



Genexis FiberTwist

PX2100-Series (AE/PtP)

Compact and high-speed network demarcation



Where GPON and Active Ethernet (AE) are starting to hit bandwidth limitations, 10G provides a solution. The well-known FiberTwist offers an easy Do-It-Yourself (DIY) upgrade path from to 10G Point-to-Point: increasing the end-user's bandwidth with a single twist.

With the FiberTwist product range, Genexis introduces a unique broadband connectivity solution that redefines size, ease of installation and flexibility for the distribution of fiber bandwidth throughout the entire home.

Key features

- Compact, fully managed network demarcation
- Patented FiberTwist twist-on interface that fits all FiberTwist FTUs and Bracket; enabling a trouble-free, real DIY end-user installation
- One 10GE LAN port to meet the higher speed demand of connected devices in the home
- Optional integrated CATV receiver
- Flexible management via i.a. TR-069 and CloudSight
- ITU-T K.21 Basic level (Surge Protection)
- Halogen-free PCB
- Recycled plastics
- Enhanced LED dimming

A perfect Match for every deployment scenario

The Genexis FiberTwist product family has been developed in such a way that it can be integrated into various deployment scenarios. Using products from the FiberTwist FTU family, the demarcation point can be extended to any desired location in the home, enabling easy access and installation of services.

Its small size (4.33 x 4.33 x 1.82 in) makes the FiberTwist a perfect fit in any environment, be it a living room, metering cabinet or basement.

The FiberTwist PX2100-Series is the perfect next step in an AE network to enable higher speeds in every deployment scenario.

Product features and specifications



Genexis FiberTwist PX2100-Series (AE/PtP)

General specifications

Dimensions (H x W x D)	4.33x4.33x1.81 in
Weight	
· PX2110	6.42 oz
· PX2120	7.48 oz
Operating temperature	32 - 113 °F
Storage temperature	-13 - 131 °F
Operating humidity	5% - 95%
Storage humidity	10% - 95%
Flame retardants	Halogen free
Power supply voltage	12 Vdc ± 5%

Power consumption (EU-CoC-BBE)

Model	Ready Mode	On Mode
PX2110	3.9 W	3.9 W
PX2120	5.5 W	5.5 W

Fiber (WAN) interface

Optics compliant with 10GBASE-BX-10U	
TX (upstream) power	-2.2...0.8 dBm
RX sensitivity	-15 dBm
TX wavelength (typical)	1270 nm
RX wavelength (typical)	1330 nm
Single mode fiber	ITU-T G.657.A2
Optical connector	SC/APC
Optical Range	Up to 10km
Digital Diagnostic Monitoring (DDM)	

LAN interfaces

- 1x 10GE: Compliant with 1000/2.5G/5G/10G BASE-T
 - IEEE 802.3an-2006 for 10G
 - IEEE 802.3bz (nbase-t 2,5G/5G)
 - IEEE 802.3az Energy Efficient Ethernet
- LED indicators for speed and activity

User interfaces

- 1 x Unlock button
- 1 x LED dimming button
- 1x LAN interface
- 1 x Power button
- 1 x Reset button
- 1 x CATV output coaxial F-female*

CATV*

Wavelength (typical)	1550 nm
Optical return loss	min 40 dB
RF passband	45-900 MHz
RF output impedance	75 Ω
F-Connector length	8,5 mm
AGC optical input power	-9 ... 0 dBm
RF output level (AGC on)	80 ± 2.5 dBμV
RF flatness	max 2 dB
Output return loss	max -10 dB
Slope / tilt	1 ... 4 dB
CNR min	47 dB@-8 dBm
CSO / CTB	max -57 dBc
Spurious to carrier	max -57 dBc
MER QAM-64	> 35
MER QAM-256	> 37
BER	max 1.0E-9
Remote management via TR-069	

* Applicable to selected models only

Product features and specifications



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Layer 2 features

- Jumbo up to 9K supported on WAN and LAN
- Non-blocking switching performance
- Up to 8K MAC addresses
- Automatic learning and aging
- IEEE 802.1Q VLAN support for 4096 VLANs
- VLAN classification and retagging (VLAN mapping)
- Port-based VLANs
- IEEE 802.1ad QinQ VLAN tagging
- Port Trunking and Monitoring/Mirroring
- Layer 2 loop prevention

Quality of Service (QoS)

- 8 QoS traffic classes
- Port based QoS
- IEEE 802.1p tagged frames
- IPv4 QoS Type of Service (ToS)
- IPv4 QoS Differentiated Services (DS)
- IPv6 QoS Traffic Class
- Strict, weighted, or mixed mode per port

Management

- DHCP/TFTP, HTTP
- TR-069, TR-369, TR-181
- CLI
- CloudSight
- Ethernet OAM including dying gasp
- GUI





IGMP

- IGMP/MLD (v2/v3) snooping and proxy
- Configurable parameters for e.g. robustness, fast leave and snooping behavior

Emissions and safety regulations

- CE, FCC, ICES approved
- Safety:
 - IEC EN 62368-1
 - BS EN 62368-1
- Laser safety:
 - IEC 60825-1: Class 1 laser
- Emissions & Immunity:
 - EN 55032/CISPR 32, Class B
 - EN 55035
- RoHS/WEEE marking:
 - Compliant with 2011/65/EU
- Surge protection
 - Compliant with ITU-T K.21 basic level

Status LEDs

- Power/Alarm 
- Fiber uplink status 
- LAN 
- CATV status* 

* Applicable to selected models only

Genexis FiberTwist PX2100-Series product models

Model	Type	WAN (Mbps)	10GE LAN	Wavelength		
				TX	RX	CATV
FiberTwist PX2110	Layer-2 AE/PtP ONT	10000	1x	1270 nm	1330 nm	-
FiberTwist PX2120	Layer-2 AE/PtP ONT	10000	1x	1270 nm	1330 nm	Yes

Note: More features are available and not listed in this document. Not every listed feature may be included in the shipping product.

Genexis reserves the right to make changes of technical specifications, housing or design without prior notice.