



Genexis FiberTwist

P3000B-Series Point-to Point (PtP)

Compact network demarcation with optional routing



The highly successful FiberTwist P2000 and P3000-Series have proven themselves as flexible, reliable and fully manageable Point-to-Point Network Terminators. To further meet future market demands, a new platform generation will provide even more possibilities, like upgrading the device to a router using the same hardware.

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 Point-to-Point network demarcation
- Patented FiberTwist twist-on interface that fits all FiberTwist FTUs and Bracket; enabling a trouble-free, real DIY end-user installation
- Up to 4 Gigabit LAN ports to connect external devices, such as a Residential Gateway and various Layer 2 services
- Optional integrated CATV receiver or FXS port
- Flexible management via i.a. TR-069 and CloudSight
- ITU-T K.21 Basic level (Surge Protection)
- Halogen-free PCB
- Dying gasp support
- Enhanced LED dimming
- Upgradable to L3/routing via license fee

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 models, including single-dwelling and multi-dwelling 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 (110 x 110 x 46 mm) makes the FiberTwist a perfect fit in any environment, be it a living room, metering cabinet or basement.

The FiberTwist P3000B-Series is using the open and flexible GenXOS operating system, based on ioWrt. This offers operators maximum software flexibility in every deployment scenario.



Product features and specifications

Genexis FiberTwist P3000B-Series Point-to Point (PtP)

General specifications

Dimensions (H x W x D)	110x110x46 mm
Operating temperature	0 - 45 °C
Storage temperature	-20 - 75 °C
Operating humidity (non-condensing)	5% -95%
Storage humidity (non-condensing)	5% -95%
Flame retardants	Halogen free
Power supply voltage	12 Vdc ± 5%

CATV*

Wavelength (typical)	1550 nm
Optical return loss	min 45 dB
RF passband	45-900 MHz
RF output impedance	75 Ω
F-Connector length	11 mm
AGC optical input power	-9 ... 0 dBm
RF output level (AGC on) according to CENELEC-42	80 ± 2.5 dBμV 4% OMI / ch
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	> 34
MER QAM-256	> 36
Remote enabling of CATV	

Quality of Service (QoS)

4 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

Power consumption

P3410B / P3411B	typ. 3.5 W
P3414B	typ. 4.5 W
P3420B	typ. 6.3 W

Management

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

Fiber (WAN) interface

Optics compliant with 1000BASE-BX20-U	
TX wavelength (typical)	1310 nm
RX wavelength (typical)	
· FiberTwist P3410B	1490 & 1550 nm
· FiberTwist P3411B	1490 nm
· FiberTwist P3420B	1490 nm (CATV 1550 nm)
Single mode fiber	ITU-T G.657.A2
Optical connector	SC/APC
Optical Range	Up to 20km
Digital Diagnostic Monitoring (DDM)	
Configurable optical blackout (for OTDR)	

Layer 2 features

Jumbo up to 2K 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

Emissions and safety regulations

CE approved
LVD safety standard:
· IEC EN 62368-1:2014
· A11 2017 (Second Edition)
Laser safety standard:
· IEC EN 60825-1: Class 1 laser
Emissions & Immunity standards:
· EN 55032/CISPR 32:2015 ED2.0, Class B
· EN 55035:2017
· EN 55024:2010 / A1:2015
· EN 50083-2
RoHS/WEEE marking
Surge protection:
· Compliant with ITU-T K.21 basic level

LAN interfaces

4x 10/100/1000Base-T RJ45 ports
LED indicators for speed and activity
IEEE802.3az Energy Efficient Ethernet (EEE)

User interfaces

1 x Unlock button
1 x LED dimming button
4x LAN interface
1 x Power connector
1 x Reset button
1 x CATV output coaxial F-female*

IGMP

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

Status LEDs

System/Status
Fiber uplink
CATV status*



* Applicable to selected models only

Genexis FiberTwist P3000B-Series product models

Model	Type	WAN (Mbps)	LAN interface	Wavelength			
				TX	RX	CATV	Voice (FXS)
FiberTwist P3410B	Network termination with router functionality	1000	4x	1310 nm	1490 nm & 1550 nm	-	-
FiberTwist P3411B	Network termination with router functionality	1000	4x	1310 nm	1490 nm	-	-
FiberTwist P3414B	Network termination with router functionality	1000	4x	1310 nm	1490 nm	-	Yes
FiberTwist P3420B	Network termination with router functionality	1000	4x	1310 nm	1490 nm	1550	-

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

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