10Gbps XGSPON ONU Stick SFP+ Transceiver with MAC

CLXGSP-ONU-STK

Product Features:

- XGSPON ONU data links TX 9.95Gbps / RX 9.95Gbps with MAC
- SC/APC receptacle
- Single 3.3V power supply
- Hot-pluggable capability
- TX 1270nm DFB laser and RX 1577nm APD receiver
- Support 20km transmission distance with SMF
- CML compatible data input/output interface
- Low power dissipation < 2.5W
- Low EMI and excellent ESD protection
- Digital diagnostic monitor interface
- RoHS-6 compliance
- Case temperature range: commercial 0~70°C
- 256 GEM/XGEM ports, 64 T-CONTs or 16 LLIDs
- Carrier grade QoS engine
- Advanced loopback and diagnostic capabilities
- Supports Synchronous Ethernet (SyncE)

Applications:

- Residential home gateway
- Network switch/router, VDSL MDU, and G.fast DPU
- Mobile backhaul

Functional Characteristics

The following tables list the performance specifications for the various functional blocks of the module.

Table 1 – Optical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Transmitter						
Centre Wavelength	λc	1260	1270	1280	nm	
Spectral Width (-20dB)	σ			1	nm	
Average Output Power	Pout	4		9	dBm	
Extinction Ratio	ER	6			dB	
Side Mode Suppression Ratio	SMSR	30			dB	
Average Launch Power of OFF Transmitter	Poff			-40	dBm	

Eye Diagram	Compliant With IEEE 802.3av					
Receiver						
Centre Wavelength	λc	1570	1577	1585	nm	
Receiver Sensitivity	PIN			-29	dBm	
Receiver Overload	Pmax	-8			dBm	
LOS De-Assert	LOSD			-29	dBm	
LOS Assert	LOSA	-40			dBm	
LOS Hysteresis		0.5		4.5	dB	

Table 2 – Electrical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Recommended Operating Conditions						
Operating Case Temperature	TC	0		70	℃	
Power Supply Voltage	VCC	3.15	3.3	3.45	V	
Power Supply Current	ICC			650	mA	
Data Rate			9.95		Gbps	
Max Link Length on 9/125μm SMF	Lmax			20	km	
Electrical Characteristics						
Input Differential Impedance	Zin	90	100	110	Ω	
Data Input Swing Differential	Vin	200		1000	mV	
Tx-Dis Disable	Vd	2.0		Vcc	V	
Tx-Dis Enable	Ven	0		0.8	V	
Data Output Swing Differential	Vout	250		1200	mV	
Rx-LOS Fault	Vlf	2.0		Vcc Host	V	
Rx-LOS Normal	Vln	0		0.8	V	
Output Rise and Fall Time	Tr/Tf	30			ps	

Ordering Information

Table 3 - Ordering Information

Part No.	Data Rate	DDM	Wave	Fiber Type	Dist.	Temp.	Optical Interface
CLXGSP-ONU-STK	9.95Gbps	Yes	1270nm/1577nm	SMF	20km	0~70℃	SC/APC

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