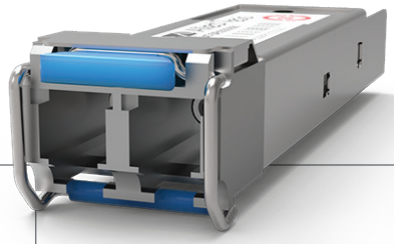
SP10 Series

10 Gigabit Small Form-Factor Pluggable Modules



Overview

The Allied Telesis SP10 Series offers a wide variety of 10 Gigabit Ethernet connectivity options for data center, enterprise and service provider transport applications. These industry-standard hot-swappable devices simply plug into the Ethernet SFP+ port on all SFP+-compatible devices. Configuration can be optimized to meet a wide variety of distance and service requirements.

Compatibility

Allied Telesis SP10 Series 10 Gigabit SFP+ modules are supported on all Allied Telesis devices with SFP+ uplink connections.

Options

The SP10 Series offers short-haul and long-haul solutions. From the inexpensive Allied Telesis SP10SR to the far-reaching Allied Telesis SP10ZR80/I, the network can be extended to meet any performance needs.

Interoperability

The SP10 Series SFP+ modules fully comply with industry-standard networking regulations. This allows the SP10 Series to be used with any networking equipment which complies with industry standards.

BiDi transceivers

Using an SFP BiDi transceiver can upgrade transmission capacity on a typical network—without installing new fibers—by utilizing a single fiber for both the send and receive signals.

Applications

The extended temperature optics offer a wide operating temperature range of -40C to 85C, allowing deployment in even the harshest industrial environments.

Key Features

- 10Gbps data rate
- Compact size
- Flexible architecture
- Hot-swappable
- RoHS compliant
- Compliant to SFP+ Electrical MSA SFF-8431
- Compliant to SFF-8472 MSA
- Lower power consumption
- Digital diagnostics monitoring (DDM)
- Maximum data rate of 10.3Gbps
- BiDi options available

SPECIFICATIONS

	Fiber Type	Connector Type	Maximum Distance	Wavelength Tx/Rx	DDM*	Transmit		Receive Sensitivity	Power Budget	Overload	Operating Temperature
						Min	Max				
SP10TM/I	100M/1/ 2.5/5/10G	RJ45	100 m	-	-	-	-	-	-	-	-40°C to 85°C (-40°F to 185°F)
SP10SR	MMF	LC	OM1 - 33 m OM2 - 82 m OM3 - 300 m OM4 - 470 m	850 nm	Yes	-7 dBm	-1 dBm	-12 dBm	5 dBm	-1 dBm	0°C to 70°C (32°F to 158°F)
SP10SR/I	MMF	LC		850 nm	Yes	-5 dBm	-1 dBm	-10 dBm	5 dBm	-1 dBm	-40°C to 85°C (-40°F to 185°F)
SP10LRa/I	SMF	LC	Up to 10 km	1310 nm	Yes	-8 dBm	1 dBm	-14 dBm	6 dBm	1 dBm	-40°C to 85°C (-40°F to 185°F)
SP10ZR80/I	SMF	LC	Up to 80 km	1550 nm	Yes	0 dBm	5 dBm	-20 dBm	20 dBm	1 dBm	-40°C to 85°C (-40°F to 185°F)
SP10BD10/I-12	SMF	LC	up to 10 km	1270/1330 nm	Yes	-6 dBm	-1 dBm	-14 dBm	8 dBm	1 dBm	-40°C to 85°C (-40°F to 185°F)
SP10BD10/I-13	SMF	LC	up to 10 km	1330/1270 nm	Yes	-6 dBm	-1 dBm	-14 dBm	8 dBm	1 dBm	-40°C to 85°C (-40°F to 185°F)
SP10BD20-12	SMF	LC	uo to 20 km	1270/1330 nm	Yes	-3 dBm	3 dBm	-15 dBm	12 dBm	1 dBm	0°C to 70°C (32°F to 158°F)
SP10BD20-13	SMF	LC	uo to 20 km	1330/1270 nm	Yes	-3 dBm	3 dBm	-15 dBm	12 dBm	1 dBm	0°C to 70°C (32°F to 158°F)
SP10BD40/I-12	SMF	LC	uo to 40 km	1270/1330 nm	Yes	-1 dBm	4 dBm	-15 dBm	14 dBm	1 dBm	-40°C to 85°C (-40°F to 185°F)
SP10BD40/I-13	SMF	LC	uo to 40 km	1330/1270 nm	Yes	-1 dBm	4 dBm	-15 dBm	14 dBm	1 dBm	-40°C to 85°C (-40°F to 185°F)
SP10BD80/I-14	SMF	LC	uo to 80 km	1490/1550 nm	Yes	1 dBm	5 dBm	-15 dBm	16 dBm	1 dBm	-5°C to 85°C (23°F to 185°F)
SP10BD80/I-15	SMF	LC	uo to 80 km	1550/1490 nm	Yes	1 dBm	5 dBm	-15 dBm	16 dBm	1 dBm	-5°C to 85°C (23°F to 185°F)

Power consumption: Fiber modules < 1W; Copper Modules: up to 2.5W (See Hardware release note for proper unit installation: https://www.alliedtelesis.com/nz/en/relnote/hardware-release-note-sp10t-and-sp10tm-10gbase-sfp-copper-port-transceivers)

*Digital Diagnostics Monitoring

Environmental Specifications for Commercial Temperature Optics:

- Operating temperature
  - Fiber: 0°C to 70°C (32°F to 158°F)
  - SP10TM/I: -40°C to 85°C (-40°F to 185°F)
- Storage temperature: -40°C to 85°C (-40°F to 185°F)
- Relative humidity: 0 to 80% non-condensing

Environmental Specifications for Industrial Temperature Optics:

- Operating temperature: -40°C to 85°C (-40°F to 185°F)
- Storage temperature: -40°C to 85°C (-40°F to 185°F)
- Relative humidity: 0 to 85% non-condensing

ORDERING INFORMATION

Commercial Temperature	
AT-SP10TM/I	1G/2.5G/5G/10G, 100 m ,TAA*
AT-SP10SR	10GBASE-SR, 850 nm, MMF, TAA*
Industrial Temperature	
AT-SP10LRa/I	10GBASE-LR, 1310 nm, 10 km with SMF, I-Temp, TAA*
AT-SP10ER40a/I	10GBASE-ER, 1550 nm, 40 km with SMF, I-Temp, TAA*
AT-SP10ZR80/I	10GBASE-ZR, 1550 nm, 80 km with SMF, I-Temp

*Trade Act Agreement compliant (TAA)

BiDi Transceivers	
AT-SP10BD10/I-12	10 GbE (1270 nm Tx, 1330 nm Rx) fiber up to 10 km, I-Temp, TAA*
AT-SP10BD10/I-13	10 GbE (1330 nm Tx, 1270 nm Rx) fiber up to 10 km, I-Temp, TAA*
AT-SP10BD20-12	10 GbE (1270 nm Tx, 1330 nm Rx) fiber up to 20 km, TAA*
AT-SP10BD20-13	10 GbE (1330 nm Tx, 1270 nm Rx) fiber up to 20 km, TAA*
AT-SP10BD40/I-12	10 GbE (1270 nm Tx, 1330 nm Rx) fiber up to 40 km, I-Temp, TAA*
AT-SP10BD40/I-13	10 GbE (1330 nm Tx, 1270 nm Rx) fiber up to 40 km, I-Temp, TAA*
AT-SP10BD80/I-14	10 GbE (1490 nm Tx, 1550 nm Rx) fiber up to 80 km, I-Temp, TAA*
AT-SP10BD80/I-15	10 GbE (1550 nm Tx, 1490 nm Rx) fiber up to 80 km, I-Temp, TAA*