



E.C.I.NETWORKS



Telecom Begins Here

# Passive Optical Network (PON) Solutions

Product Brochure, 2021



**E.C.I. NETWORKS INC.** BroadStack series delivers a comprehensive portfolio of Passive Optical Network (PON) solutions for the GPON, XGS-PON standards to satisfy a range of FTTx deployment scenarios, ensuring a seamless network transition to **10G and above**. Our high-quality optical transceivers, CE-WDM MUX, PLC splitters and fiber patch cables enable high-performance PON fiber networks for broadband applications. With speeds from **1.2Gbps to 40Gbps** we have the solution to fit different scenarios and the background knowledge around this technology.

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

## Standard Optical Transceivers

- Single fiber XGS-PON ONT/ONU Transceiver
- Single Fiber XGS-PON OLT SFP+ N1/N2
- Single fiber GPON ONT/ONU Transceiver
- Single Fiber GPON OLT B+/C+ SFP+ Transceiver
- Single Fiber XGSPON/GPON Combo OLT SFP+ Class B+ C-temp/I-temp



## SFU XGS-PON ONT

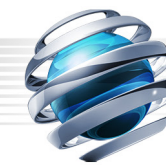
EN-XGSONT-1/10GT is the XGS-PON ONT unit equipped with ITU-T G.9807 compliant 10G Downstream and 10G Upstream XGS-PON interface.



## Intelligent Optical Transceivers with MAC

EN-XGSFPP-OMAC is XGSPON ONT with MAC function mounted into a standard SFP+ package. EN-XGSONT-SFP+ is a transceiver can plug directly into a commercially available Ethernet switch with SFP+ ports, 4G/5G base stations, or other enterprise solutions.

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

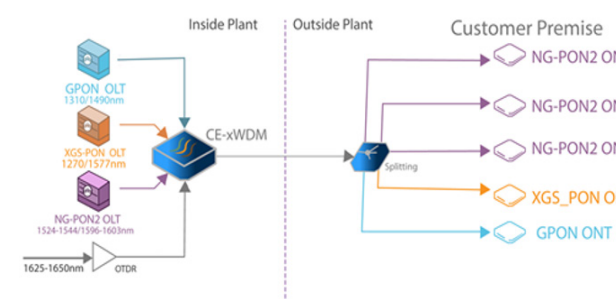


## BroadStack CE-WDM Migration & Coexistence of GPON with XGS-PON

In order to coexist with GPON networks, a Co-Existence WDM element (CE-WDM) is needed, replacing the legacy triplexer. Apart from the CE replacement, the ODN infrastructure remains unaffected. Although, current GPON (1310/1490 nm) and XGS-PON (1270/1577 nm) coexistence requires wavelength separation of signals assigned for different GPON ONTs, and XGS-PON ONTs, BroadStack CE-WDM device, low-cost WDM with Thin-film passive filters (TFF), can be used for that purpose.

### Features:

- CE-WDM solution for GPON, XGS-PON, NG-PON2, OTDR
- Allows gradual upgrade from GPON to 10 Gbps XGS-PON
- Supports symmetric DS/US data rates of up to 10/10 Gbps
- GR-1209-CORE and GR-1221-CORE compliant
- Different Connectors available LC/UPC, LC/APC, SC/UPC, SC/APC, ST, etc



### PARAMETERS

### GPON/XGPON/ NG-PON2/ OTDR

CENTER WAVELENGTH (NM)

1260-1660

Pass band (nm)

GPON 1290-1330& 1480-1500  
XGS-PON 1260-1280&1575-1581  
NG-PON2 1524-1544& 1596-1625  
OTDR 1640-1660

Insertion Loss(dB)

COM □ GPON ≤0.8  
COM □ XGS-PON ≤1.1  
COM □ NG-PON2 ≤1.2  
COM □ OTDR ≤1.4

Isolation(dB)

GPON@XGS-PON/NG-PON2 >40  
XGS-PON@GPON/NG-PON2 >40  
NG-PON2@XGS-PON/GPON >40  
OTDR >40

PDL(dB)

≤0.2

RL(dB)

>48

Directivity(dB)

>50

Fiber Type

SMF-28e or customer specified

Maximum Optical Power (mw)

300

Operating Temperature (□)

-10□70

Storage Temperature (□)

-40□85

BOX Package(mm)

ABS: 100\*80\*10

LGX Package(mm)

1U 130\*150\*28

19" Rack mount Package(mm)

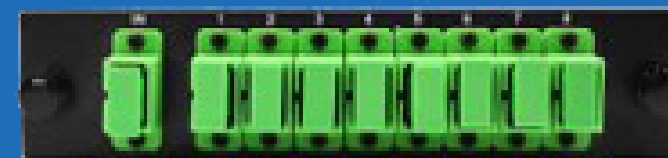
1U 19" Rackmount





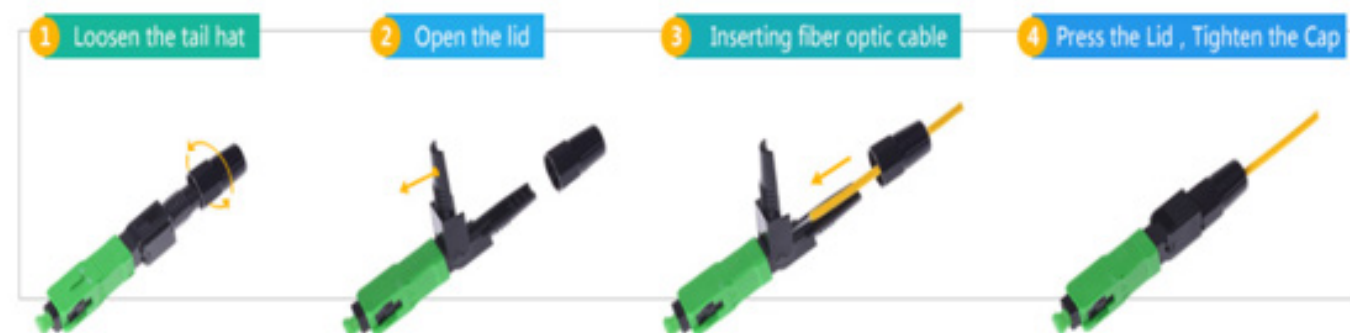
## PLC Splitters for GPON, XGS-PON, NG-PON2, FTTX

PLC splitter is a type of optical power management device that is to distribute optical signals from Central Office (CO) to multiple premise locations. It features small size, high reliability, wide operating wavelength range and good channel-to-channel uniformity, and is widely used in FTTx, PON, GPON, XGS-PON, and NG-PON networks to realize optical signal power splitting as a low-cost solution. E.C.I. NETWORKS INC. offers 1x32, 1x16, 1x8, 1x4 PLC Splitters in multiple packaging options 1RU, LGX Box, Fan-out, etc. All products meet GR-1209-CORE and GR-1221-CORE requirements.



## SC/APC Field Connector EN-FLDFC-SM-SCA

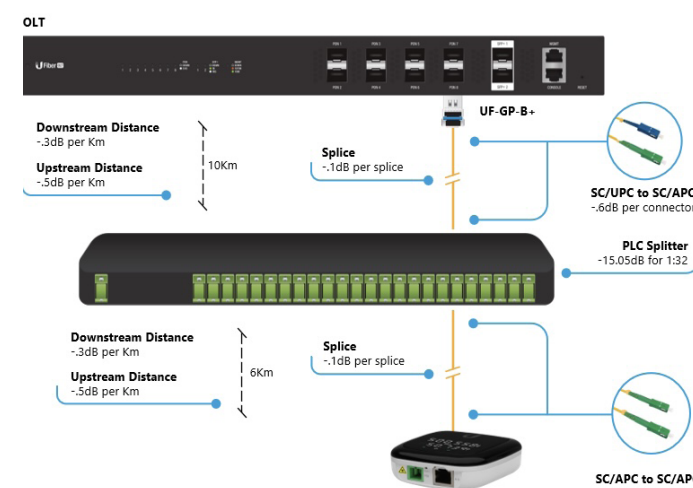
EN-FLDFC is a suitable solution for optical fiber field and FTTH applications. The SC/APC fast connector are factory pre-polished, field-installable connectors that completely eliminate the need for hand polishing in the field. Our Field Assembly Optical Connector series are now available in SC, LC, or FC variants, catering for 250um to 900um, and 2.0mm, 3.0mm diameter single mode and multimode fiber types, including Multi-mode 62.5/125um and Multi-mode 50/125um. The single-mode versions are available with SPC or APC ferrules.




Note: The fiber must be cut flat, otherwise the connector will be damaged.

## Features:

- Single mode with SC APC Connector
- Inside ferrule with fiber stuff and pre-polishing
- Field installable, quick connection, easy for operation
- No epoxy, no polishing, no adhesive, no electricity required
- High performance and high reliability
- Working environment of -40-85 C
- Low insertion <0.21 dB
- Average 500-1000 insertion and removal tests





E.C.I. Networks delivers the network optics solutions you need for tomorrow's Data Center, Access and Wireless Networks, designing innovative solutions to your engineering challenges in network connectivity.

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