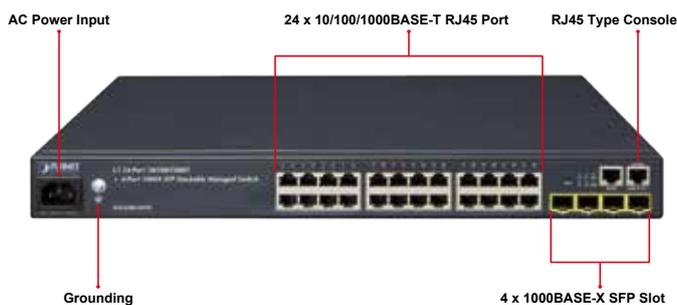


Layer 3 24-Port 10/100/1000T + 4-Port 1000X SFP Stackable Managed Switch



Powerful Layer 3 Gigabit Routing Solution for Enterprise Backbone and Data Center Networking

PLANET SGS-6340-24T4S is a Layer 3 Stackable Managed Gigabit Switch that provides high-density performance, Layer 3 static routing, RIP (Routing Information Protocol) and OSPF (Open Shortest Path First). With 56Gbps switching fabric, the SGS-6340-24T4S can handle extremely large amounts of data in a secure topology linking to an enterprise backbone or high capacity servers. The powerful WRR (Weighted Round Robin) and Network Security features make the SGS-6340-24T4S perform effective data traffic control for ISP and enterprise VoIP, video streaming, and multicast applications.



Layer 3 Routing Support

The SGS-6340-24T4S enables the administrator to conveniently boost network efficiency by configuring Layer 3 static routing manually, the RIP (Routing Information Protocol) or OSPF (Open Shortest Path First) settings automatically. The RIP can employ the hop count as a routing metric and prevent routing loops by implementing a limit on the number of hops allowed in a path from the source to a destination. The maximum number of hops allowed for the RIP is 15. The OSPF is an interior dynamic routing protocol for autonomous system based on link-state. The protocol creates a link-state database by exchanging link-states among Layer3 switches, and then uses the Shortest Path First algorithm to generate a route table based on that database.

Physical Ports

- 24-Port 10/100/1000BASE-T Gigabit Ethernet RJ45
- 4 1000BASE-X mini-GBIC/SFP slots
- RJ45 to DB9 console interface for switch basic management and setup

IP Stacking

- Connects with stack member via both Gigabit TP and SFP interfaces
- Single IP address management, supporting up to 24 units stacked together

IP Routing Features

- Supports maximum 128 static routes and route summarization
- Supports dynamic routing protocol: RIP and OSPF

Layer 2 Features

- Complies with the IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z Gigabit Ethernet standard
- Supports auto-negotiation and half-duplex/full-duplex modes for all 10BASE-T, 100BASE-TX and 1000BASE-T ports
- Auto-MDI/MDI-X detection on each RJ45 port
- Prevents packet loss flow control
 - IEEE 802.3x pause frame flow control in full-duplex mode
 - Back-pressure flow control in half-duplex mode
- High performance Store-and-Forward architecture, broadcast storm control, port loopback detect
- 16K MAC address table, automatic source address learning and aging
- Supports VLAN
 - IEEE 802.1Q tag-based VLAN
 - GVRP for dynamic VLAN management
 - Up to 256 VLANs groups, out of 4041 VLAN IDs
 - Provider Bridging (VLAN Q-in-Q, IEEE 802.1ad) supported
 - Private VLAN Edge (PVE) supported
 - GVRP protocol for Management VLAN
 - Protocol-based VLAN

Abundant IPv6 Support

The SGS-6340-24T4S provides IPv6 management and enterprise-level secure features such as SSH, ACL, WRR and RADIUS authentication. The SGS-6340-24T4S thus helps the enterprises to step in the IPv6 era with the lowest investment. In addition, you don't need to replace the network facilities when the IPv6 FTTx edge network is built.

High Performance

The SGS-6340-24T4S boasts a high-performance switch architecture that is capable of providing non-blocking switch fabric and wire-speed throughput as high as 56Gbps, which greatly simplifies the tasks of upgrading the LAN for catering to increasing bandwidth demands.

Robust Layer 2 Features

The SGS-6340-24T4S can be programmed for basic switch management functions such as port speed configuration, port aggregation, VLAN, Spanning Tree Protocol, WRR, bandwidth control and IGMP snooping. The SGS-6340-24T4S provides 802.1Q tagged VLAN, Q-in-Q, voice VLAN and GVRP Protocol. The VLAN groups allowed to be on the SGS-6340-24T4S will be maximally up to 256. By supporting port aggregation, the SGS-6340-24T4S allows the operation of a high-speed trunk combined with multiple ports. It enables up to 128 groups for trunking with a maximum of 8 ports for each group.

Excellent Traffic Control

The SGS-6340-24T4S is loaded with powerful traffic management and WRR features to enhance services offered by telecoms. The WRR functionalities include wire-speed Layer 4 traffic classifiers and bandwidth limitation which are particularly useful for multi-tenant unit, multi-business unit, Telco, or network service applications. It also empowers the enterprises to take full advantage of the limited network resources and guarantees the best in VoIP and video conferencing transmission.

Powerful Security

The SGS-6340-24T4S supports ACL policies comprehensively. The traffic can be classified by source/destination IP addresses, source/destination MAC addresses, IP protocols, TCP/UDP, IP precedence, time ranges and ToS. Moreover, various policies can be conducted to forward the traffic. The SGS-6340-24T4S also provides IEEE 802.1x port based access authentication, which can be deployed with RADIUS, to ensure the port level security and block illegal users.

Efficient Management

The SGS-6340-24T4S supports IP stacking function that helps network managers to easily configure up to 24 switches in the same series via one single IP address instead of connecting and setting each unit one by one. For efficient management, the SGS-6340-24T4S Managed Gigabit Switch is equipped with console, Web and SNMP management interfaces. With its built-in Web-based management interface, the SGS-6340-24T4S offers an easy-to-use, platform-independent management and configuration

- MAC-based VLAN
- IP subnet VLAN
- Supports Link Aggregation
 - Maximum 128 trunk groups, up to 8 ports per trunk group
 - IEEE 802.3ad LACP (Link Aggregation Control Protocol)
 - Cisco ether-channel (static trunk)
- Supports Spanning Tree Protocol
 - STP, IEEE 802.1D (Classic Spanning Tree Protocol)
 - RSTP, IEEE 802.1w (Rapid Spanning Tree Protocol)
 - MSTP, IEEE 802.1s (Multiple Spanning Tree Protocol, spanning tree by VLAN)
- Supports BPDU & root guard
- Port mirroring to monitor the incoming or outgoing traffic on a particular port (many to many)
- Provides port mirror (many-to-1)

Quality of Service

- 8 priority queues on all switch ports
- Support for strict priority and WRR (Weighted Round Robin) CoS policies
- Traffic classification
 - IEEE 802.1p CoS/ToS
 - IPv4/IPv6 DSCP
 - Port-based WRR
- Strict priority and WRR CoS policies

Multicast

- Supports IPv4 IGMP snooping v1, v2 and v3, IPv6 MLD v1 and v2 snooping
- Querier mode support
- Supports Multicast VLAN Register (MVR)

Security

- IEEE 802.1x port-based network access authentication
- MAC-based network access authentication
- Built-in RADIUS client to co-operate with the RADIUS servers for IPv4 and IPv6
- TACACS+ login users access authentication
- IP-based Access Control List (ACL)
- MAC-based Access Control List
- Supports DHCP snooping
- Supports ARP inspection
- IP Source Guard prevents IP spoofing attacks
- Dynamic ARP Inspection discards ARP packets with invalid MAC address to IP address binding

facility. The SGS-6340-24T4S supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software. For text-based management, the SGS-6340-24T4S can be accessed via Telnet and the console port. Moreover, the SGS-6340-24T4S offers secure remote management by supporting SSH connection which encrypts the packet content at each session.

Flexibility and Extension Solution

The four mini-GBIC slots built in the SGS-6340-24T4S are compatible with 1000BASE-X and WDM SFP (Small Form-factor Pluggable) fiber-optic modules. The distance can be extended from 550 meters (multi-mode fiber) to 10/50/70/120 kilometers (single-mode fiber or WDM fiber). They are well suited for applications within the enterprise data centers and distributions.

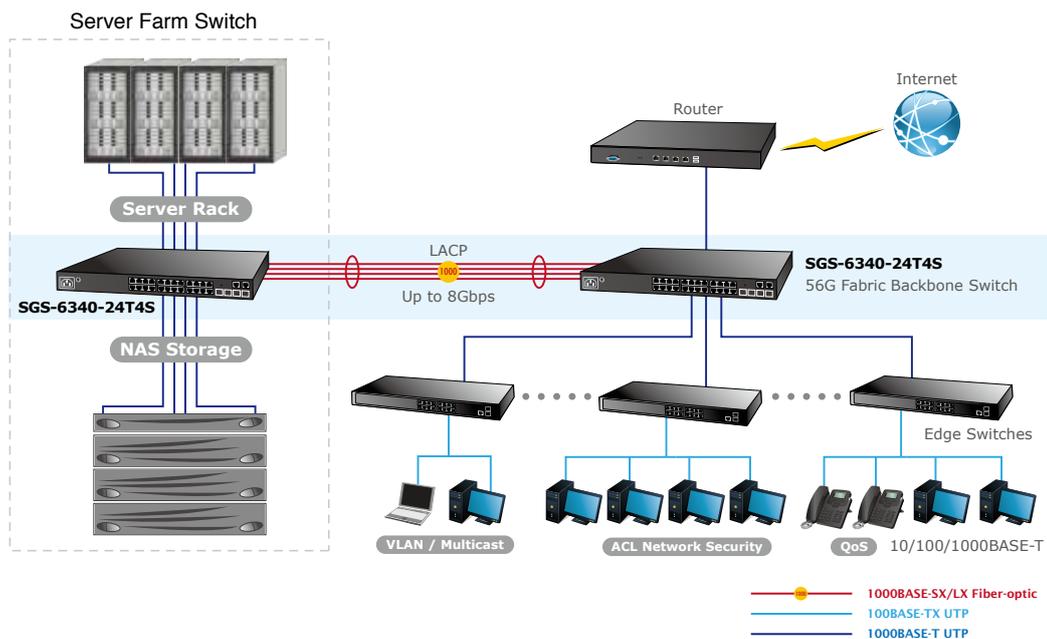
Management

- Management IP for IPv4 and IPv6
- Switch Management Interface
 - Console/Telnet Command Line Interface
 - Web switch management
 - SNMP v1, v2c, and v3 switch management
 - SSH/SSL secure access
- BOOTP and DHCP for IP address assignment
- Firmware upload/download via TFTP or HTTP Protocol for IPv4 and IPv6
- SNTP (Simple Network Time Protocol) for IPv4 and IPv6
- User privilege levels control
- Syslog server for IPv4 and IPv6
- Four RMON groups 1, 2, 3, 9 (history, statistics, alarms and events)
- Supports ping, trace route function for IPv4 and IPv6

Applications

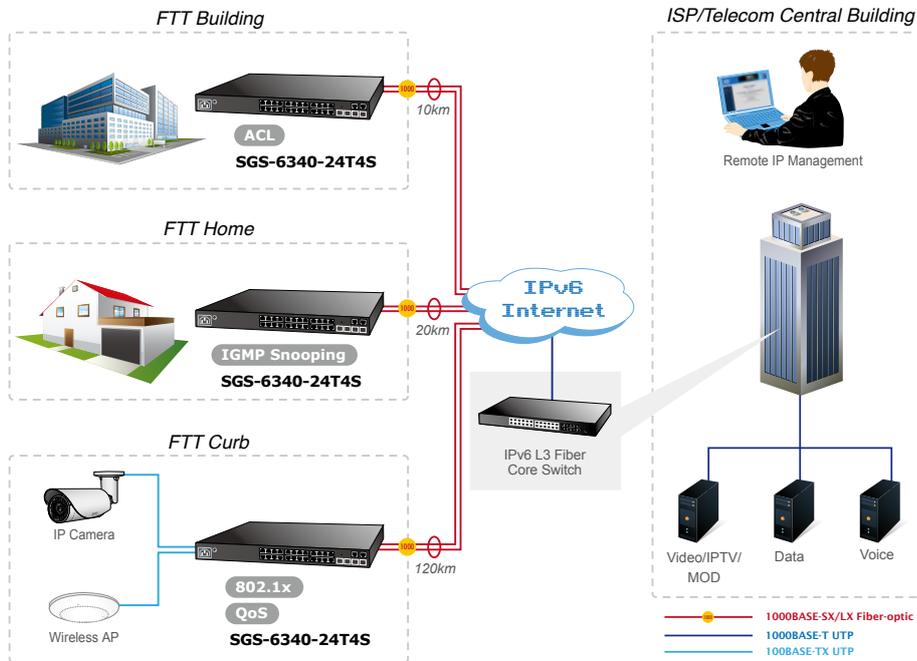
Server Farm Switch

The SGS-6340-24T4S provides up to 28 Gigabit Ethernet ports for enterprises and network servers. It is ideal to be used as a server farm switch connecting to servers. With its port trunking function, an 8GB fat pipe is provided for connecting to the backbone if required.



Enterprise Security and QoS Edge Switch

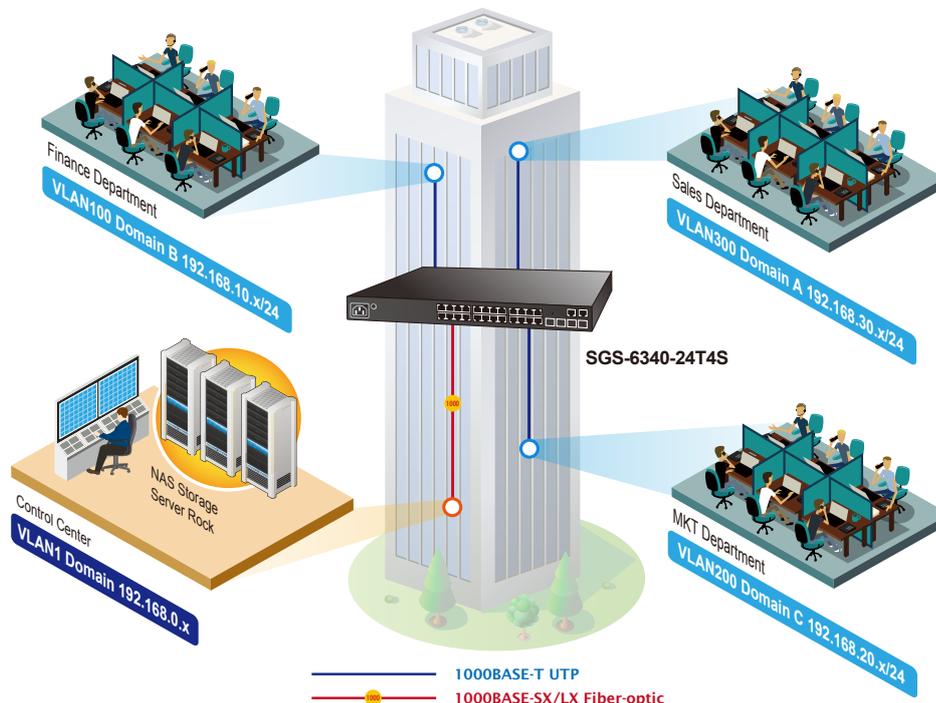
With the IEEE 802.1x network access authentication, the SGS-6340-24T4S provides the MAC/IP/Protocol Access Control list and Port Security functions which can limit the number of MAC addresses to be passed through one specific port. The IGMP snooping and QoS features in the SGS-6340-24T4S improve the network efficiency and protect the network clients.



Layer 3 VLAN Routing

With the built-in robust Layer 3 traffic routing protocols, the SGS-6340-24T4S ensures reliable routing between VLANs and network segments. The routing protocols can be applied via VLAN interface. The SGS-6340-24T4S is certainly a cost-effective and ideal solution for enterprises.

VLAN Routing Applications



Specifications

Model	SGS-6340-24T4S
Hardware Specifications	
CPU	ARM A9 400MHz
RAM Size	256MB
FLASH Size	32MB
Copper Ports	24 10/100/1000BASE-T RJ45 auto-MDI/MDI-X ports
SFP/mini-GBIC Slots	4 1000BASE-X SFP interfaces
Console	1 x RJ45-to-RS232 serial port (9600, 8, N, 1)
Switch Architecture	Store-and-forward
Switch Fabric	56Gbps/non-blocking
Switch Throughput	41.66Mpps
Address Table	16K MAC address table with auto learning function
Shared Data Buffer	1.5MB
Flow Control	Back pressure for half-duplex IEEE 802.3x pause frame for full-duplex
Jumbo Frame	9KB
LED	System:PWR, SYS Ports: 10/100/1000T RJ45 Port: LNK/ACT 1000X SFP slot: LNK/ACT
Dimensions (W x D x H)	442 x 220 x 44 mm, 1U height
Weight	2340g
Power Consumption	19.2 watts/65.51 BTU (maximum)
Power Requirements	AC 100~240V, 50/60Hz
Management Function	
System Configuration	Console, Telnet, SSH, Web browser, SNMP v1, v2c and v3
Management	<ul style="list-style-type: none"> Supports both IPv4 and IPv6 addressing Supports the user IP security inspection for IPv4/IPv6 SNMP Supports MIB and TRAP Supports IPv4/IPv6 FTP/TFTP Supports IPv4/IPv6 NTP Supports RMON 1, 2, 3, 9 four groups Supports the RADIUS authentication for IPv4/IPv6 Telnet user name and password Supports IPv4/IPv6 SSH The right configuration for users to adopt RADIUS server's shell management Supports CLI, console, Telnet Supports SNMP v1, v2c and v3 Supports Security IP safety net management function: avoid unlawful landing at nonrestrictive area Supports Syslog server for IPv4 and IPv6 Supports TACACS+
Layer 3 Function	
Routing Protocol	Static routing, RIP and OSPF
Routing Table	Total 128 entries (IPv4+IPv6)
Layer 2 Function	
Port Configuration	<ul style="list-style-type: none"> Port disable/enable Auto-negotiation 10/100/1000Mbps full and half duplex mode selection Flow control disable/enable Bandwidth control on each port Port loopback detect
Port Status	Display each port's speed duplex mode, link status, flow control status and auto negotiation status
VLAN	<ul style="list-style-type: none"> 802.1Q tagged based VLAN, up to 256 VLAN groups 802.1ad Q-in-Q (VLAN stacking) GVRP for VLAN management Private VLAN Edge (PVE) supported Protocol-based VLAN MAC-based VLAN IP subnet VLAN
Bandwidth Control	TX/RX/both
Link Aggregation	<ul style="list-style-type: none"> IEEE 802.3ad LACP/static trunk Supports 128 groups with 8 ports per trunk group

QoS	<p>8 priority queues on all switch ports</p> <p>Supports strict priority and Weighted Round Robin (WRR) CoS policies</p> <p>Traffic classification:</p> <ul style="list-style-type: none"> - IEEE 802.1p CoS/ToS - IPv4/IPv6 DSCP - Port-based WRR
Multicast	<p>IGMP v1/v2/v3 snooping</p> <p>Querier mode support</p> <p>MLD v1/v2 snooping</p> <p>Multicast VLAN Register (MVR)</p>
Access Control List	<p>Supports Standard and Expanded ACL</p> <p>IP-based ACL/MAC-based ACL</p> <p>Time-based ACL</p> <p>Up to 512 entries</p>
Bandwidth Control	<p>At least 64Kbps step</p>
Security	<p>Supports MAC + port binding</p> <p>IPv4/IPv6 + MAC + port binding</p> <p>IPv4/IPv6 + port binding</p> <p>Supports MAC filter</p> <p>ARP scanning prevention</p>
Authentication	<p>IEEE 802.1x port-based network access control</p> <p>AAA authentication: TACACS+ and IPv4/IPv6 over RADIUS</p>
SNMP MIBs	<p>RFC 1213 MIB-II</p> <p>RFC 1215 Internet Engineering Task Force</p> <p>RFC 1271 RMON</p> <p>RFC 1354 IP-Forwarding MIB</p> <p>RFC 1493 Bridge MIB</p> <p>RFC 1643 Ether-like MIB</p> <p>RFC 1907 SNMP v2</p> <p>RFC 2011 IP/ICMP MIB</p> <p>RFC 2012 TCP MIB</p> <p>RFC 2013 UDP MIB</p> <p>RFC 2096 IP forward MIB</p> <p>RFC 2233 if MIB</p> <p>RFC 2452 TCP6 MIB</p> <p>RFC 2454 UDP6 MIB</p> <p>RFC 2465 IPv6 MIB</p> <p>RFC 2466 ICMP6 MIB</p> <p>RFC 2573 SNMP v3 notify</p> <p>RFC 2574 SNMP v3 vacm</p> <p>RFC 2674 Bridge MIB Extensions (IEEE 802.1Q MIB)</p> <p>RFC 2674 Bridge MIB Extensions (IEEE 802.1P MIB)</p>
Standard Conformance	
Regulatory Compliance	<p>FCC Part 15 Class A, CE</p>
Standards Compliance	<p>IEEE 802.3 10BASE-T</p> <p>IEEE 802.3u 100BASE-TX</p> <p>IEEE 802.3z Gigabit 1000BASE-SX/LX</p> <p>IEEE 802.3ab Gigabit 1000BASE-T</p> <p>IEEE 802.3x flow control and back pressure</p> <p>IEEE 802.3ad port trunk with LACP</p> <p>IEEE 802.1D Spanning Tree Protocol</p> <p>IEEE 802.1w Rapid Spanning Tree Protocol</p> <p>IEEE 802.1s Multiple Spanning Tree Protocol</p> <p>IEEE 802.1p Class of Service</p> <p>IEEE 802.1Q VLAN tagging</p> <p>IEEE 802.1X port authentication network control</p> <p>IEEE 802.1ab LLDP</p> <p>RFC 768 UDP</p> <p>RFC 793 TFTP</p> <p>RFC 791 IP</p> <p>RFC 792 ICMP</p> <p>RFC 2068 HTTP</p> <p>RFC 1112 IGMP v1</p> <p>RFC 2236 IGMP v2</p> <p>RFC 3376 IGMP v3</p> <p>RFC 2710 MLD v1</p> <p>RFC 3810 MLD v2</p> <p>RFC 2328 OSPF v2</p> <p>RFC 1058 RIP v1</p> <p>RFC 2453 RIP v2</p>

Environment	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 90% (non-condensing)
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 90% (non-condensing)

Ordering Information

SGS-6340-24T4S	Layer 3 24-Port 10/100/1000T + 4-Port 1000X SFP Stackable Managed Switch
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Related PoE Products

SGS-6340-48T4S	Layer 3 48-Port 10/100/1000T + 4-Port 1000X SFP Stackable Managed Switch
SGS-6340-24P4S	Layer 3 24-Port 10/100/1000T 802.3at PoE + 4-Port 1000X SFP Stackable Managed Switch/370W
SGS-6340-20S4C4X	Layer 3 20-Port 100/1000X SFP + 4-Port Gigabit TP/SFP + 4-Port 10G SFP+ Stackable Managed Switch

Available Modules for SGS-6340-24T4S

Gigabit Ethernet Transceiver (1000BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-GT	1000	Copper	--	100m	--	0 ~ 60 degrees C
MGB-SX	1000	LC	Multi Mode	550m	850nm	0 ~ 60 degrees C
MGB-SX2	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MGB-LX	1000	LC	Single Mode	10km	1310nm	0 ~ 60 degrees C
MGB-L30	1000	LC	Single Mode	30km	1310nm	0 ~ 60 degrees C
MGB-L50	1000	LC	Single Mode	50km	1550nm	0 ~ 60 degrees C
MGB-L70	1000	LC	Single Mode	70km	1550nm	0 ~ 60 degrees C
MGB-L120	1000	LC	Single Mode	120km	1550nm	0 ~ 60 degrees C
MGB-TSX	1000	LC	Multi Mode	550m	850nm	-40 ~ 75 degrees C
MGB-TLX	1000	LC	Single Mode	10km	1310nm	-40 ~ 75 degrees C
MGB-TL30	1000	LC	Single Mode	30km	1310nm	-40 ~ 75 degrees C
MGB-TL70	1000	LC	Single Mode	70km	1550nm	-40 ~ 75 degrees C

Gigabit Ethernet Transceiver (1000BASE-BX, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MGB-LA10	1000	WDM (LC)	Single Mode	10km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB10					1550nm	1310nm	
MGB-LA20	1000	WDM (LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB20					1550nm	1310nm	
MGB-LA40	1000	WDM (LC)	Single Mode	40km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB40					1550nm	1310nm	
MGB-LA60	1000	WDM (LC)	Single Mode	60km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB60					1550nm	1310nm	
MGB-TLA10	1000	WDM (LC)	Single Mode	10km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB10					1550nm	1310nm	
MGB-TLA20	1000	WDM (LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB20					1550nm	1310nm	
MGB-TLA40	1000	WDM (LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB40					1550nm	1310nm	
MGB-TLA60	1000	WDM (LC)	Single Mode	60km	1310nm	1550nm	-40 ~ 75 degrees C
MGB-TLB60					1550nm	1310nm	