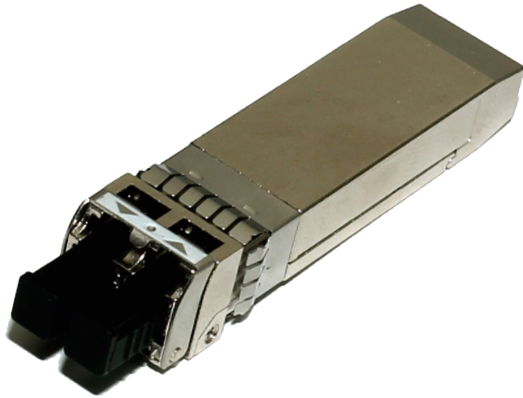




1.25G to 2.67Gbps SFP Transceiver

160km, DWDM Hyper Reach

P/N AHR6A0x-DWyy (160km ZX)



Description

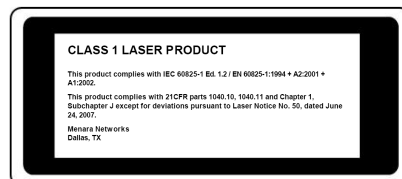
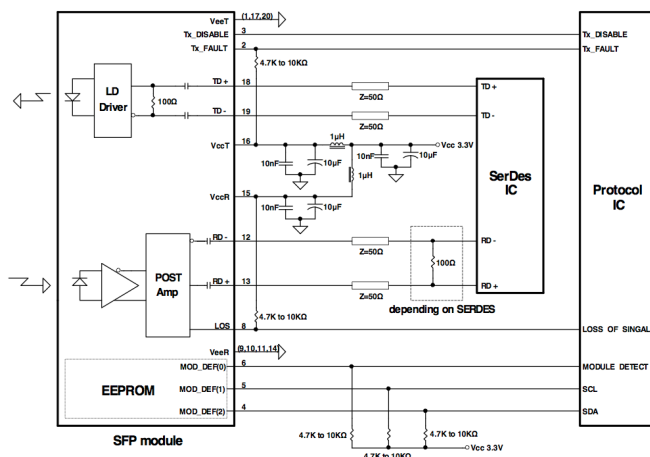
Menara Networks' AHR6A00-DWxx hyper reach transceivers are designed for use in 1Gbps, OC-48 and OTU-1 DWDM 100GHz links up to 160km over single mode fiber. The SFP module supports IEEE 802.3ae 1000BASE-(E)ZX applications along with SONET OC-48 LR-2 and Fiber Channel 1x SM-LC-L FC-PI applications for Ethernet Switches or IP Router optical interfaces. Digital Optical Monitoring interfaces are provided via the SFP SFF-8472 standards compliant I²C interface.

Applications

- 160km GbE, OC-48 or OTU-1 DWDM switch transmission interconnection
- Long distance, multi-channel Ethernet Switch or IP Router bandwidth expansion

Features

- Hot-pluggable SFP footprint
- Up to 2.67Gbps bit rates
- 100GHz DWDM high output transmitter supporting 47 DWDM channels
- APD receiver for greater range (160km)
- Single 3.3V power supply
- Power dissipation < 1.5W
- 0°C to +70°C and -40°C to +85°C Temperature Ranges
- Duplex LC fiber connectors
- Full Digital Optical Monitoring
- Metal enclosure for lower EMI
- Complies with RoHS directive (2002/95/EC)
- Compliant with SFP MSA SFF-8472 and SFF-8074
- Laser Class 1 IEC/CDRH compliant
- Links of 160 km with 9/125 μm single mode fiber (SMF) of maximum interconnect distances



Transmitter E-O Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Support data rate	-	1.15	-	2.67	Gb/s	
Center Wavelength (100GHz)	λ	1528.77	to	1565.50	nm	
Spectral Width (RMS)	$\Delta\lambda$	-	-	0.3	nm	
Wavelength Accuracy	$\Delta\lambda_{EOL}$	-100	-	100	pm	
Side Mode Suppression Ratio	SMSR	30	-	-	dB	
Average Optical Output Power	P _o	+3	-	+7	dBm	
Extinction Ratio	E _r	8.2	-	-	dB	
Optical Rise/Fall Time	T _r /T _f	-	-	160	ps	
Output Eye Diagram	Compliant with SFP MSA					

Receiver O-E Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Note
Support data rate		1.15	-	2.67	Gb/s	
Operating Wavelength		1520	-	1570	nm	
Receiver Sensitivity 1GE	Sen ₁	-	-	-31	dBm	1
Receiver Sensitivity OC-48	Sen ₂	-	-	-28	dBm	1
Receiver Sensitivity OC-48, 20dB OSNR	Sen _{OSNR}	-	-	-24	dBm	1
Saturation	P _{sat}	-8	-	-	dBm	
Receiver Optical Return Loss		-	-	-27	dB	
LOS Asserted	LOS _A	-40	-	-	dBm	
LOS Deassert	LOS _D	-	-	-28	dBm	
LOS Hysteresis		0.5		5.0	dB	

Notes:

1. Measured with a PRBS 2²³-1 at 10⁻¹² BER

Ordering Information

Part Number	ROHS Compliant	Operating Case Temperature
AHR6A0y-DWxx	ROHS-6	0 ~ +70°C
AHR6A1y-DWxx		0 ~ +85°C
AHR6A2y-DWxx		-40 ~ +85°C

xx = DWDM Wavelength. See table below for details.

y = Compatibility; J = Juniper, A = AlcatelLucent, C = Cisco, O = Cisco ONS, N = Ciena, F or 9 = Fujitsu

Freq (THz)	Wave (nm)	ITU Ch	Freq (THz)	Wave (nm)	ITU Ch	Freq (THz)	Wave (nm)	ITU Ch
196.10	1528.77	61	194.60	1540.56	46	193.10	1552.52	31
196.00	1529.55	60	194.50	1541.35	45	193.00	1553.33	30
195.90	1530.33	59	194.40	1542.14	44	192.90	1554.13	29
195.80	1531.12	58	194.30	1542.94	43	192.80	1554.94	28
195.70	1531.90	57	194.20	1543.73	42	192.70	1555.75	27
195.60	1532.68	56	194.10	1544.53	41	192.60	1556.55	26
195.50	1533.47	55	194.00	1545.32	40	192.50	1557.36	25
195.40	1534.25	54	193.90	1546.12	39	192.40	1558.17	24
195.30	1535.04	53	193.80	1546.92	38	192.30	1558.98	23
195.20	1535.82	52	193.70	1547.72	37	192.20	1559.79	22
195.10	1536.61	51	193.60	1548.51	36	192.10	1560.61	21
195.00	1537.40	50	193.50	1549.32	35	192.00	1561.42	20
194.90	1538.19	49	193.40	1550.12	34	191.90	1562.23	19
194.80	1538.98	48	193.30	1550.92	33	191.80	1563.05	18
194.70	1539.77	47	193.20	1551.72	32	191.70	1563.86	17