

SFP-1GB-DW6163-120-AV-AO

ADVA® Compatible TAA 1000Base-DWDM SFP Transceiver 100GHz (SMF, 1528.77nm to 1527.22nm, 120km, LC, DOM)

Features:

- Up to 1.25Gbps Bit-Rate Over 120km ITU-T G.652 Single-Mode Fiber
- Supports Digital Diagnostic Interface and Serial ID Functionality
- C-Band DWDM 4-Channel Tunable Transmitter (Cooled DML) and APD TIA Receiver
- LC/UPC Duplex Optical Connector Interface and SFF-8432 for Mechanical Interface
- Single 3.3V Power Supply
- SFF-8472 Compliant
- Operating Temperature: 0 to 70 Celsius
- Hot-Pluggable
- RoHS Compliant and Lead-Free



Applications:

- Access, Metro and Enterprise
- Gigabit Ethernet over DWDM

Product Description

This ADVA® compatible SFP transceiver provides 1000Base-DWDM throughput up to 120km over single-mode fiber (SMF) using a wavelength of 1528.77nm to 1527.22nm via an LC connector. It can operate at temperatures between 0 and 70C. Our transceiver is built to meet or exceed OEM specifications and is guaranteed to be 100% compatible with ADVA®. It has been programmed, uniquely serialized, and tested for data-traffic and application to ensure that it will initialize and perform identically. All of our transceivers comply with Multi-Source Agreement (MSA) standards to provide seamless network integration. Additional product features include Digital Optical Monitoring (DOM) support which allows access to real-time operating parameters. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

AddOn's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S.-made or designated country end products."



DWDM Wavelength Table (Ref. ITU-T G.694.1 Wavelength)

Channel Number	Frequency [THz]	Wavelength [nm]	Notes
16	191.60	1564.679	Default Ch at Factory Set
17	191.70	1563.863	
18	191.80	1563.047	
19	191.90	1562.233	
61	196.10	1528.773	Default Ch at Factory Set
62	192.20	1527.994	
63	196.30	1527.213	

Operating Conditions

Parameter	Symbol	Min.	Max.	Unit	Notes
Operating Case Temperature	Tc	0	70	°C	1
Module Supply Voltage	VccT, VccR	3.135	3.465	V	
Total Power Consumption	PC		1.5	W	2

Notes:

1. Case, with airflows.
2. @3.3V.

Electrical Characteristics

Parameter		Symbol	Min.	Typ.	Max.	Unit	Notes
Data Rate		DR			1.25	Gbps	
Transmitter							
Differential Input Voltage		VINp-p	150		1000	mVppd	1
Differential Input Impedance		ZIN	90	100	110	Ω	
Tx Disable	Disable	VIH	2		Vcc+0.3	V	
	Enable	VIL	-0.3		0.8	V	
Tx Fault	Fault	VOH	2.0		Vcc+0.3	V	
	Normal	VOL	-0.3		0.4	V	
Receiver							
Differential Output Voltage		VOUtp-p	450		800	mVppd	1
Differential Output Impedance		ZOUT	90	100	110	Ω	
Rx_LOS	LOS Assert	LOSA	2		Vcc+0.3	V	
	LOS De-Assert	LOSD	-0.3		0.4	V	

Notes:

1. AC coupled.

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter						
Optical Peak Wavelength	λ_P	1527.216		1528.773	nm	
Optical Center Frequency	f _C	196.1		196.3	THz	
Center Frequency Spacing		100			GHz	
Wavelength Accuracy	λ_{EOL}	-100		100	pm	
Side-Mode Suppression Ratio	SMSR	30			dB	
Average Optical Power	PAVG	0.0		6.0	dBm	1
Transmitter Disable Power	POFF			-35	dBm	2
Extinction Ratio	ER	7.0			dB	3
Receiver						
Operating Wavelength	λ_O	1260		1620	nm	
Receiver Sensitivity	SBtoB			-31.0	dBm	4
Optical Overload	OL	-8.0			dBm	
Loss of Signal - Assert	PA	-40.0			dBm	
Loss of Signal – De-Assert	PD			-31.0	dBm	
Loss of Signal Hysteresis	PD-PA	0.5		5.0	dB	

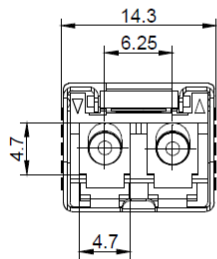
Notes:

1. Normal operation.
2. Tx_Disable is high.
3. PRBS 2⁷-1.
4. BtoB, PRBS 2⁷-1, ER 7.0dB, BER 1×10⁻¹², @ 1.25Gbps.

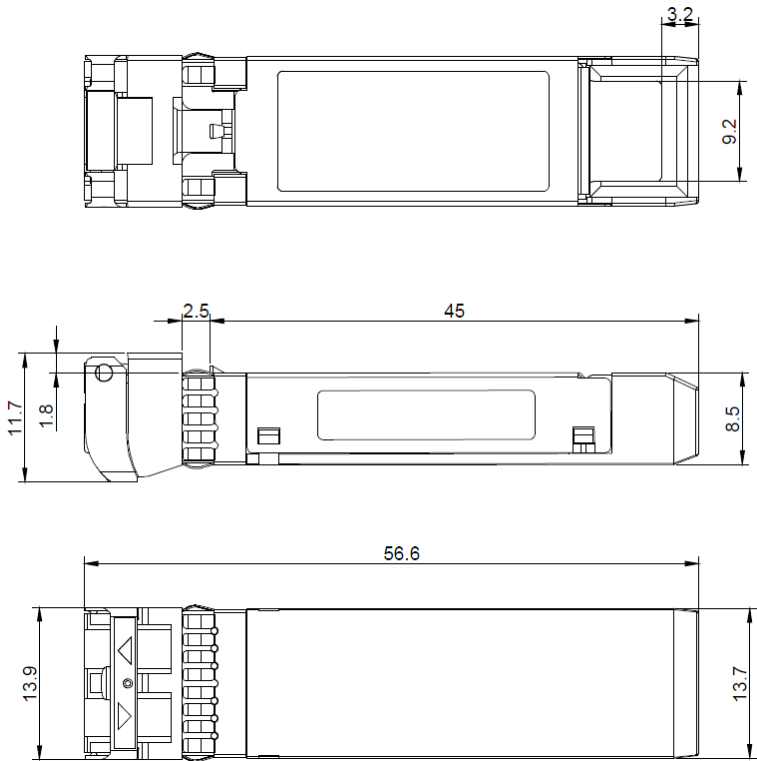
DDM Range and Information

Parameter	Symbol	Range	Units	Accuracy	Calibration
Temperature	TDDM	0 to +70	°C	±3°C	Internal
Voltage	VDDM	3.145 to 3.465	V	±3%	Internal
Bias Current	BDDM	0 to 90	mA	±10%	Internal
Tx Output Power	ODDM	0 to 6	dBm	±3dB	Internal
Rx Input Power	IDDM	-31 to -8	dBm	±3dB	Internal

Mechanical Specifications



Unit:mm



About AddOn Networks

In 1999, AddOn Networks entered the market with a single product. Our founders fulfilled a severe shortage for compatible, cost-effective optical transceivers that compete at the same performance levels as leading OEM manufacturers. Adhering to the idea of redefining service and product quality not previously had in the fiber optic networking industry, AddOn invested resources in solution design, production, fulfillment, and global support.

Combining one of the most extensive and stringent testing processes in the industry, an exceptional free tech support center, and a consistent roll-out of innovative technologies, AddOn has continually set industry standards of quality and reliability throughout its history.

Reliability is the cornerstone of any optical fiber network and is ingrained in AddOn's DNA. It has played a key role in nurturing the long-term relationships developed over the years with customers. AddOn remains committed to exceeding industry standards with certifications ranging from NEBS Level 3 to ISO 9001:2015 with every new development while maintaining the signature reliability of its products.



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