Stride® Stride PRO Series Unmanaged Plus Industrial Ethernet Switches

RoHS Compliant

Features

- **Rapid Provisioning Technology** with DIP switch configuration
- IGMP snooping for EtherNet/IP optimization
- Port mirroring for network troubleshooting
- Port disconnect alarms for security monitoring
- QoS / Port Prioritization
- VLAN support for network segmentation
- Broadcast Storm Protection
- Wide temp range models (-40 to +75 °C)
- DIN-rail and panel mounting
- 12–48 VDC redundant input (PoE models: 12–55 VDC)
- IP30 metal cases
- 5-year warranty

Stride Pro Series Unmanaged Plus Industrial Network Switches

Part Number	Price	Model Features															
		RJ45 10/100 Fast Ethernet Ports	Non-PoE RJ45 Gigabit Ports	PoE+ RJ45 Gigabit Ports	SFP Gigabit Ports	QoS (Quality of Service)	Port Prioritization	BSP (Broadcast Storm Protection)	IGMP Snooping	VLAN (Virtual LAN)	Port Mirror	Port Alarm	Operating Temperature Range	Metal Housing	IP30 Rating	35mm DIN Rail or Panel Mount	5-Year Warranty
Fast Ethernet Unmanaged Plus Switch Models																	
SEP1-SW5U	$106.00	5	–	–	–	–	✓	✓	–	–	–	–	-10 to +65 °C [+14 to +149 °F]	✓	✓	✓	✓
SEP1-SW5U-T	$119.00												-40 to +75 °C [-40 to +167 °F]				
SEP1-SW8U	$140.00	8											-10 to +65 °C [+14 to +149 °F]				
SEP1-SW8U-T	$177.00												-40 to +75 °C [-40 to +167 °F]				
Non-PoE Gigabit Unmanaged Plus Switch Models																	
SEP1-SW5UG-1P-T	$299.00	–	4	–	1*	✓	–	✓	✓	✓	✓	✓	-40 to +75 °C [-40 to +167 °F]	✓	✓	✓	✓
SEP1-SW6UG-1P-T	$349.00		5														
SEP1-SW7UG-2P-T	$369.00				2*												
SEP1-SW10UG-2P-T	$439.00		8														
SEP1-SW12UG-2P-T	$499.00		10														
PoE+ Gigabit Unmanaged Plus Switch Models																	
SEP1-SWP2A5UG-T	$399.00	–	1	4	–	✓	–	✓	✓	✓	✓	✓	-40 to +75 °C [-40 to +167 °F]	✓	✓	✓	✓
SEP1-SWP2A8UG-T	$689.00		–	8													
SEP1-SWP2A10UG-2P-T	$855.00			8	2*												

* Optional SFP modules sold separately.
** Does not include power supplied to PoE devices

Stride® Stride PRO Series Unmanaged Plus Industrial Ethernet Switches

What is Rapid Provisioning Technology?

Stride PRO switches feature *Rapid Provisioning Technology*, a simple DIP switch interface that enables essential managed switch capabilities without complex configuration software.

Six-Position DIP Switch Controls:

- **QoS (Quality of Service)**: Automatically prioritizes time-sensitive traffic, such as EtherNet/IP, for industrial automation applications
- **BSP (Broadcast Storm Protection)**: Prevents network flooding from duplicate messages
- **IGMP Snooping**: Optimizes multicast traffic delivery, essential for EtherNet/IP networks
- **VLAN**: Enables network segmentation for security and traffic management
- **Port Mirror**: Copies traffic to a monitoring port for troubleshooting and security analysis
- **Port Alarm**: Triggers relay contact disengagement when port connections change, providing physical security monitoring

IGMP Snooping

IGMP Snooping optimizes the delivery of multicast traffic within a local area network (LAN). Without IGMP snooping, network switches treat multicast traffic like broadcast traffic, meaning they send it to all connected devices. This results in unnecessary traffic on the network, consuming bandwidth and potentially slowing down performance. This can be problematic for protocols such as EtherNet/IP where most adapters default to multicast I/O messages.

- **Bandwidth efficiency**: Reduces unnecessary traffic.
- **Improved performance**: Prevents network congestion.
- **Enhanced security**: Limits multicast traffic to authorized devices.

Port Mirroring

Port Mirroring is a networking feature found in network switches that allows you to copy network traffic from one or more switch ports to another port, known as the "mirror" or "monitoring" port. This copied traffic can then be analyzed by network monitoring tools. In Stride PRO switches, port mirroring copies all network traffic from port 1 to port 2. Both transmitted and received traffic is mirrored to port 2, so all traffic between port 1 and ports 3 and higher can be monitored. When port mirroring is enabled, port 2 cannot be used for normal network traffic.

- **Network Monitoring**: Port mirroring is primarily used for network monitoring and analysis. It allows network administrators to gain visibility into network traffic for troubleshooting, security, and performance analysis.
- **Security**: It's used for intrusion detection systems (IDS) and other security tools to monitor network traffic for suspicious activity.
- **Troubleshooting**: It helps diagnose network problems and communication protocol issues by capturing and analyzing network packets.

Port Disconnect Alarm

Port Disconnect Alarm is designed to continuously supervise the physical connection status of each RJ45 or SFP port. Upon detection of a disconnection or link loss, the switch immediately triggers an alert through both a relay contact disengagement and dedicated fault LED on the switch.

- **Hardware-Based Alarming:** Integrates with existing industrial control systems without requiring additional IT infrastructure.
- **Improved Network Reliability**: It facilitates rapid identification and resolution of network connectivity issues arising from device failures or cable disconnections, minimizing downtime and ensuring network stability.

Stride® PRO Stride PRO Series Unmanaged Plus Industrial Ethernet Switches

General Specifications			
Specification	***Fast Ethernet Models***	***Gigabit Models***	***PoE+ Models***
Ethernet Standards	IEEE 802.3, 802.3u	IEEE 802.3, 802.3u, 802.3ab, 802.3z	IEEE 802.3, 802.3u, 802.3ab, 802.3af/at
Processing Type	Store and forward		
MAC Addresses	2K	8K	8K
Memory Buffer	448 kbit	4 Mbit	4 Mbit
Switching Fabric	1–1.6 Gbps	10–24 Gbps	10–24 Gbps
Packet Forwarding Rate	14.88 kpps for Ethernet ports 148.8 kpps for Fast Ethernet ports 14,888 kpps for Gigabit Ethernet ports		
Jumbo Frame Support	N/A	9.6 kbyte	9.6 kbyte
Packaging and Protection	Metal case, IP30		
Mounting	DIN rail, panel mount		
Storage Temperature Range	-40 to +85 °C [-40 to +185 °F]		
Humidity (Non-Condensing)	5 to 95% RH		
Environmental Air	No corrosive gases permitted		
Vibration, Shock & Freefall	IEC60068-2-6, -27, -32		
EMI Emissions	FCC Part 15 Subpart B Class A, CE EN55032/EN61000-6-4 Class A		
EMS	CE EN55035/EN61000-6-2 Class A: IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6 (CS), IEC61000-4-8 (Magnetic Field)		
RoHS	RoHS (Pb free) compliant		
Hazardous Location (Class I, Div.2)	ANSI/ISA 12.12.01	N/A	
Agency Approvals	SEP1-SW5U / SEP1-SW5U-T: CE, FCC, UL 508 All others: CE, FCC, UL 61010-1, UL 61010-2-201		

Power Details	
Power Input	Redundant input terminals, removable terminal block
Input Voltage	Class 2 power supply 12–48 VDC (non-PoE models) 12–55 VDC (PoE+ models)
Reverse Power Protection	Yes
System Power (Maximum)*	
SEP1-SW5U	3.0W
SEP1-SW5U-T	3.0W
SEP1-SW8U	3.5W
SEP1-SW8U-T	3.5W
SEP1-SW5UG-1P-T	6.8W
SEP1-SW6UG-1P-T	7.3W
SEP1-SW7UG-2P-T	7.8W
SEP1-SW10UG-2P-T	13.5W
SEP1-SW12UG-2P-T	15.0W
SEP1-SWP2A5UG-T	10.1W
SEP1-SWP2A8UG-T	11.7W
SEP1-SWP2A10UG-2P-T	13.5W
Power Supply Wiring	20–18 AWG
Relay Contact	24 VDC, 1A resistive, open on fault

* **Does not include power supplied to PoE devices**

PoE Details			
Part Number	SEP1-SWP2A5UG-T	SEP1-SWP2A8UG-T	SEP1-SWP2A10UG-2P-T
PoE Ports	4	8	8
Max PoE Power per Port	30W		
PoE Budget	90W @ 12V 120W @ 24V 120W @ 36–55V	90W @ 12V 150W @ 24V 200W @ 36V 240W @ 48–55V	90W @ 12V 150W @ 24V 240W @ 36–55V
PoE Standard	IEEE 802.3af/at (PoE+)		
PoE Pinout	V+, V+, V-, V-, for pin 1, 2, 3, 6 (Endspan, MDI Alternative A)		
PD (Powered Device) Detection	Yes - the switch port will detect the presence of a PoE enabled device before sending power. If a non-PoE device is detected, power will not be sourced on that port but Ethernet communications will be permitted.		
PoE Overload Protection	Yes		
Reverse Protection	Yes		
Redundancy Protection	Yes		

Stride® Stride PRO Series Unmanaged Plus Industrial Ethernet Switches

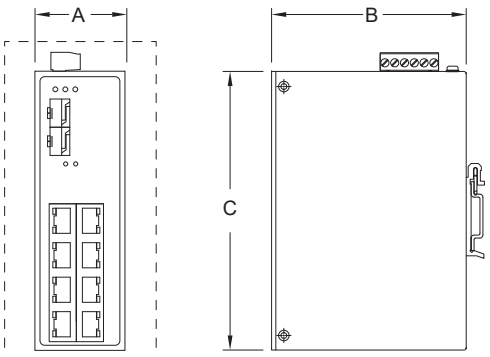
RJ45 Ports	
Ethernet Compliance	IEEE 802.3 for 10Base-T Ethernet IEEE 802.3u for 100Base-TX Ethernet IEEE 802.3ab for 1000Base-T Gigabit Ethernet IEEE 802.3af or 802.3at for Power over Ethernet
Auto-Crossover	Yes, allows straight-through or crossover wired cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Flow Control	IEEE 802.3x flow control, back pressure flow control
Cable Requirements	
10BaseT	2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100Ω
100BaseTX	2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100Ω
1000BaseTX	UTP/STP Cat. 5e/6a cable; EIA/TIA-568 100Ω
Max. Cable Distance	100m [328ft]

SFP Ports	
Ethernet Compliance	IEEE 802.3, 802.3u, 802.3x for 10/100 Ethernet IEEE 802.3ab, 802.3z for Gigabit Ethernet

SFP (pluggable) ports accept 100/1000 Mbps Mini-GBIC (SFP) transceivers.
See SFP module datasheet for optional fiber transceiver specifications

Dimensions					
Part Number	***Weight kg [lb]***	***Width (A)***	***Depth (B)***	***Height (C)***	***Drawing***
		mm [in]			
SEP1-SW5U	0.45 [0.99]	30 [1.18]	95 [3.74]	140 [5.51]	PDF
SEP1-SW5U-T					PDF
SEP1-SW8U					PDF
SEP1-SW8U-T					PDF
SEP1-SW5UG-1P-T	0.68 [1.5]	30 [1.18]	120 [4.72]	142 [5.59]	PDF
SEP1-SW6UG-1P-T					PDF
SEP1-SW7UG-2P-T					PDF
SEP1-SW10UG-2P-T	0.91 [2.0]	46 [1.81]			PDF
SEP1-SW12UG-2P-T					PDF
SEP1-SWP2A5UG-T	1.00 [2.2]	46 [1.81]	120 [4.72]	142 [5.59]	PDF
SEP1-SWP2A8UG-T	1.04 [2.3]				PDF
SEP1-SWP2A10UG-2P-T	1.09 [2.4]				PDF

See our website www.AutomationDirect.com for complete engineering drawings.



Front Panel LEDs				
LED	***State***	***10/100 models***	***Non-PoE Gigabit models***	***PoE models***
P1/P2	Green	Power supply status		
FAULT	Red	Power input fault	Power fault or port alarm	
RJ45 Port LINK/ ACT	Green	Port link established, network activity		
	Amber	N/A	N/A	PoE power delivery, network activity
RJ45 Port SPEED	Green	N/A	Connected at 1 Gbps, port link failure	
	Amber	Full/half duplex, packet collision	Connected at 100 Mbps, port link failure	
SFP Port LINK/ ACT	Green	N/A	Connected at 1 Gbps, network activity	
	Amber	N/A	Connected at 100 Mbps, network activity	

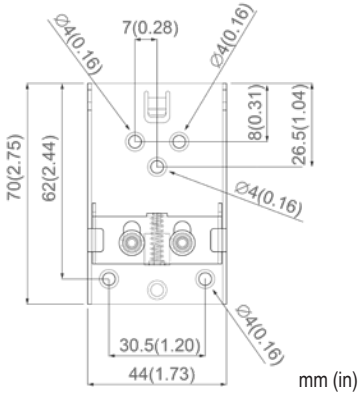
DIP Switch Settings (Gigabit and PoE Models)	
DIP Switch	***Description***
1	QoS (Quality of Service)
2	BSP (Broadcast Storm Protection)
3	IGMP Snooping
4	VLAN
5	Port Mirror
6	Port Alarm

SEP1-DIN-RAIL-KIT $13.00

This upgraded DIN rail bracket provides a secure, spring-loaded latch. It is compatible with all DIN rail mountable SE3 series and SEP1 series switches. Note that the bracket is wider than some narrow-bodied switches.

SEP1-DIN-RAIL-KIT

SEP1-DIN-RAIL-KIT Dimensions	
Height	70mm [2.72in]
Width	44mm [1.73in]
Thickness	10.2mm [0.40in]



Stride Industrial Ethernet Fiber Transceivers Fast Ethernet

Description:
STRIDE 100 Mbps Small Form Factor Pluggable (SFP) transceiver modules (Transmit/Receive). Hot Swappable. 1310nm wavelength. Data transmission up to 4km multimode fiber (SFP-4K-FMF) or 30km singlemode fiber (SFP-30K-FSF). LC duplex receptacle, SFP Multi-Source Agreement compliant.

NOTE: Port speed settings for the Stride switch must be manually set to 100 Mbps.

Part Number	Mode	Light Source	Max Trans. Distance	Price
SFP-4K-FMF	Multi-mode	1310nm, FP	4km	$66.00
SFP-30K-FSF	Single-mode		30km	$59.00
Note: Use only Gigabit speed SFPs with SE2-SW10UG-2P-T				

Transmitter Optical characteristics

Parameter (unit)		Minimum	Typical	Maximum
Output optical power (dBM)	SFP-4K-FMF	-9		0
	SFP-30K-FSF	-15		-8
Extinction Ratio (dB)	SFP-4K-FMF	8.2		
	SFP-30K-FSF			
Center Wavelength (nm)	SFP-4K-FMF	1261	1310	1360
	SFP-30K-FSF			
Spectral width - RMS (nm)	SFP-4K-FMF			7
	SFP-30K-FSF			4
Rise / Fall Time - 10% - 90% (ns)	SFP-4K-FMF			2
	SFP-30K-FSF			

General Specifications

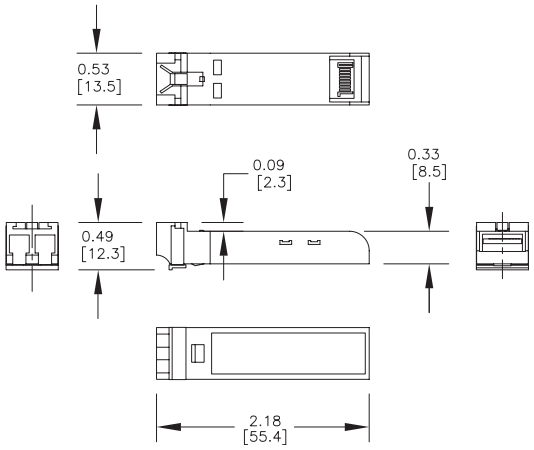
Connector Type		Type LC connector with bail latch
Operating Temperature range		-40 to +85 °C [-40 to +185 °F]
Storage temperature range		-40 to +85 °C [-40 to +185 °F]
Humidity (non-condensing)		5–95% RH
Link Speed		Gigabit Ethernet
Laser Type		FP laser diode (Class 1 laser safety standard IEC 60825 compliant)
Media	SFP-4K-FMF	Multi-mode Fiber
	SFP-30K-FSF	Single-mode Fiber
Fiber	SFP-4K-FMF	62.5 / 125µm
	SFP-30K-FSF	9 / 125µm
Code	SFP-4K-FMF	FX5
	SFP-30K-FSF	100LX
Distance	SFP-4K-FMF	4km
	SFP-30K-FSF	30km
Compliances	SFP-4K-FMF	125 Mbps IEEE802.3u 100BASE-FX compliant 125 Mbps FDDI ISO/IEC 9314-1 compliant
	SFP-30K-FSF	125 Mbps IEEE802.3ah 100BASE-LX10 compliant 155 Mbps ITU-T G957 STM S-1.1/L-1.1 compliant 155 Mbps SONET OC-3 IR-1/LR-1 compliant
Inputs / Outputs		AC-coupled differential inputs and outputs

Receiver Optical characteristics

Parameter (unit)		Minimum	Maximum
Sensitivity (dBm)	SFP-4K-FMF		-30
	SFP-30K-FSF		-34
Operating Wavelength (nm)	SFP-4K-FMF	1260	1620
	SFP-30K-FSF		
Loss of Signal - Deasserted (dBm)	SFP-4K-FMF		-30
	SFP-30K-FSF		-35
Loss of Signal - Asserted (dBm)	SFP-4K-FMF	-45	
	SFP-30K-FSF		
Loss of Signal - Hysteresis (dB)	SFP-4K-FMF	0.5	
	SFP-30K-FSF		

Dimensions

Inches [mm]



Safety Standards:

Electrical Safety | European Directives | WEEE Compliant | RoHS Compliant | US Emissions

Stride Industrial Ethernet Fiber Transceivers Gigabit Ethernet

Description:

STRIDE Gigabit (1.25 Gb) Small Form Factor Pluggable (SFP) transceiver module (Transmit/Receive). Hot Swappable. Short or long wavelength of 850nm or 1310nm, dependant on model. Supports data transmission up to 550m, 2km, 10km, or 30km on a single-mode or multi-mode fiber, dependant on model. LC duplex receptacle, SFP Multi-Source Agreement compliant.

Part Number	Mode	Light Source	Max Trans. Distance	Price
SFP-500-GMF	Multi-mode	850nm, VCSEL	550m	$53.00
SFP-2K-GMF		1310nm, FP	2km	$88.00
SFP-10K-GSF	Single-mode		10km	$53.00
SFP-30K-GSF		1310nm, DFB	30km	$121.00

Note: Use only Gigabit speed SFPs with SE2-SW10UG-2P-T

Transmitter Optical characteristics

Parameter (unit)		Minimum	Typical	Maximum
Output optical power (dBM)	SFP-500-GMF	-9.5		-4
	SFP-2K-GMF	-9		-1
	SFP-10K-GSF	-9.5		-3
	SFP-30K-GSF	-2	1	3
Extinction Ratio (dB)	SFP-500-GMF	9		
	SFP-2K-GMF			
	SFP-10K-GSF			
	SFP-30K-GSF			
Center Wavelength (nm)	SFP-500-GMF	830	850	860
	SFP-2K-GMF	1270	1310	1355
	SFP-10K-GSF	1285		1343
	SFP-30K-GSF	1270		1355
Spectral width - RMS (nm)	SFP-500-GMF			0.85
	SFP-2K-GMF			4
	SFP-10K-GSF			2.8
	SFP-30K-GSF			1
Rise / Fall Time - 20% - 80% (ps)	SFP-500-GMF			260
	SFP-2K-GMF			
	SFP-10K-GSF			
	SFP-30K-GSF			

Receiver Optical characteristics

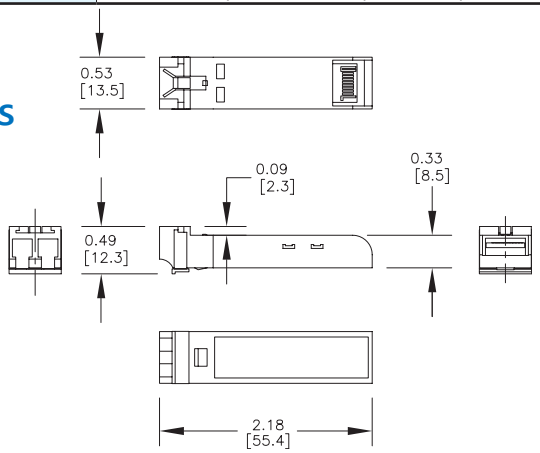
Parameter (unit)		Minimum	Maximum
Sensitivity (dBm)	SFP-500-GMF		-17
	SFP-2K-GMF		-19
	SFP-10K-GSF		-20
	SFP-30K-GSF		-23
Operating Wavelength (nm)	SFP-500-GMF	770	860
	SFP-2K-GMF	1260	1610
	SFP-10K-GSF	1270	1355
	SFP-30K-GSF		1580
Return Loss (dB)	SFP-500-GMF	12	
	SFP-2K-GMF		
	SFP-10K-GSF		
	SFP-30K-GSF		
Loss of Signal - Deasserted (dBm)	SFP-500-GMF		-17.5
	SFP-2K-GMF		-19
	SFP-10K-GSF		-20
	SFP-30K-GSF		-23
Loss of Signal - Asserted (dBm)	SFP-500-GMF	-35	
	SFP-2K-GMF		
	SFP-10K-GSF		
	SFP-30K-GSF		
Loss of Signal - Hysteresis (dB)	SFP-500-GMF	0.5	
	SFP-2K-GMF		
	SFP-10K-GSF		
	SFP-30K-GSF		

General Specifications

Connector Type		Type LC connector with bail latch
Operating Temperature range		-40 to +85 °C [-40 to +185 °F]
Storage temperature range		-40 to +85 °C [-40 to +185 °F]
Humidity (non-condensing)		5–95% RH
Link Speed		Gigabit Ethernet
Laser Type	SFP-500-GMF	VCSEL laser diode (Class 1 laser safety standard IEC 60825 compliant)
	SFP-2K-GMF	FP laser diode (Class 1 laser safety standard IEC 60825 compliant)
	SFP-10K-GSF	
	SFP-30K-GSF	DFB laser diode (Class 1 laser safety standard IEC 60825 compliant)
Media	SFP-500-GMF	Multi-mode Fiber
	SFP-2K-GMF	
	SFP-10K-GSF	Single-mode Fiber
	SFP-30K-GSF	
Fiber	SFP-500-GMF	50 / 125µm and 62.5 / 125µm
	SFP-2K-GMF	
	SFP-10K-GSF	9 / 125µm
	SFP-30K-GSF	
Code	SFP-500-GMF	SX
	SFP-2K-GMF	SX2
	SFP-10K-GSF	LX
	SFP-30K-GSF	lhx
Distance	SFP-500-GMF	550m
	SFP-2K-GMF	2km
	SFP-10K-GSF	10km
	SFP-30K-GSF	40km
Compliances	SFP-500-GMF	1.0625 Gbps Fiber Channel FC-PI 100-M5-SN-I compliant 1.0625 Gbps Fiber Channel FC-PI 100-M6-SN-I compliant 1.25 Gbps IEEE 802.3z 1000BASE-SX compliant 1.25 Gbps IEEE 802.3ah 1000BASE-SX compliant
	SFP-2K-GMF	IEEE 802.3 1000BASE-SX+ compliant
	SFP-10K-GSF	1.0625 Gbps Fiber Channel FC-PI 100-SM-LC-L compliant 1.25 Gbps IEEE 802.3 1000BASE-LX compliant
	SFP-30K-GSF	1.25 Gbps Gigabit Ethernet compliant
Inputs / Outputs		AC-coupled differential inputs and outputs

Dimensions

Inches [mm]



Safety Standards:

Electrical Safety | European Directives | WEEE Compliant | RoHS Compliant | US Emissions

Stride Industrial Ethernet Copper Transceivers Gigabit Ethernet

Description:

The STRIDE SFP-1GC-T is a hot-pluggable Small Form Factor Pluggable (SFP) transceiver. It has an RJ-45 connector, and can send and receive data at 1.25 Gbps up to 100m distance over 4-pair Cat5e/6a cable. The module is compliant with the SFP Multi-Source Agreement (MSA) and IEEE802.3:2002.

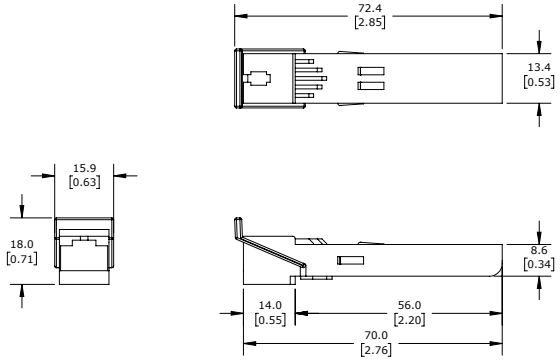
Part Number	Connector Type	Link Speed	Price
SFP-1GC-T	RJ-45	Gigabit Ethernet	$93.00

RJ45 Ports	
Ethernet Compliance	IEEE 802.3ab (1000Base-T) Gigabit Ethernet
Auto-Crossover	Yes, allows use of straight-through or crossover cables
Auto-Sensing Operation	Yes, full and half duplex
Port Speed	1000Base-T only
Cable Requirements	4-pair UTP/STP Cat.5e/6a cable EIA/TIA-568 100Ω
Max. Cable Distance	100m [328ft]

General Specifications	
Operating Temperature Range	-40 to +85 °C [-40 to +185 °F]
Storage Temperature Range	-40 to +85 °C [-40 to +185 °F]
Humidity (non-condensing)	5–95% RH
Link Speed	Gigabit Ethernet
Compliances	SFP Multi-Source Agreement (MSA)

Dimensions

Inches [mm]



Safety Standards:

European Directives

WEEE Compliant

RoHS Compliant

US Emissions