

WAS-110 XGSPON SFP+ SFU
Product Specification

Ver. 0.3

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AZORES CONFIDENTIAL and DRAFT

■ Summary

Azores Networks' WAS-110 XGSPON SFP+ SFU is an integrated SFP+ ONT, complying with the ITU-T G.9807.1 standard for 10-Gigabit-Capable Symmetric Passive Optical Network (XGSPON). This transceiver provides a pluggable SC/APC SFP+ compliant interface to upgrade existing devices for FTTH services. WAS-110 can also support IEEE1588v2, and Y.1731 for mobile backhaul application. WAS-110 is best suited for FTTH residential, mobile backhaul and network switch/router/MDU applications.

■ Highlights

- ❖ ITU-T G.9807.1 XGSPON uplink with SC/APC connector
- ❖ TOD and 1PPS synchronization interface for IEEE1588v2
- ❖ Symmetric Data Rate: Tx: 9.95328Gbps ; Rx: 9.95328Gbps
- ❖ Operating case temperature options for consumer and industrial applications

■ General Specifications

Azores Model	WAS-110
ONT Type	XGSPON SFP+ SFU
Main SoC	Intel PRX126
Uplink	XGSPON
Downlink	Gold finger connector
Operating Temperature	C-Temp (0-70C), I-Temp (-40-85), both case temperatures

■ Performance Specifications

Absolute Maximum Ratings

Parameters	Symbol	Min.	Typ.	Max.	Unit
Storage Temperature	Ts	-40	--	+85	°C
Supply Voltage	Vcc_Rx	-0.3	--	+4.2	V
	Vcc_Tx	-0.3	--	Vcc_Rx +1	V
Relative Humidity (non-condensing)	RH	5	--	95	%

General Characteristics

Parameters	Symbol	Min.	Typ.	Max.	Unit
Case Operating Temperature	Tc	0		+70	°C
Operating Voltage	Vcc	3.14	3.3	3.46	V
Supply current (Total Current)	ITotal	--	--	900	mA
Power Dissipation	PD	--	--	3	W
Bit Rate(Tx)	BR_Tx		9.95328		Gbps
Bit Rate(Rx)	BR_Rx		9.95328		Gbps

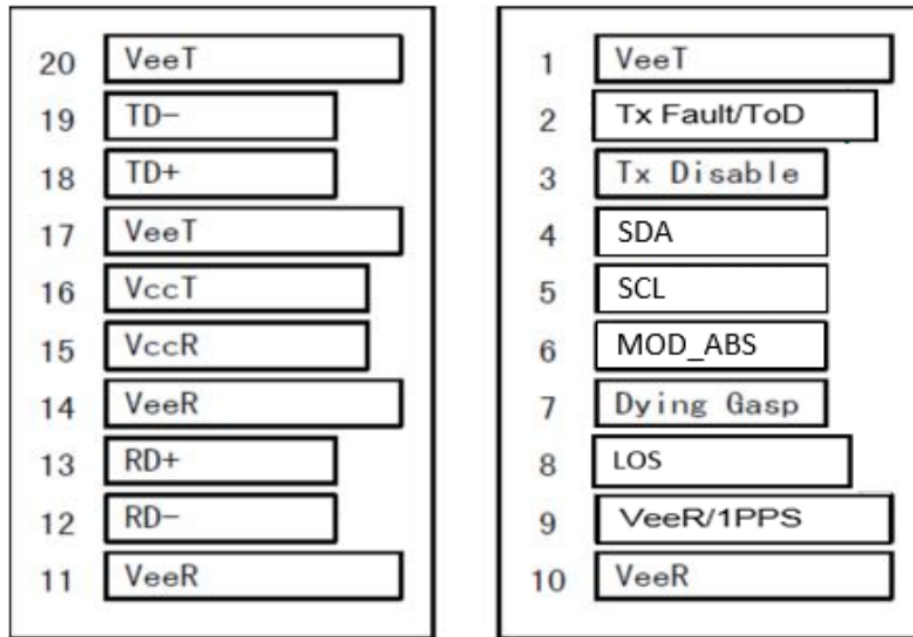
Transmitter Specifications

Parameters	Symbol	Min.	Typ.	Max.	Unit	Note
Differential Data Input Voltage	$V_{IN,P-P}$	200	--	1000	mVpp	
Input Differential Impedance	Z_{IN}	--	100	--	Ω	
Tx Disable Assert Time	T_{DIS_A}	--	--	10	ms	
Tx Disable De-assert Time	T_{DIS_D}	--	--	1	ms	
Center Wavelength Range	λ_c	1260	1270	1280	nm	
Average Output Power	P_{OUT}	4	--	9	dBm	
Average Output Power (Laser Off)	$P_{OUT-OFF}$	--	--	-45	dBm	
Side Mode Suppression Ratio	SMSR	30	--	--	dB	
Spectral Width (-20dB)	$\Delta\lambda_{20}$	--	--	1	nm	
Extinction Ratio	ER	6	--	--	dB	
Transmitter Output Eye	Compliant with 802.3av					

Receiver Specifications

Parameters	Symbol	Min.	Typ.	Max.	Unit	Note
Differential Output Voltage		500	--	1000	mV	
Signal Detect Output HIGH Voltage	V_{SD_High}	2	--	$V_{CC}+0.3$	V	
Signal Detect Output LOW Voltage	V_{SD_Low}	0	--	0.8	V	
Data Output Rise and Fall Time	T_R/T_F	--	160	--	ps	
Center Wavelength Range	λ_c	1480	1490	1500	nm	
Overload		-9	--	--	dBm	
Sensitivity	Sen	--	--	-29	dBm	

■ Pin Definitions and Description

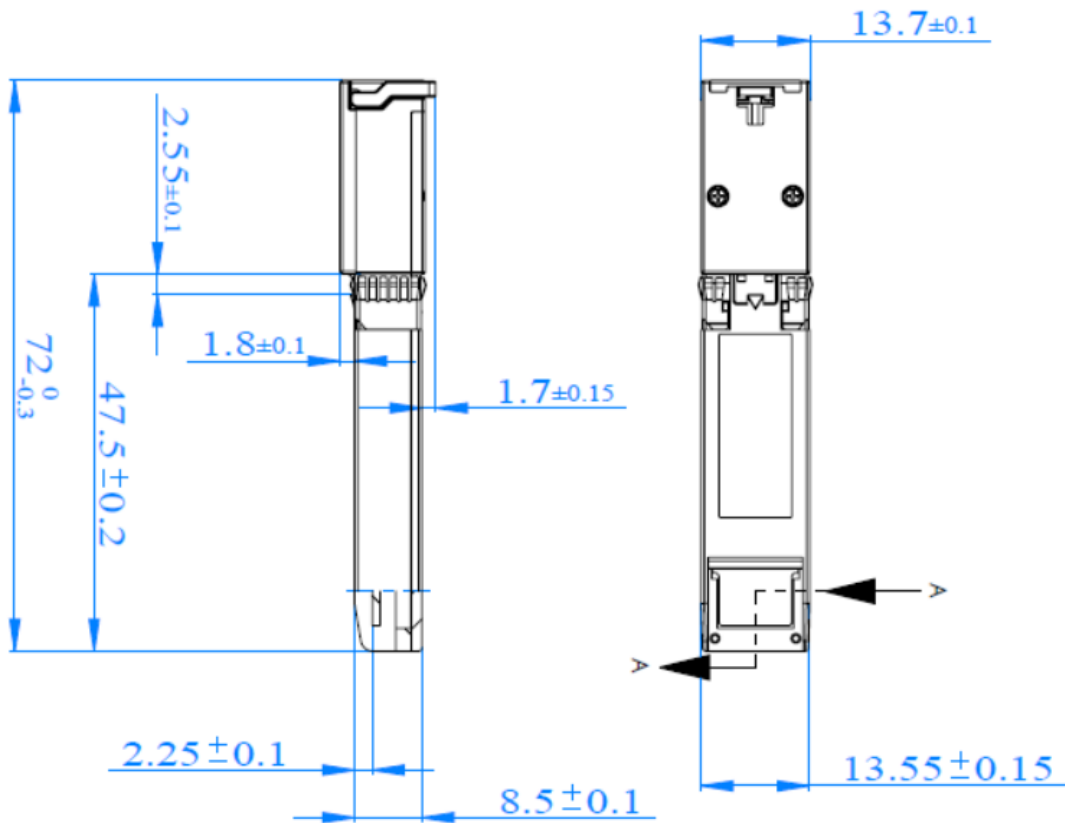


Pin No.	Pin Name	Logic	Description	Note
1	VeeT	NA	Module Transmitter Ground	
2	Tx Fault	LVTTTL-O	Transmitter fault indication	
3	Tx Disable	LVTTTL-I	Transmitter Shut-off	
4	SDA	LVTTTL-I/O	2-Wire Serial Interface Data Line (MOD-DEF2)	
5	SCL	LVTTTL-I	2-Wire Serial Interface Clock (MOD-DEF1)	
6	MOD_ABS	NA	Module Absent, connected to VeeT or VeeR in the module	
7	DYING GASP	LVTTTL-I	Dying Gasp message indicator (default off)	
8	LOS	LVTTTL-O	Loss of Signal	
9	VeeR/1PPS	NA/1PPS	Module Receiver Ground	
10	VeeR	NA	Module Receiver Ground	
11	VeeR	NA	Module Receiver Ground	
12	RXD-	CML-O	Receiver Inverted Data Output	
13	RXD+	CML-O	Receiver Non-Inverted Data Output	
14	VeeR	NA	Module Receiver Ground	
15	VccR	NA	Module Receiver 3.3V Supply	
16	VccT	NA	Module Transmitter 3.3V Supply	
17	VeeT	NA	Module Transmitter Ground	
18	TXD+	CML-I	Transmitter Non-Inverted Data Input, CML, 100ohm differential impedance	
19	TXD-	CML-I	Transmitter Inverted Data Input, CML, 100ohm differential impedance	
20	VeeT	NA	Module Transmitter Ground	

■ Order Information

Model	Description
WAS-110	XGS SFP+ SFU, C-Temp (0 to 70°C operating temperature)
WAS-110I	XGS SFP+ SFU, I-Temp (-40 to 85°C operating temperature)

■ Mechanical



■ Contact

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