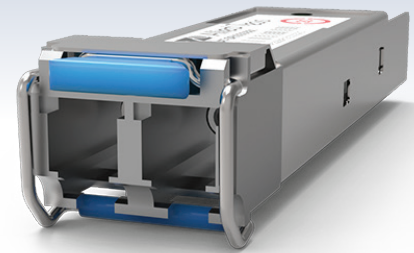


# SP10 Series

## 10 Gigabit Small Form-Factor Pluggable Modules



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 Allied Telesis 10G Long Reach Multimode (LRM) optic is designed to transmit and receive optical data over a legacy OM1 multi-mode fiber link up to 220m. This makes it ideal for high-speed storage area networks, computer cluster cross-connect and custom high-speed data pipes.

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 < 1 Watt
- ▶ Digital diagnostics monitoring (DDM)
- ▶ Maximum data rate of 10.3Gbps
- ▶ BiDi options available

## Specifications

MODEL	FIBER TYPE	CONNECTOR TYPE	MAXIMUM DISTANCE	WAVELENGTH Tx/Rx (nm)	DDM*	TRANSMIT (dBm)		RECEIVE SENSITIVITY (dBm)	Power Budget (dBm)	OVERLOAD (dBm)	OPERATING TEMPERATURE
						MIN	MAX				
SP10T	100/1G/10G	RJ45	Cat 6a/7 - 20 m	-	-	-	-	-	-	-	-5°C to 85°C (23°F to 185°F)
SP10SR	MMF	LC	OM1 - 33 m OM2 - 82 m	850	Yes	-7	-1	-12	5	-1	0°C to 70°C (32°F to 158°F)
SP10SR/I	MMF	LC	OM3 - 300 m OM4 - 470 m	850	Yes	-5	-1	-10	5	-1	-40°C to 85°C (-40°F to 185°F)
SP10LRa/I	SMF	LC	Up to 10 km	1310	Yes	-8	1	-14	6	1	-40°C to 85°C (-40°F to 185°F)
SP10LRM	MMF	LC	OM1 - 220 m	1310	Yes	-8	1	-6	-2	1	0°C to 70°C (32°F to 158°F)
SP10ER40/I	SMF	LC	Up to 40 km	1550	Yes	-5	4	-14	9	1	-40°C to 85°C (-40°F to 185°F)
SP10ZR80/I	SMF	LC	Up to 80 km	1550	Yes	0	5	-20	20	1	-40°C to 85°C (-40°F to 185°F)
SP10BD10/I-12	SMF	LC	up to 10 km	1270/1330	Yes	-6	-1	-14	8	1	-40°C to 85°C (-40°F to 185°F)
SP10BD10/I-13	SMF	LC	up to 10 km	1330/1270	Yes	-6	-1	-14	8	1	-40°C to 85°C (-40°F to 185°F)
SP10BD20-12	SMF	LC	uo to 20 km	1270/1330	Yes	-3	3	-15	12	1	0°C to 70°C (32°F to 158°F)
SP10BD20-13	SMF	LC	uo to 20 km	1330/1270	Yes	-3	3	-15	12	1	0°C to 70°C (32°F to 158°F)
SP10BD40/I-12	SMF	LC	uo to 40 km	1270/1330	Yes	-1	4	-15	14	1	-40°C to 85°C (-40°F to 185°F)
SP10BD40/I-13	SMF	LC	uo to 40 km	1330/1270	Yes	-1	4	-15	14	1	-40°C to 85°C (-40°F to 185°F)

Power consumption: <1W

\*Digital Diagnostics Monitoring

## SP10 Series | 10Gigabit Small Form-Factor Pluggable Modules

### Environmental Specifications for Commercial Temperature Optics:

Operating temperature

Fiber: 0°C to 70°C (32°F to 158°F)

SP10T: -5°C to 85°C (23°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-SP10T

100/1000/10000T, 20 m, CAT6a/7

##### AT-SP10SR

10GBASE-SR, 850 nm, MMF, TAA\*

##### AT-SP10LRM

10GBASE-LRM, 1310 nm FP, MMF

#### Industrial Temperature

##### AT-SP10SR/I

10GBASE-SR, 850 nm, MMF, I-Temp, TAA\*

##### AT-SP10LRa/I

10GBASE-LR, 1310 nm, 10 km with SMF, I-Temp, TAA\*

##### AT-SP10ER40/I

10GBASE-ER, 1550 nm, 40 km with SMF, I-Temp

##### AT-SP10ZR80/I

10GBASE-ZR, 1550 nm, 80 km with SMF, I-Temp

### BiDi Transceivers

##### AT-SP10BD10/I-12

10G 1270/1330, 10 km, I-Temp, TAA\*

##### AT-SP10BD10/I-13

10G 1330/1270, 10 km, I-Temp, TAA\*

##### AT-SP10BD20-12

10G 1270/1330, 20 km, TAA\*

##### AT-SP10BD20-13

10G 1330/1270, 20 km, TAA\*

##### AT-SP10BD40/I-12

10G 1270/1330, 40 km, I-Temp, TAA\*

##### AT-SP10BD40/I-13

10G 1330/1270, 40 km, I-Temp, TAA\*

\*TAA = Trade Act Agreement Compliant