RJ-SP-10GBASE-T

Copper SFP+ Transceiver

Description:

OPTOKON's **RJ-SP-10GBASE-T** Copper Small Form Pluggable (SFP+) transceivers are based on the SFP Multi Source Agreement (MSA). They are compatible with the 10 Gigabit Ethernet and 10GBASE-T/5GBASE-T/2.5GBASE-T/1000BASE-T/100BASE-T standards as specified in IEEE Std 802.3.

RJ-SP-10GBASE-T uses the SFP's RX_LOS (must be pulled up on host) pin for link indication. If pull up or open SFP's TX_DISABLE pin, PHY IC be reset.

Features:

- Support 10Gbase-T / 5Gbase-T / 2.5Gbase-T / 1000Base-T / 100Base-T on line port
- Support 10Gbase-R on host port
- Hot-pluggable SFP footprint
- Low power dissipation (max. 4.0 W)
- Compact RJ-45 connector assembly
- Fully metal enclosure, for lower EMI
- RoHS compliant and lead-free
- Single +3.3 V power supply
- Up to 30 m reach over Cat 6A/7 cable
- Case operating temperature -40°C to +85°C

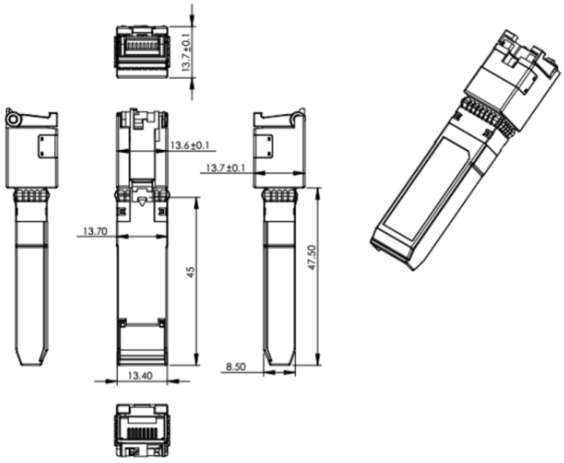
Temperature:

Name	Min	Max	Notes/Conditions
Operating Temperature	- 40 °C	+85 °C	Case temperature
Storage Temperature	-40 °C	+85 °C	Ambient temperature

Applications:

- 10GBASE-T
- 5GBASE-T
- 2.5GBASE-T
- 1000BASE-T
- 100BASE-T

Dimensions:



OPTOKON a.s., Cerveny Kriz 250, 586 01 Jihlava, Czech Republic
tel. +420 564 040 111,WWW.OPTOKON.COM, INFO@OPTOKON.CZ

SFP+ HOST Connector Pin Out:

PIN	Symbol	Name/Description	Ref
1	VEET	Transmitter Ground (Common with Receiver Ground)	1
2	TFAULT	Transmitter Fault. Not supported.	
3	TDIS	Transmitter Disable. Laser output disabled on high or open.	2
4	MOD_DEF(2)	Module Definition 2. Data line for Serial ID.	3
5	MOD_DEF(1)	Module Definition 1. Clock line for Serial ID.	3
6	MOD_DEF(0)	Module Definition 0. Grounded within the module.	3
7	Rate Select	No connection required	
8	LOS	High indicates no linked. low indicates linked.	
9	VEER	Receiver Ground (Common with Transmitter Ground)	1
10	VEER	Receiver Ground (Common with Transmitter Ground)	1
11	VEER	Receiver Ground (Common with Transmitter Ground)	1
12	RD-	Receiver Inverted DATA out. AC Coupled	
13	RD+	Receiver Non-inverted DATA out. AC Coupled	
14	VEER	Receiver Ground (Common with Transmitter Ground)	1
15	VCCR	Receiver Power Supply	
16	VCCT	Transmitter Power Supply	
17	VEET	Transmitter Ground (Common with Receiver Ground)	1
18	TD+	Transmitter Non-Inverted DATA in. AC Coupled.	
19	TD-	Transmitter Inverted DATA in. AC Coupled.	
20	VEET	Transmitter Ground (Common with Receiver Ground)	1

Notes:

1. Circuit ground is connected to chassis ground.

2. PHY disabled on TDIS > 2.0 V or open, enabled on TDIS < 0.8 V.

3. Should be pulled up with 4.7k – 10k Ohms on host board to a voltage between 2.0 V and 3.6 V. MOD_DEF(0) pulls line low to indicate module is plugged in.

4. LVTTL compatible with a maximum voltage of 2.5V.

Cable length:

Line Port	Cable	Distance [m]	Host port
10GBASE-T	CAT6A/7	30	10GBASE-R
5GBASE-T	CAT5E	100	10GBASE-R
2.5GBASE-T	CAT5E	100	10GBASE-R
1000GBASE-T	CAT5E	100	10GBASE-R
100GBASE-T	CAT5E	100	10GBASE-R

Automatic crossover detection is enabled. External crossover cable is not required

Ordering code:

Part number:	Data rate [Gbps]	Distance [m]	Cable type	Host port	Temperature
RJ-SP-10GBASE-T	10	100, 30	CAT5E, CAT6A/7	10GBASE-R	-40 to +85 °C

OPTOKON a.s., Cerveny Kriz 250, 586 01 Jihlava, Czech Republic
tel. +420 564 040 111,WWW.OPTOKON.COM, INFO@OPTOKON.CZ