



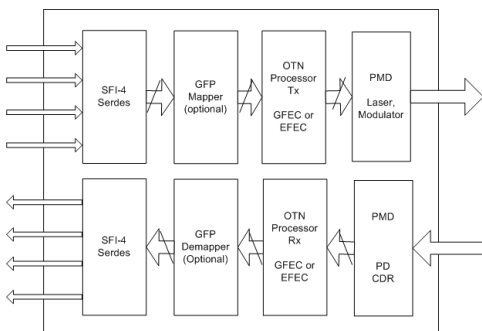
OTN 300-pin MSA Compliant DWDM 11.1Gb/s Transponder with Integrated G.709, FEC and EDC



Description

Menara Networks OTN 300-pin DWDM transponder combines carrier grade OTN G.709 and FEC performance into a 300-pin MSA compliant package. OTN 300-pin is the only industry 300-pin MSA that can transparently carry a native 10G LAN PHY, SONET/SDH and Fibre Channel payload with a carrier grade DWDM Optical Transport Network (OTN) interface without the need for bandwidth limitation. OTN 300-pin offers G.709 compliant Digital Wrapper, Enhanced Forward Error Correction (FEC) and Electrical Dispersion Compensation (EDC) for advanced optical performance and management functions superior to those found in DWDM Transponder systems. OTN 300-pin supports full C or L band tunability and is designed to interoperate with any Open DWDM line system that support 50GHz spaced wavelengths per the ITU-T grid, thus offering complete and cost effective DWDM transport for SONET/SDH and Ethernet applications.

OTN 300-pin G.709 digital wrapper overhead and FEC functions are handled by the OTN Processor, which is integrated into the 300-pin module. The OTN Processor provides Operations Administration and Management (OAM) functions with G.709 alarms and Performance Management statistics.



Management

Management of OTN 300-pin is provided via the 300-pin MSA I²C interface, which supports digital diagnostic monitoring, alarms and loop backs to include G.709 and FEC management registers. Routers and Switches can reap the performance gains of FEC without changes to the existing I²C interface in a management Transparent Mode of operation, in which OTN 300-pin activates the G.709 Digital Wrapper and FEC coding without the need for I²C provisioning.

Applications

- Access, Metro and Regional Carrier Ethernet DWDM Networks
- MSPPs, OXCs
- Long Haul DWDM Transport Networks

Features

- Compliant with 300-pin MSA
- Integrated OTN G.709 Digital Wrapper
- >6dB and 8.6dB selectable Net Coding Gain FEC for superior optical performance
- Multi-protocol and bit rate support for 10GE, OC-192/STM-64, OTN and Fibre Channel
- Adaptive Receiver Decision Threshold Control for improved OSNR range
- Fully transparent 10G LAN PHY OTU2e at 11.09 Gbps
- GFP Mapper for 10GE OTN over 10.709Gbps
- ITU-T Full C or L band Tunable 50GHz Laser
- True link BER reporting and Integrated 10 Gbps BERT for test set free link turn-up
- OTN Digital diagnostics and alarm reporting
- Integrated Electrical Dispersion Compensation (EDC) with 80% wider dispersion window
- Software Download over I²C
- SBS Suppression

OTN 300-pin MSA Compliant DWDM 10Gb/s Transceiver with Integrated G.709 and FEC

Transceiver Optical Specifications (G.709 and FEC Enabled)

Parameter	Symbol	Min	Typical	Max	Units
Host Native Nominal Bit Rate		9.9533 (SONET/SDH) 10.3125 (LAN PHY) 10.5188 (10G Fibre Channel)			Gbps
DWDM Line Interface Bit Rate		10.7092 (OTU2) 11.0957 (OTU2e LAN PHY) 11.3176 (OTU2 10G Fibre Ch)			Gbps
OTN Interface Bit Rate Deviation		+/- 20			ppm
DWDM Wavelength Range	λ_{WDM}	1528.77	-	1563.05	nm
Channel Spacing	$f_{SPACING}$	50			GHz
Laser Tuning Range	f_{TUNE}	Full C or L band			
Wavelength Accuracy (End of Life)	$\Delta\lambda_{EOL}$	-25	-	+25	pm
Extinction Ratio	ER	11			dB
Side Mode Suppression Ratio	SMSR	35	-	-	dB
Average Output Power	P_{OUT}	+4	-	+7	dBm
Average Output Power (Laser off)	P_{DIS}	-40	-	-	dBm
Receiver Operating Range ¹					
0ps/nm Dispersion	P_{IN}	-28	-	-5	dBm
+1600ps/nm Dispersion		-25	-	-8	dBm
OSNR Requirement 0 ps/nm	$OSNR_{MIN}$	12	-	-	dB/ 0.1nm
Jitter Compliance	-	802.3ae/GR-253i3			
Operating Case Temperature	T_C	0	-	70	°C
Storage Temperature	T_{stg}	-40	-	85	°C



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Preliminary Data Sheet