Product Description:

TSPAD9-I and TSPAD9-O are part of our passive CCWDM Mux/Demux series and supports 18 CWDM Channel interconnection over single fiber using 1271-1611nm wavelength from ITU-T G.694.2 grid.
TSPAD9-O unit is for harsh outdoor environments supporting IP55- water dust resistance, -5 to 70C temperature, telecom pole or wall installation options and comes with LC/UPC or customer specified for easy fiber connection. Unit is small in size, light in weight, is simple to install, requires zero configuration or maintenance and is fully passive - no power supplyor cooling required. TSPAD9-O is used together with TSPAD9-I. Thissolution is designed for scenarios where single fiber passive CWDMconnections on both sides of the link are deployed in harsh outdooror one of sides is deployed in Indoor environments.

TSPAD9 uses Compact CWDM filter technology and provides ≤ 3 dB insertion loss.

CCWDM Mux/Demux are data rate or line protocol neutral and are used in combination with colored optical transceivers which ensure desired application and data rate. Typical use case for TSPAD9 Mux/Demux are 5G/4G/3G Mobile Fronthaul Network Baseband Unit (BBU) and Remote Radio Head (RRH) interconnection (CPRI/eCPRI protocol), Enterprise Network 25G/10G Ethernet links or Datacenter 32/16/8G Fiber Channel connections.

TSPAD9 is compatible with all types of CWDM SFPs that use the same wavelength

Key Highlights:

- 18CH CWDM Data services over Single SMF
- LC/UPC connectors
- Small size and lightweight
- Low Insertion Loss: ≤3 dB
- Compact CWDM filters
- Temperature: -5°C – +70°C
- Compatible with 3G/4G/5G Nokia, Ericsson, Huawei, ZTE
- Fully passive (No Power Supply or Cooling)
- MTBF: 100+ Years
- 2 Year Warranty

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Key Technical Data: TSPAD9-O

Parameter		Unit	Value
Product Type:			Single Fiber CCWDM Outdoor unit
Number of Data Channels:			18
Number of Wavelength			18 CWDM Channels According ITU-T G.694.2
Transport Media:			One strand of Fiber Single Mode Fiber (SMF)
Operating Wavelengths:	center	nm	• Ch1-Tx: 1291nm • Ch1-Rx: 1271nm • Ch2-Tx: 1331nm • Ch2-Rx: 1311nm • Ch3-Tx: 1371nm • Ch3-Rx: 1351nm • Ch4-Tx: 1411nm • Ch4-Rx: 1391nm • Ch5-Tx: 1451nm • Ch5-Rx: 1431nm • Ch6-Tx: 1491nm • Ch6-Rx: 1471nm • Ch7-Tx: 1531nm • Ch7-Rx: 1511nm • Ch8-Tx: 1571nm • Ch8-Rx: 1551nm • Ch9-Tx: 1611nm • Ch9-Rx: 1591nm
Filter Technology:			CCWDM (Compact CWDM - Free Space Technology)
Passband:	λ_{center}	nm	± 6.5 nm
Channel Spacing:		nm	20 nm
Insertion Loss $_{Passband}$**:**	Max	dB	≤ 3 dB
Isolation Adjacent Channels:	Min	dB	30 dB
Isolation Non-Adjacent Channels:	Min	dB	45 dB
Channel Passband Ripple:		dB	≤0.5 dB
Polarization Dependent Loss (PDL):	Max	dB	<0.1 dB
Polarization Mode Dispersion (PMD):	Max	ps	< 0.1 ps
Directivity:	Min	dB	>50 dB
Return Loss:	Min	dB	>45 dB
Maximum Power Handling:	Max	mW	500mW = 26.98dBm maximum power pass
Connectors:			LC/UPC or customer specified
Operating Temperature:		(°C)	-5~+70 (°C)
Storage Temperature:		(°C)	-40~+85 (°C)
Material:			Plastic housing with protective lock, Pole/Wall Mount
Protection Class:			IP55 - Water, Dust resistant
Compliance:			ITU-T G.694.2, CE, RoHS, IP55
Installation accessories:			Complete installation accessories included

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Product Data Sheet

Key Technical Data: TSPAD9-I

Parameter		Unit	Value
Product Type:			Single Fiber CWDM Indoor unit
Number of Data Channels:			18
Number of Wavelength			18 CWDM Channels According ITU-T G.694.2
Transport Media:			One strand of Fiber Single Mode Fiber (SMF)
Operating Wavelengths:	center	nm	• Ch1-Rx: 1291nm • Ch1-Tx: 1271nm • Ch2-Rx: 1331nm • Ch2-Tx: 1311nm • Ch3-Rx: 1371nm • Ch3-Tx: 1351nm • Ch4-Rx: 1411nm • Ch4-Tx: 1391nm • Ch5-Rx: 1451nm • Ch5-Tx: 1431nm • Ch6-Rx: 1491nm • Ch6-Tx: 1471nm • Ch7-Rx: 1531nm • Ch7-Tx: 1511nm • Ch8-Rx: 1571nm • Ch8-Tx: 1551nm • Ch9-Rx: 1611nm • Ch9-Tx: 1591nm
Filter Technology:			CCWDM (Compact CWDM - Free Space Technology)
Passband:	λ_{center}	nm	± 6.5 nm
Channel Spacing:		nm	20 nm
Insertion Loss Passband**:**	Max	dB	≤ 3 dB
Isolation Adjacent Channels:	Min	dB	30 dB
Isolation Non-Adjacent Channels:	Min	dB	45 dB
Channel Passband Ripple:		dB	≤0.5 dB
Polarization Dependent Loss (PDL):	Max	dB	<0.1 dB
Polarization Mode Dispersion (PMD):	Max	ps	< 0.1 ps
Directivity:	Min	dB	>50 dB
Return Loss:	Min	dB	>45 dB
Maximum Power Handling:	Max	mW	500mW = 26.98dBm maximum power pass
Connectors:			LC/UPC or customer specified
Operating Temperature:		(℃)	-5~+70 (℃)
Storage Temperature:		(℃)	-40~+85 (℃)
Dimensions (W x H x D):			19" Rack Mount,
Material			powder-coated metal enclosure
Protection Class:			IP25 - Water, Dust resistant
Compliance:			ITU-T G.694.2, CE, RoHS, IP25
Installation accessories:			Complete installation accessories included

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