ADD-QSFP28-EDFA-BOOST-17DB

QSFP28 Pluggable EDFA Booster amplifier for DWDM, Duplex LC, Input power -20dBm to 0dBm, Nominal gain +17dB

Features:

- SFF-8661 compliant
- QSFP28 standard
- Narrowband amplification over C-band with built-in control circuits
- Low power consumption
- Up to 17dBm adjustable output power
- Duplex LC/UPC receptacle
- Commercial Temperature: 0°C to 70°C
- Hot pluggable amplifier
- Telcordia GR-1312-CORE qualified
- RoHS compliant and lead-free

Product Description:

This QSFP28 pluggable EDFA booster amplifier offers a optical input range and provides a +17dB nominal gain to a C-Band DWDM link. The pluggable EDFA connects to a composite DWDM link via an LC connector. It is configured for Automatic Gain Control (AGC) by default and can be further configured via CLI prompt in supported hosts or by our coding and tuning system.

General Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply Voltage	Vcc	3.15	3.3	3.45	V	
Storage Temperature	Tstg	-40		85	°C	
Operating Case Temperature	Tc	0		70	°C	
Storage Humidity	RH	0		95	%	
Operating Humidity	RH	5		90	%	
Power Consumption				2.5	W	1

Notes:

1. Steady state.

Electrical Characteristics

Parameter	Min.	Typ.	Max.	Unit	Notes
Input Power Monitor Accuracy	-0.5		0.5	dB	1
Output Power Monitor Accuracy	-0.5		0.5	dB	2
Gain Accuracy	-0.5		0.5	dB	

Notes:

1. @-23~+3dBm.
2. @-10~+20dBm.

Optical Characteristics

Parameter	Min.	Typ.	Max.	Unit	Notes
Wavelength Range	1529		1567	nm	1
	1545.32		1557.36	nm	2
Input Power Range	-20		0	dBm	
Saturated Output Power		17		dBm	
Output Power Variation	-0.5		0.5	dB	
Nominal Gain		17		dB	
Gain Range	9		24	dB	
Gain Flatness		3.5	5.0	dB	3
		1	1.5	dB	4
Output Monitor Range	-10		20	dBm	
Noise Figure		5.5	6.5	dB	5
Input/Output Port Return Loss	40			dB	
PDG			0.3	dB	
PMD			0.5	ps	
Operation Mode	AGC/APC				
Input LOS Threshold		-23		dBm	
LOS Hysteresis		1		dB	

Notes:

1. 48 channels.
2. 16 channels.
3. 48 channels @ nominal gain.
4. 16 channels @ nominal gain.
5. Nominal gain @ Pin=-10dBm.

Pin Descriptions

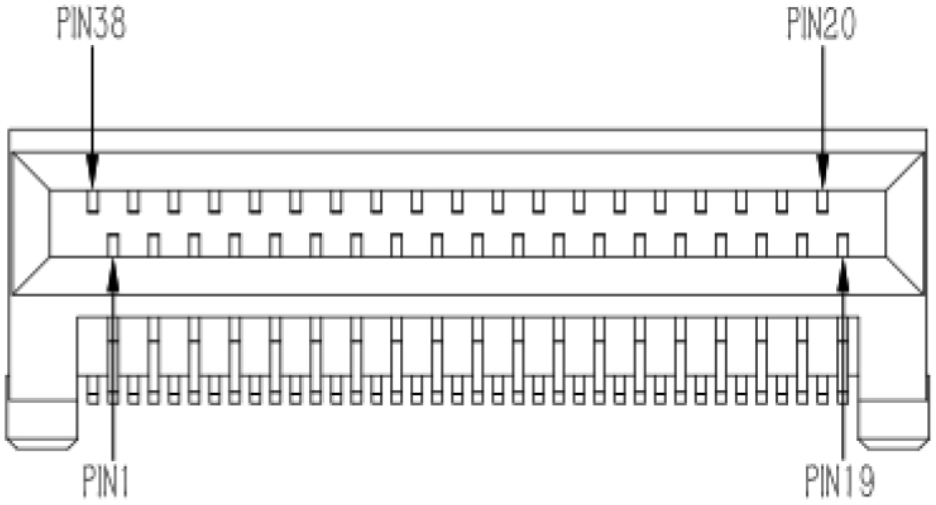
Pin	Logic	Symbol	Name/Description	Plug Sequence	Notes
1		GND	Module Ground.	1	1
2		Reserved	Not connected within the module.	3	
3		Reserved	Not connected within the module.	3	
4		GND	Module Ground.	1	
5		Reserved	Not connected within the module.	3	
6		Reserved	Not connected within the module.	3	
7		GND	Module Ground.	1	
8	LVTTL-I	ModSelL	Module Select.	3	
9	LVTTL-I	ResetL	Module Reset. Internal pull-up 10kΩ.	3	
10		Vcc3	+3.3V Power Supply.	2	
11	OC-I	SCL	I2C Serial Interface Clock.	3	3
12	OC-I/O	SDA	I2C Serial Interface Data.	3	3
13		GND	Module Ground.	1	
14		Reserved	Not connected within the module.	3	
15		Reserved	Not connected within the module.	3	
16		GND	Module Ground.	1	
17		Reserved	Not connected within the module.	3	
18		Reserved	Not connected within the module.	3	
19		GND	Module Ground.	1	
20		GND	Module Ground.	1	
21		Reserved	Not connected within the module.	3	
22		Reserved	Not connected within the module.	3	
23		GND	Module Ground.	1	
24		Reserved	Not connected within the module.	3	
25		Reserved	Not connected within the module.	3	
26		GND	Module Ground.	1	
27	LVTTL-O	ModPrsL	Module Present. Internally connected to the GND.	3	
28	LVTTL-O	IntL/INLOS	Interrupt. Optionally configurable as INLOS, EDFA loss of input signal.	3	
29		Vcc3	+3.3V Power Supply.	2	
30		Vcc3	+3.3V Power Supply.	2	
31	LVTTL-I	LPMode/TxDis	Low-Power Mode. Optionally configurable as TxDis via the management interface (SFF-8636).	3	
32		GND	Module Ground.	1	
33		Reserved	Not connected within the module.	3	
34		Reserved	Not connected within the module.	3	
35		GND	Module Ground.	1	

36		Reserved	Not connected within the module.	3	
37		Reserved	Not connected within the module.	3	
38		GND	Module Ground.	1	

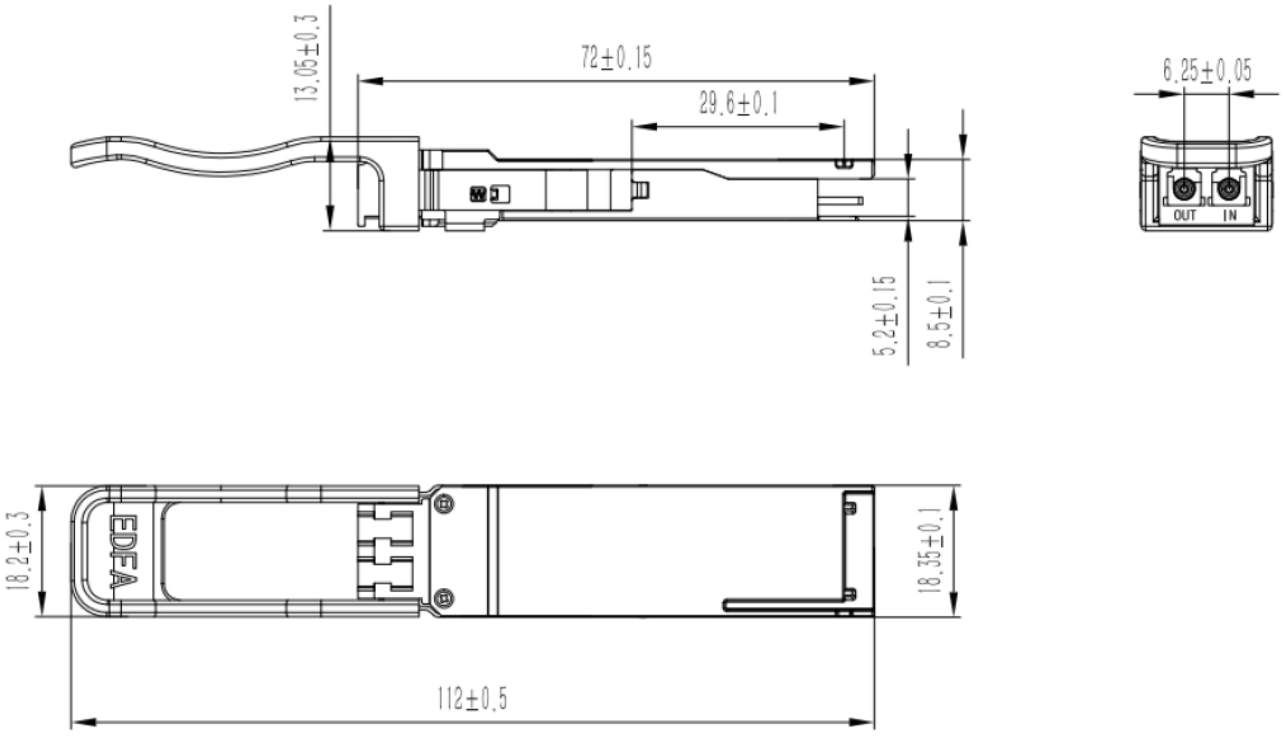
Notes:

1. GND is the symbol for signal and supply (power) common for the module. All are common within the module and all module voltages are referenced to this potential unless otherwise noted. Connect these directly to the host board signal-common ground plane.
2. An alarm condition is present when Pin 4 changes from the normal condition of LVTTL “high” to a condition LVTTL “low.” The alarm condition can be for Output Power, Pump Laser Bias, Case Temperature, and/or Power Supply Voltage. Read specific alarm conditions through the I2C interface.
3. Pulled up in the module to a voltage between 3.15V and 3.45V.
4. Voltages applied to this pin do not impact operation or performance of the module.
5. Connected in series with a capacitor (0.1uF) and resistor (51Ω) to the GND in the module.

QSFP28 Host Socket Connector



Mechanical Specifications



Dimensions are in 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 in engrained 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 from ranging from NEBS Level 3 to ISO 9001:2005 with every new development while maintaining the signature reliability of its products.

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