



Genexis FiberTwist

P2000-Series Point-to-Point (PtP)

Compact network demarcation



Providing Gigabit fiber connectivity to any desired location in the home, is one of today's major challenges.

With the endless variety of different deployment scenarios and end-user requirements, this calls for a flexible and scalable connectivity solution.

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
- A flexible solution matching both single-dwelling and multi-dwelling deployment scenarios
- Patented FiberTwist click-on interface on the FTU or Bracket, enabling trouble-free, DIY end-user installation
- Flexible management via TR-069, CLI, DHCP/TFTP and SNMP
- Optional integrated CATV receiver
- Up to 4 Gigabit LAN ports to connect external devices, such as a Residential Gateway and various Layer 2 services
- LED dimming
- Wall junction box compatible

A perfect fit 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.



Product features and specifications

Genexis FiberTwist P2000-Series Point-to Point (PtP)

General specifications

Dimensions (H x W x D)	110x110x46 mm
Weight (without an CATV)	176 g
Weight (with CATV)	225 g
Power supply voltage	12 Vdc ± 5%
Operating temperature	0 - 40 °C
Storage temperature	0 - 70 °C

Power consumption

P2110B	typ. 3.0 W
P2410 / P2411	typ. 3.9 W
P2414	typ. 4.9 W
P2420	typ. 6.3 W

WAN interface

Tx wavelength	1310 nm
Rx wavelength**	1490/1550 nm
Optical output range	-9 ... -3 dBm
Optical input range	-23 ... -3 dBm

Network interface

Single mode fiber (ITU-T G.657)
 SC/APC connector
 Up to 20 km range
 Compliant with 1000BASE-BX20-U
 Compliant with 100BASE-BX20-U
 Auto sensing 1Gb/s and 100Mb/s

Voice features*

SIP based Voice-over-IP
 G.711 A-law / μ -law codec
 G.729 codec
 5 REN support
 Line Echo Cancellation
 DTMF: In-band, RFC2833, SIP-Info
 Class 5 features

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 dB μ V 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	

User interfaces

- 1 x Unlock button
- 1 x Reset button ***
- 1 x LED dimming button ****
- 1 or 4x LAN interface
- 1 x Power connector
- 1 x CATV output coaxial F-female *
- 1x Telephone FXS/RJ11 port *

Layer 2 features

- Support Jumbo frames (up to 9K)
- Managed Quality of Service (QoS)
- Network Terminator
 - Remote port enabling/disabling
 - Remote per-port rate shaping
 - Up to 64 VLANs or 802.1q transparent
 - Q-in-Q (PVID 88a8)
- Media Converter
 - WAN link state forwarding
 - WAN to LAN link speed following

Management

Network Terminator

- TR-069, TR-181
- GAPS (7.0 and higher)
- CLI
- DHCP/TFTP
- IEEE 802.3ah OAM in passivemode:
 - Discovery
 - Loopback

Media Converter

- HTTP
- DHCP / TFTP
- IEEE 802.3ah OAM in passive mode:
 - Discovery
 - Loopback

Remote monitoring

- CATV input signal
- (Calculated) RF output

LAN interfaces

Up to 4 1000/100/10Base-T RJ45 interfaces
 LED indicators for link and activity

Emissions and safety regulations

- CE approved, FCC on request
 Safety:
- IEC EN 60950 or IEC EN 62368-1
- Laser safety:
- IEC EN 60825-1: Class 1 laser
- Emissions & Immunity:
- EN 55032/CISPR 32:2008, Class B
 - EN 55024
- RoHS/WEEE marking:
- Compliant with 2011/65/EU

Status LEDs

- Power
- Fiber uplink status/activity
- CATV status *
- Telephony status *



* Applicable to selected models only

** The WAN receiver is wideband. In case it is combined with CATV it is sensitive to 1490nm only

*** Not applicable to the FiberTwist P2110 and FiberTwist P2110B

**** Not applicable to the FiberTwist P2110

Genexis FiberTwist P2000-Series product models

Model	Type	WAN (Mbps)	LAN interface	Wavelength			
				Tx	Rx	Voice port (FXS)	CATV
FiberTwist P2110B	Media converter	1000/100	1x	1310 nm	1490 nm & 1550 nm	-	-
FiberTwist P2410	Network terminator	1000/100	4x	1310 nm	1490 nm & 1550 nm	-	-
FiberTwist P2411	Network terminator	1000/100	4x	1310 nm	1490 nm	-	-
FiberTwist P2414	Network terminator	1000/100	4x	1310 nm	1490 nm	Yes	-
FiberTwist P2420	Network terminator	1000/100	4x	1310 nm	1490 nm	-	1550 nm

Note: 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.