

Element P1000 Series

Media Converter

Point-to-Point Series



The Hybrid product family marks the embodiment of a new vision for 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 Media Converter provides a cost-effective

fibre-to-copper termination point for customer premises. This media converter provides fibre optic bandwidth and link distance advantages for Ethernet networks with minimum upgrade costs. The Element Media Converter series is designed for Point-to-Point Ethernet networks.

Features

- » Cost-effective network termination
- » Supports Gigabit and 100Mbps fibre uplinks
- » Provides Ethernet connectivity for one device
- » Powers Universe-CATV & Hybrid Live! (optional)
- » IEEE 802.3ah OAM fault management
- » Fully compatible with Universe FTU
- » Optional Element Masque to cover Element and smoothen the design and enable customer branding
- » Direct wall-mounting optional

Dual speed WAN port

The media converter supports 100 and 1000 Mbit/s speeds on the fibre WAN port. The fibre signal is converted to an electrical signal on the copper interface, which operates at 10/100/1000 Mbit/s depending on the capabilities of the connected device and the actual WAN speed.

This functionality provides a low-cost integration option for migrating from conventional 100 Mbit/s networks to a high performance Gigabit Ethernet to the Home (GTTH) solution. The Element MC can be introduced into existing 100 Mbit/s FTTH networks, allowing the access switches to be gradually upgraded to 1000 Mbit/s.

No configuration needed

Since all packets that enter the fibre port are transmitted transparently to the user port and vice versa, the Element Media Converter needs no configuration.

Due to its full layer 2 functionality, the Element Media Converter is fully transparent to all layer 3-7 network protocols. It works seamlessly together with the IP-protocol (IPv4 and IPv6) and features such as VLAN/QoS, VPN, IP ToS and DHCP.

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Features & Specifications

General specifications

- » Dimensions (H x W x D) 223x104x45 mm
- » Weight 200 g
- » Power supply voltage 12 Vdc ± 10%
- » Operating conditions 0 - 40 °C
- » Storage conditions 0 - 70 °C

WAN interface

- » Compliant with IEEE 802.3 Clause 59 (1000BASE-BX10-U)
- » Compatible with IEEE 802.3 Clause 58 (100BASE-BX10-U)
- » Single mode fibre (ITU-T G.652)
- » SC/PC connector
- » Full duplex transmission
 - TX 1310 nm
 - RX 1480 - 1580 nm
- » 10 km range
- » > 12 dB power budget
- » Class 1 laser product
- » Transmit power -3 ... -9 dBm
- » Receive power -3 ... -21 dBm

LAN Interface (optional)

- » Compliant with IEEE 802.3 Clause 40 (10/100/1000BASE-T)
- » 1x RJ-45 connector
- » Auto-negotiating speed, duplex
- » 100 m range
- » Line speed performance
- » LED indicators for link and activity

CATV control (optional)

- » Power for Universe-CATV unit
- » Local monitoring of CATV input signal via LED

Management (optional)

- » DHCP-client on VLAN 255
- » Firmware upgrade via TFTP / HTTP
- » Passive IEEE802.3ah operation
 - Device discovery
 - WAN loopback control

Emission and safety regulations

- » CE, FCC approved
- » Safety:
 - IEC EN 60950
 - IEC EN 60825-1:2001-08
- » Emissions & Immunity:
 - EN 55022/CISPR 22:2008, Class B
 - EN 55024
- » RoHS/WEEE marking:
 - Compliant with 2002/95/EC





Layer 2 features (optional)

- » Wirespeed forwarding
- » Transparent forwarding for all L3-7 protocols
- » Jumbo frames up to 9216 bytes
- » Flow control not advertised / disabled

Hybrid interface (optional)

- » Gigabit Ethernet electrical interface
- » Supports any Hybrid Live! module
- » When the Hybrid interface is connected, LAN interface is disabled

Status LEDs

-  Power
-  CATV status
-  LAN status
-  Fibre uplink status

Element P1000 Series product models

Model	Layer 2 Functionality	Hybrid Interface Slots	LAN Interfaces	Universe CATV Power
Element-P1012	-	1x	-	yes
Element-P1090	yes	-	1x	-
Element-P1022	yes	1x	1x	yes