavelength	Vary on module
Max Distance	Vary on module
Dimensions (W x D x H)	94 x 70 x 26 mm
Power	5V DC, 2A max.
Power Consumption	5.4 watts max.
Environment	Operating Temperature: 0 ~ 50 degrees C Humidity: 5% ~ 90% RH (non-condensing)
Features	<ul style="list-style-type: none"> <li>DIP switch for 100FX/1000X SFP Option</li> <li>DIP switch for 3-port Switch mode, redundant mode support</li> </ul>
Applied Chassis	MC-700/MC-1500/ MC-1500R/MC-1500R48

## Fiber Switches & Media Converters

## 10Gigabit Media Converters

### Managed Gigabit Ethernet Media Converters

Model	GT-915A
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Product Image 

Ports	1 x 10/100/1000BASE-T RJ45; Auto-MDI, Auto-Negotiation, 1 x 1000BASE-SX / LX
Optic Interface	SFP
Wavelength	Vary on module
Max Distance	Vary on module
Dimensions (W x D x H)	94 x 70 x 26 mm
Power	5V DC, 2A max.
Power Consumption	5.6 watts max.
Environment	Operating Temperature: 0 ~ 50 degrees C Humidity: 5% ~ 90% RH (non-condensing)
Management	Web, SNMPv1, v2c, Smart Discovery utility, Dying Gasp
Features	Max. Packet Size: 9K Jumbo Frame VLAN: 802.1q VLAN, QinQ VLAN Priority: 802.1p, IP DSCP, WRR QoS policy Remote Management: IEEE 802.3ah, TS-1000 OAM, In-band management, Remote loopback
Applied Chassis	MC-700/MC-1500/MC-1500R/MC-1500R48

### Managed

Model	XT-905A	XT-915A	XT-925A	XT-705A	XT-715A
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Product Image 

Copper	Ports	1	-	1	1	1
	Interface Capability	100/1G/2.5G/5G/10GBASE-T RJ45			100/1G/2.5G/5G/10GBASE-T RJ45	2.5G/5G/10GBASE-T RJ45
Fiber	Ports	1	2	2	1	1
	Interface Capability	100/1G/2.5G/10GBASE-X SFP+			10GBASE-X SFP+	
	Optical Wavelength	Vary on module			Vary on module	
	Max. Distance	Vary on module			Vary on module	
Mechanical	Dimensions (W x D x H)	135 x 87 x 20 mm			94 x 70 x 26 mm	94 x 70 x 26 mm
Power	Inputs	12V DC, 1.5A max.			5V DC, 2A max.	
	Consumption	9.72 watts	9.84 watts	12.5 watts	3.75 watts	5.5 watts max.
Environment	Operating Temperature	0~50 degrees C				
	Operating Humidity	5% to 95%RH (non-condensing)				
Regulatory	Emissions	FCC Class A, CE				
Management	Interface	Web, Telnet, SNMPv1/v2c/v3, RMON, SSHv2, TLSv1.2, PLANET CloudViewerPro App, PLANET NMS Central Management			-	-
	Features	802.1Q VLAN, LLDP, QoS, Bandwidth control, ERPS Ring, LFP, Access Security			-	-

### Gigabit Ethernet Media Converters

Model	GT-802	GT-802S	GT-805A	GT-805A-PD	FT-801	FT-802	FT-802S15	FT-806A20	FT-806B20
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Product Image 

Ports	1 x 10/100/1000BASE-T RJ45; Auto-MDI, Auto-Negotiation, 1 x 1000BASE-SX / LX				1 x 10/100BASE-TX RJ45; Auto-MDI, Auto-Negotiation, 1 x 100BASE-FX				
Optic Interface	MM SC	SM SC	SFP	SFP	MM ST	MM SC	SM SC	SM WDM SC	SM WDM SC
Wavelength	850nm	1310nm	Vary on module		1310nm	1310nm	1310nm	TX: 1310nm RX: 1550nm	TX: 1550nm RX: 1310nm
Max Distance	220/550m	20km	Vary on module		2km	2km	15km	20km	20km
Dimensions (W x D x H)	94 x 70 x 26 mm		94 x 70 x 26 mm		94 x 70 x 26 mm		94 x 70 x 26 mm		
Power	5V DC, 2A max.		5V DC, 2A max.	802.3af/at PoE 5V DC, 2A max.	5V DC, 2A max.		5V DC, 2A max.		
Power Consumption	4.6 watts max.		4.6 watts max.		5.5 watts	5.5 watts	5.5 watts	5.5 watts	5.5 watts
Environment	Operating Temperature: 0 ~ 50 degrees C				Operating Temperature: 0 ~ 50 degrees C Humidity: 5% ~ 90% RH (non-condensing)				
Features	Humidity: 5% ~ 90% RH (non-condensing)				LFP, FX duplex mode selection				
Applied Chassis	MC-700/MC-1500/MC-1500R/MC-1500R48				MC-700/MC-1500/MC-1500R/MC-1500R48				

### Video over Fiber Media Converters

Model	VF-101G-KIT	VF-102G-KIT	VF-106G-KIT	VF-402-KIT
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Product Image 

Ports	1 x Fiber, 1 x BNC (75ohm / unbalanced interface)			1 x Fiber, 4 x BNC (75ohm / unbalanced interface)
Optic Interface	ST	FC	WDM-SC	FC
Wavelength	T model: TX 1310nm RX 1550nm		R model: TX 1550nm RX 1310nm	
Max Distance	20km for single mode	20km for single mode	20km for single mode	20km for single mode
Video Type	1080p: AHD/TVI/CVI 480p: CVBS	1080p: AHD/TVI/CVI 480p: CVBS	1080p: AHD/TVI/CVI 480p: CVBS	1080p: AHD/TVI/CVI 480p: CVBS
Dimensions (W x D x H)	94 x 70 x 26 mm	94 x 70 x 26 mm	94 x 70 x 26 mm	157 x 116.5 x 48 mm
Power / Power Consumption	5V DC, 2A max./4.8 watts max.	5V DC, 2A max./4.8 watts max.	5V DC, 2A max./4.8 watts max.	5V DC, 2A max./4.8 watts max.
Environment	Operating Temperature: -25 ~ 70 degrees C, Humidity: 0 ~ 95% RH (non-condensing)			
Video Type	1080p: AHD/TVI/CVI 480p: CVBS			
Video Specifications	1 bi-directional channel; NTSC/PAL system compliant; 6.5MHz video bandwidth; SNR Weighted @63db (typical)			4 bi-directional channel; NTSC/PAL system compliant; 6.5MHz video bandwidth; SNR Weighted @63db (typical)
Data Interface Specifications	1 simplex channel RS485: 115.2kbps data rate max.; Bit Error Rate @10ns			
Applied Chassis	MC-700/MC-1500/MC-1500R/MC-1500R48			-

# Passive Optical Network - xPON

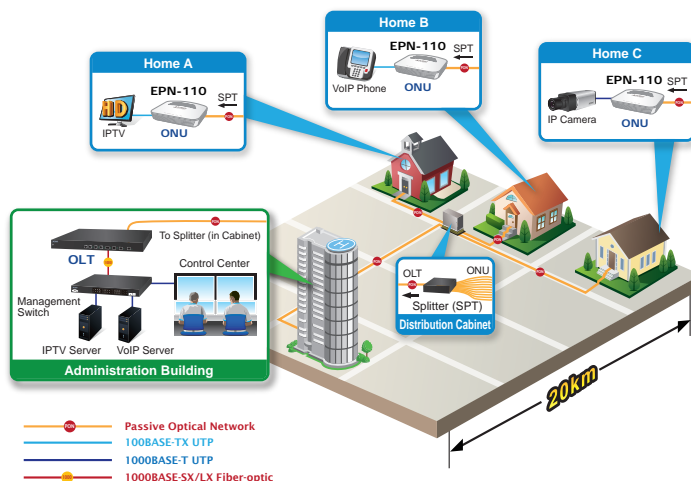


Passive Optical Network (PON) would be the most promising Next Generation Network technology to meet the high bandwidth demand for HDTV, IPTV, VoIP and multimedia broadband applications. PON technology is developed to support PMP (Point-to-Multi-Point) applications and offers the advantages of reduced cost by sharing the equipment and fiber at the CO, and easy maintenance compared to the active equipment.

PLANET offers the perfect GPON/GEAPON OLT and ONU solutions bringing the FTTx applications with high scalability yet cost-effective network connection. The competitive advantages of PLANET GPON/GEAPON OLT and ONU solutions include:

- High split ratio of 1:128 (GPON)
- High split ratio of 1:64 (GEAPON)
- Up to 20km distance between equipment nodes
- Centralized management with user-friendly GUI utility
- Easy installation and maintenance
- Lower operating costs from the reduction of "active" components

## Fiber To The Home (FTTH) Application



## Network Connectivity Products

GPON OLT	
Model	GPL-8000

Product Image



Transmission Speed	Downstream: 1.25 Gbps Upstream: 1.25 Gbps
Ethernet Port	8 x 1000BASE-T RJ45, 4 x Gigabit SFP interface 4 x 1G/10G SFP+ interface
PON Port	8 x PON interface
Console Port	•
Management Port	1 x 10/100 RJ45 port
Maximum Splits	128 per PON port
Maximum Distance	20km
IEEE 802.3ah	•
IEEE 802.3ah FEC	•
OAM	•
DBA	•
SLA	•
802.1Q VLAN	•
802.1p QoS	•
IGMP	Up to 256 multicast groups
MAC Filtering	•
128-bit AES Encryption	-
802.1X Authentication	-
Logical Link IDs (LLID)	-
MAC Address	40K
Queues	•
GUI Management	•
ONU Management	•
Bandwidth Control	•

GPON ONU		
Model	GPN-100	GPN-400ACV

Product Image



Transmission Speed	Downstream: 2.5 Gbps Upstream: 1.25 Gbps	Downstream: 2.5 Gbps Upstream: 1.25 Gbps
Ethernet Port	1 x 10/100/1000Mbps RJ45 Port	4 x 10/100/1000Mbps RJ45 Port
PON Port	1 x PON with SC/UPC	1 x PON with SC/UPC
FXS Port	-	2 x RJ11 Port
USB Port	-	1 x USB 2.0 Port Type A, 5V 500mA
Maximum Distance	20km	20km
IEEE 802.3ah	•	•
IEEE 802.3ah FEC	•	•
OAM	•	•
DBA	•	•
802.1Q VLAN	•	•
802.1p QoS	•	•
128-bit AES Encryption	-	•
802.1X Authentication	-	•
Logical Link IDs (LLID)	-	-
MAC Address	64	2K
Queues	8	8
Integrated Buffering	-	-
Layer 2/3/4 Classification	-	-
Internal MIB Counters	•	•

# Fiber Optic Transceivers

## Fast Ethernet Transceivers (100BASE-X SFP) | Fast Ethernet Transceivers (100BASE-BX, Single Fiber Bi-Directional SFP)

Model	MFB-FX	MFB-F20	MFB-F40	MFB-F60	MFB-F120	MFB-TFX	MFB-TF20	MFB-FA20	MFB-FB20	MFB-TFA20	MFB-TFB20	MFB-TFA40	MFB-TFB40	MFB-TSA	MFB-TSB
Product Image															
Speed (Mbps)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Connector Interface	LC	LC	LC	LC	LC	LC	LC	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	LC	LC
Fiber Mode	Multi Mode	Single Mode		Single Mode		Multi Mode	Single Mode		Single Mode		Single Mode		Single Mode		Multi Mode
Distance	2km	20km	40km	60km	120km	2km	20km	20km	20km	20km	20km	40km	40km	2km	2km
Wavelength (nm)	1310nm	1310nm	1310nm	1310nm	1550nm	1310nm	1550nm	TX: 1310nm RX: 1550nm	TX: 1550nm RX: 1310nm	TX: 1310nm RX: 1550nm	TX: 1550nm RX: 1310nm	TX: 1310nm RX: 1550nm	TX: 1550nm RX: 1310nm	TX: 1310nm RX: 1550nm	TX: 1550nm RX: 1310nm
Operating Temp.	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	-40~85°C	-40~85°C	0 ~ 60°C	0 ~ 60°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C

## Gigabit Ethernet Transceivers (1000BASE-X/ Fiber Channel SFP)

Model	MGB-GT	MGB-SX	MGB-SX2	MGB-LX	MGB-L40	MGB-L80	MGB-L120	MGB-TGT	MGB-TSX	MGB-TSX2	MGB-TLX	MGB-TL40	MGB-TL80
Product Image													
Speed (Mbps)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Connector Interface	Copper	LC	LC	LC	LC	LC	LC	Copper	LC	LC	LC	LC	LC
Fiber Mode	-	Multi Mode		Single Mode		Single Mode		-	Multi Mode		Single Mode		
Distance	100m	550m	2km	20km	40km	80km	120km	100m	550m	2km	20km	40km	80km
Wavelength (nm)	-	850nm	1310nm	1310nm	1310nm	1550nm	1550nm	-	850nm	1310nm	1310nm	1310nm	1550nm
Operating Temp.	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C

## Gigabit Ethernet Transceivers (1000BASE-BX, Single Fiber Bi-Directional SFP)

Model	MGB-LA10	MGB-LB10	MGB-LA20	MGB-LB20	MGB-LA40	MGB-LB40	MGB-LA80	MGB-LB80	MGB-TSA
Product Image									
Speed (Mbps)	1000	1000	1000	1000	1000	1000	1000	1000	1000
Connector Interface	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	Simplex LC/UPC
Fiber Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single-mode
Distance	10km	10km	20km	20km	40km	40km	80km	80km	2km
Wavelength (TX)	1310nm	1550nm	1310nm	1550nm	1310nm	1550nm	1310nm	1550nm	1310nm
Wavelength (RX)	1550nm	1310nm	1550nm	1310nm	1550nm	1310nm	1550nm	1310nm	1550nm
Operating Temp.	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	0 ~ 60°C	-40~85°C

## Gigabit Ethernet Transceivers (1000BASE-BX, Single Fiber Bi-Directional SFP)

Model	MGB-TSB	MGB-TLA10	MGB-TLB10	MGB-TLA20	MGB-TLB20	MGB-TLA40	MGB-TLB40	MGB-TLA80	MGB-TLB80
Product Image									
Speed (Mbps)	1000	1000	1000	1000	1000	1000	1000	1000	1000
Connector Interface	Simplex LC/UPC	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)
Fiber Mode	Single-mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode
Distance	2km	10km	10km	20km	20km	40km	40km	80km	80km
Wavelength (TX)	1550nm	1310nm	1550nm	1310nm	1550nm	1310nm	1550nm	1310nm	1550nm
Wavelength (RX)	1310nm	1550nm	1310nm	1550nm	1310nm	1550nm	1310nm	1550nm	1310nm
Operating Temp.	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C	-40~85°C

**(2500BASE-X, Single Fiber Bi-Directional SFP)**

	MGB-2GSR	MGB-2GLR2	MGB-2GLR20	MGB-2GLA20	MGB-2GLB20	MGB-2GTSR	MGB-2GTLR2	MGB-2GTLR20	MGB-2GTLA20	MGB-2GTLB20
Product Image										
Speed (Mbps)	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Connector Interface	Dual LC/UPC	Duplex LC/UPC	Duplex LC/UPC	Simplex LC/UPC	Simplex LC/UPC	Dual LC/UPC	Duplex LC/UPC	Duplex LC/UPC	Simplex LC/UPC	Simplex LC/UPC
Fiber Mode	Multi-mode	Single Mode	Single-mode	Single-mode	Single-mode	Multi-mode	Single-mode	Single-mode	Single-mode	Single-mode
Distance	300m	2km	20km	20km	20km	300m	2km	20km	20km	20km
Wavelength (nm)	850nm	1310nm	1310nm	TX:1310nm RX:1550nm	TX:1550nm RX:1310nm	850nm	1310nm	1310nm	TX:1310nm RX:1550nm	TX:1550nm RX:1310nm
Operating Temp.	0-70°C	0-70°C	0-70°C	0-70°C	0-70°C	-40-85°C	-40-85°C	-40-85°C	-40-85°C	-40-85°C

**10Gbps SFP+ (10G Ethernet/10GBASE)**

Model	MTB-RJ	MTB-SR	MTB-SR2	MTB-LR	MTB-LR20	MTB-LR40	MTB-LR60	MTB-LR80	MTB-LA10	MTB-LB10
Product Image										
Speed (Mbps)	10G	10G	10G	10G	10G	10G	10G	10G	10G	10G
Connector Interface	RJ45	LC	LC	LC	LC	LC	LC	LC	WDM(LC)	WDM(LC)
Fiber Mode	-	Multi Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode
Distance	300m	Up to 300m	Up to 2km	10km	20km	40km	60km	80km	10km	10km
Wavelength (nm)	-	850nm	1310nm	1310nm	1310nm	1310nm	1550nm	1550nm	TX:1270nm RX:1330nm	TX:1330nm RX:1270nm
Operating Temp.	0 - 70°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C



**10Gbps SFP+ (10G Ethernet/10GBASE)**

Model	MTB-LA20	MTB-LB20	MTB-LA40	MTB-LB40	MTB-LA60	MTB-LB60	MTB-LA70	MTB-LB70	MTB-TSR	MTB-TSR2
Product Image										
Speed (Mbps)	10G	10G	10G	10G	10G	10G	10G	10G	10G	10G
Connector Interface	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	LC	LC
Fiber Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Multi Mode	Single Mode
Distance	20km	20km	40km	40km	60km	60km	70km	70km	Up to 300m	Up to 2km
Wavelength (nm)	TX:1270nm RX:1330nm	TX:1330nm RX:1270nm	TX:1270nm RX:1330nm	TX:1330nm RX:1270nm	TX:1270nm RX:1330nm	TX:1330nm RX:1270nm	TX:1270nm RX:1330nm	TX:1330nm RX:1270nm	850nm	1310nm
Operating Temp.	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	-40-85°C	-40-85°C

**10Gbps SFP+ (10G Ethernet/10GBASE)**






Model	MTB-TLR	MTB-TLR20	MTB-TLR40	MTB-TLR60	MTB-TLA20	MTB-TLB20	MTB-TLA40	MTB-TLB40	MTB-TLA60	MTB-TLB60
Product Image										
Speed (Mbps)	10G	10G	10G	10G	10G	10G	10G	10G	10G	10G
Connector Interface	LC	LC	LC	LC	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)	WDM(LC)
Fiber Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode	Single Mode
Distance	10km	20km	40km	60km	20km	20km	40km	40km	60km	60km
Wavelength (nm)	1310nm	1310nm	1310nm	1550nm	TX:1270nm RX:1330nm	TX:1330nm RX:1270nm	TX:1270nm RX:1330nm	TX:1330nm RX:1270nm	TX:1270nm RX:1330nm	TX:1330nm RX:1270nm
Operating Temp.	-40-85°C	-40-85°C	-40-85°C	-40-85°C	-40-85°C	-40-85°C	-40-85°C	-40-85°C	-40-85°C	-40-85°C





## Fiber Optic Transceivers



40Gbps QSFP+ (40Ethernet/40GBASE)		
Model	QSFP-40G-SR4	QSFP-40G-LR4
Product Image		
Speed (Mbps)	40G	40G
Connector Interface	MPO	LC
Fiber Mode	Multi Mode	Single Mode
Distance	Up to 100m	10km
Wavelength (nm)	850nm	1310nm
Operating Temp.	0 ~ 60°C	0 ~ 60°C

100G QSFP28		
Model	QSFP-100G-SR4	QSFP-100G-LR4
Product Image		
Speed (Mbps)	100G	100G
Connector Interface	MPO	LC
Fiber Mode	Multi Mode	Single Mode
Distance	Up to 100m	10km
Wavelength (nm)	850nm	1310nm
Operating Temp.	0 ~ 70°C	0 ~ 70°C

## Edge Connecting Products

Metro Edge Switches					
Model	MGSD-10080F	MGS-6320-2T6S2X	IGS-10020MT	GS-4210-8T2S	GSD-1002M
Features	IPv6/IPv4 L2 Switch	IPv6/IPv4 L3 Switch	Industrial IPv6/IPv4 L2 Switch	IPv6/IPv4 L2 Switch	Industrial L2 Managed Switch
Product Image					
10G BASE-X	-	2	-	-	-
1000BASE-X	8 SFP	6 SFP	2 SFP	2 SFP	2 SFP
10/100/1000BASE-T	2	2	8	8	8
100BASE-FX	Compatible	Compatible	Compatible	Compatible	Compatible
10BASE-T/100BASE-TX	●	●	●	●	●
Power Requirements	100~240V AC -36~72V DC	100~240V AC 24~57V DC	12~48V DC 24V AC	100~240V AC	IEEE 802.3af/at PoE 48~56V DC 12V DC power adapter
Operating Temperature	-10~60 degrees C	-10~60 degrees C	-40~75 degrees C	0~50 degrees C	0~50 degrees C

Fiber VPN Firewall				
Model	IVR-300FP	VR-300F VR-300FP	VR-300FW-NR	ICG-2515FW-NR
Product Image				
Optical Interface	1 x 1000BASE-X SFP slot		1 x 1000BASE-X SFP slot	
Copper Interface	5 x 10/100/1000T	4 x 10/100/1000T	5 x 10/100/1000T	4 x 10/100/1000T
Cellular Interface	-	-	5G NR	5G NR
Wi-Fi Spec.	-	-	802.11ax, 1800Mbps	
PoE	4 x 802.3at PoE+, 120W budget		-	-
Power Requirement	48~54V DC	100~240V AC		9~54V DC
Operating Temperature	-40~75 degrees C	0~50 degrees C		-40~75 degrees C

Fiber Network Adapters		
Model	ENW-9701	ENW-9801
Features	Gigabit NIC	10G SFP+ NIC
Product Image		
Attached Interface	X1 PCI Express	X8 PCI Express
Network Interface	1000BASE-X	10GBASE-SR/LR
Media Interface	SFP	SFP+
OS Support	Windows Server 2008	●
	Windows 8	-
	Windows 7	●
	Windows XP	●
	Linux	●
	Mac OS X 10.4, 10.5 and 10.6 Intel-based Mac computer	●
VMware® ESX 4.x	-	●



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