

Element

G1000 Network Termination
GPON series



The Hybrid product family marks the embodiment of a new vision of FTTH. It separates the service layer from the network layer, resulting in a modular, cost-effective and flexible home gateway solution matching all types of FTTH networks. The Element network terminator is the heart of the Hybrid

product family, functioning as the demarcation point of the network. Based on a full Gigabit interface, it translates the optical signal into tangible services through the click-on Live! residential gateway or an external residential gateway. The G-1000 series is designed for GPON networks.

Features

- » Cost-effective network demarcation
- » Optional integrated CATV receiver
- » Powers Hybrid Live!
- » Fully compatible with all Hybrid Live! service modules through the Hybrid Interface
- » Gigabit LAN port for the option to connect an external Residential Gateway
- » Optional Element Masque to cover Element, smoothen the design and enable customer branding
- » Direct wall-mounting optional

Network demarcation

The Element forms the most cost-effective network demarcation available in the market. It offers termination of the FTTH transport layer and a single transparent path to the service layer. Services can be activated by simply clicking on a Hybrid Live! service layer module or connecting an external RG with an Ethernet cable.

Product features & specifications

Element G1000 series

General specifications

- » Dimensions (H x W x D)
 - stand-alone 223x104x45mm
 - incl. Universe and Live!
241x104x75mm
- » Weight 350 g
- » Power supply voltage 12 Vdc ± 5%
- » Operating condition 0 - 40 °C
- » Storage condition 0 - 70 °C
- » Power consumption
 - stand-alone typ. 3W
 - incl. Live! Titanium typ. 13W
 - with CATV typ. 5W
 - incl. Live! Titanium typ. 15W

User interfaces

- 1 x Hybrid Interface
- 1 x LAN interface
- 1 x CATV output coaxial F-female (optional)

CATV

- » Filtered from WAN interface via internal wavelength filter
- » Automatic gain control
- » Coaxial connector F-male (IEC 169-24)
- » RF impedance coaxial connector 75Ω
- » RF frequency range 47 - 870 MHz
- » Return loss output > 14 dB
- » CSO, CTB < -55 dB
- » CATV RX power -7 ... +1 dBm
- » RF output level 80 dBμV (typ.)
- » Remotely switch on/off via OMCI
- » Remote monitoring if CATV input signal is present

LAN interface

- » Compliant with IEEE 802.3 Clause 40 (1000/100/10BASE-T)
- » Auto-negotiating speed, duplex, MDI/MDIX

WAN interface

- » Compliant with:
 - ITU-T G.984.1
 - ITU-T G.984.2
 - ITU-T G.984.3
 - ITU-T G.984.4, G.988 (OMCI)
 - ITU-T G.984.5
- » BBF.247 Certified
- » Compliant with Single mode fiber (ITU-T G.652 / G.657)
- » SC/APC connector
- » CATV RX 1550 nm (optional)
- » 20 km range
- » Class B+ GPON optical transceiver
 - Data TX 1310 nm
 - Data RX 1490 nm
 - Data TX power 0.5 ... +5 dBm
 - Data RX power -8 ... -28 dBm
- » OMCI management of layer 2 functionality
- » Transparent when managing Hybrid Live! or external Residential Gateway

Hybrid interface

- » Gigabit electrical interface
- » Matches with any Hybrid Live! module
- » Low voltages used for safety (SELV)

Emission and safety regulations

- » CE approved
- » Safety:
 - IEC EN 60950
 - IEC EN 60825-1:2001-08
- » Laser safety
 - IEC EN 60825-1: Class 1 laser product
- » Emission: EN 55022, Class B
- » Immunity: EN 55024
- » Users should observe safety precautions such as those recommended by:
 - ANSI Z136.1-2000
 - ANSI Z36.2-1997
 - IEC 60825-1:2001-08

Status LEDs

-  Power
-  CATV status
-  Fiber uplink status

Element G1000 product models

Model	Hybrid Interface slots	LAN ports	Integrated CATV	Optical Connector
Element-G1030	1x	1x	-	SC/APC
Element-G1034	1x	1x	yes	SC/APC