BroadStack Series - Cost-Effective Family of broadband ONT solutions for XGSPON/GPON

BROADSTACK OVERVIEW

BroadStack is a Cost-Effective Family of broadband ONT solutions for XGSPON/GPON to deliver triple-play services to the subscriber in Fiber-to-the-Home or Fiber-to-the-Premises application.

EN-iSFPGN-STK is GSPON ONT with MAC function mounted into a standard SFP package. This product integrates a bi-directional optical transceiver function and GPON MAC function. By being plugged into the customer premise equipment (CPE) with standard SFP port directly, it provides an asymmetric 1.244Gbps upstream / 2.488 Gbps downstream GPON uplink to the CPE without requiring separate power supply.
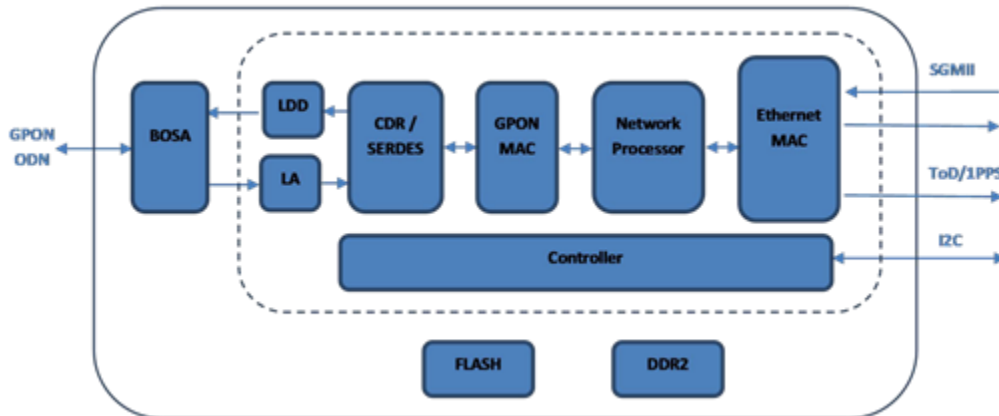
EN-iSFPGN-STK-xx Features

- Simplex SC/APC Connector, Integrated Diplexer Transceiver
- SFP MSA, digital diagnostics SFF-8472 Compliant
- Compliant to FSAN G.984.2 Specifications
- 1244 Mbps Tx, 2488 Mbps Rx Asymmetric Data Rate
- Operating case temperature: -40~85°C
- Subscriber location identifier （SLID）
- PON Link Status notification
- Dying Gasp notification
- Supports Time of Day and 1PPS interface
- Response the TX power shut-down command from OLT when OLT detect anomaly
- TC Layer GEM encapsulation mode
- OMCI support per ITU-T G.988
- 28 dB link budget; Class B+, 20 km reach
- Compliant to IEC-60825 Class 1 laser diode
- RoHS compliant

Ordering Information

Part Number	Description	Data Rate	Wavelength	Distance
EN-iSFPGN-STK-xx	GPON Stick Module, SFP transceiver with a built-in GPON ONU Class B+, Operating Temperature: Industrial Temperature (-40~85°C), DDM included, Simplex SC/APC Connector	TX:1.25Gbps RX:2.5Gbps	1310nm	20KM

Product Selection

xx: Refers to vendor compatibility
I: I refers to Industrial Temperature where applicable
Per example:
EN-SFP10G-LR-EZ refers to Commercial Temperature, and compatible with Evertz, EN-SFP10GIDL-JREX refers to Industrial Temperature, and compatible with Juniper EX Series
** Please note pricing is same for most of the NEMs including Cisco, Juniper, F5, Fortinet, except HP, Evertz. There is an additional charge

Optical Characteristics

Transmitter						
Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Center Wavelength Range	λC	1290	1310	1330	nm	
Average Output Power	P0UT	0.5	-	5	dBm	
Average Output Power (Laser Off)	P0UT-OFF	-	-	-40	dBm	
Side Mode Suppression Ratio	SMSR	3	-	-	dB	
Spectral Width (-20dB)	λ20	-	-	1	nm	
Extinction Ratio	ER	1	-	-	dB	1
Optical Rise and Fall Time(20%-80%)	TR/TF	-	-	250	ps	
Jitter Generation	JG	-	-	0.2	UI	2
Transmitter Output Eye	Compliant with G.984.2 Figure 3					
Receiver						
Center Wavelength Range	λC	1480	1490	1500	nm	
Overload		-	-	-	dBm	
Sensitivity	Sen	-28	-	-	dBm	3
Signal Detect Assertion Level	SDA	-	-	-29	dBm	
Signal Detect De-Assertion Level	SDD	-45	-	-	dBm	
Hysteresis	PSDA-SD	0.5	-	6	dB	
1310nm Tx to 1490nm Rx Crosstalk		-	-	-47	dB	
1555nm Rx to 1490nm Isolation		3	-	-	dB	
(1550-1560nm) Ext to 1490 Rx		34	-	-	dB	
Back Reflection @ 1310nm		-	-	-12	dB	
Back Reflection @ 1490nm		-	-	-27	dB	
Rx Reflectance		-	-	-20	dB	
1530nm to 1490nm Rx Isolation		7	-	-	dB	
1539nm to 1490nm Rx Isolation		2	-	-	dB	
1625nm to 1490nm Rx Isolation		2	-	-	dB	

Electrical Characteristics

Transmitter						
Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Differential Data Input Voltage	VIN,P-P	300	-	1000	mVpp	4
Input Differential Impedance	ZIN	-	100	-	Ω	5
Tx Burst Enable Time	TBURST_	-	-	12.8	ns	6
Tx Burst Disable Time	TBURST_	-	-	12.8	ns	6
Tx Disable Assert Time	TDIS_A	-	-	10	µs	
Tx Disable De-assert Time	TDIS_D	-	-	1	ms	
Receiver						
Differential Output Voltage		300	-	1200	mV	7
Signal Detect Output HIGH Voltage	VSD_High	2.4	-	-	V	8
Signal Detect Output LOW Voltage	VSD_Low	0	-	0.8	V	9
Data Output Rise and Fall Time	TR/TF	-	160	-	ps	

NOTICE:

E.C.I. Networks reserves the right to make changes to or discontinue any optical link product or service identified in this publication, without notice, to improve design and/or performance. Applications that are described herein for any of the optical link products are for illustrative purposes only.

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