

Wall mount Series 16-Port G.fast DPU



The emergence of OTT videos and 4 K TV is accelerating ultra-broadband network deployments. Fiber to the home (FTTH) is a good solution to offer ultra-broadband service, but is costly and difficult to deploy services due to complicated construction works.

G.fast, which reuses existing copper resources to reach speeds comparable to FTTH (1,000 Mbit/s), is well-suited to brownfield areas. Featuring faster access, faster deployment, and faster return on investment, G.fast is attracting increasing industry attention.

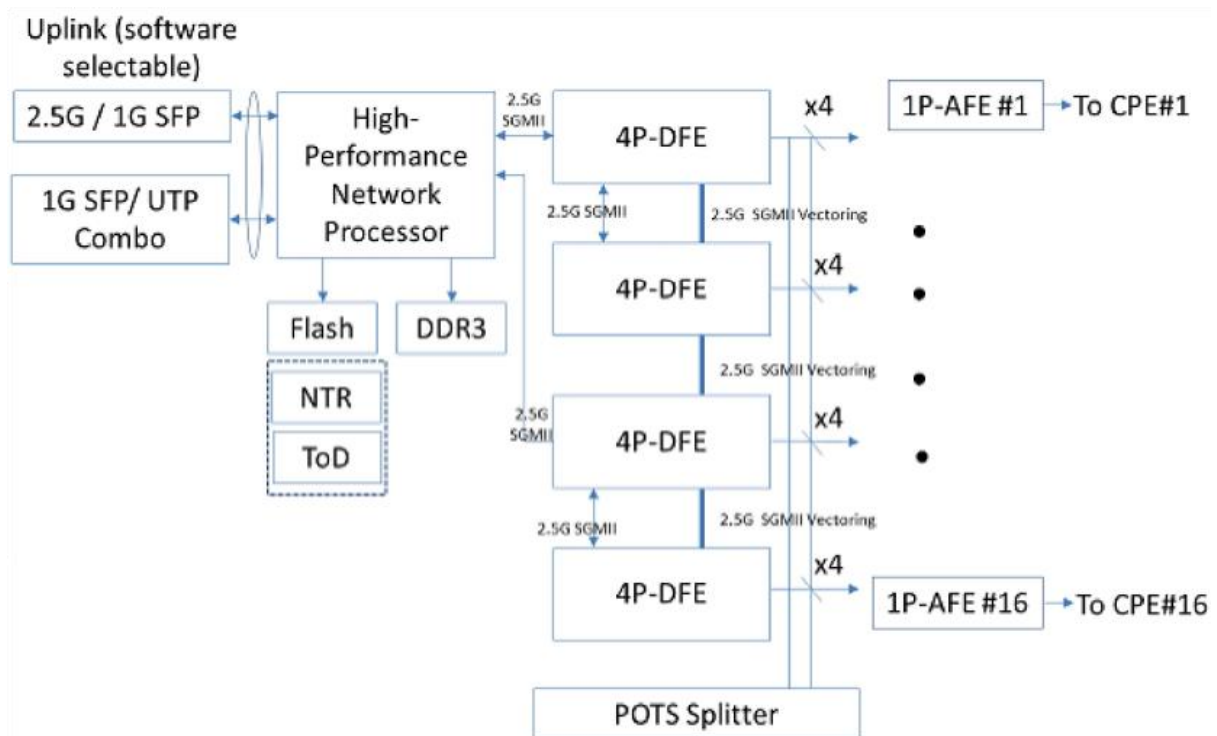
XenOpt wall mount series has a series of 16-port G.fast DPU wall mount models:

- Indoor type
- Outdoor type

XenOpt wall mount series accepts AC90~264V local power.

The service sets for XenOpt Wall mount Series are IPTV, HSIA, and cVoIP. Together with advanced Ethernet OAM, it also targets for business services for copper wired Multi-tenant Units.

As following block diagram, wall mount series supports software selectable (1) 2.5G / 1G SFP interface, (2) 1G SFP / UTP combo interface as its uplink interface.



Wall mount series G.fast link supports

- Profile 106a, spectrum up to 106 MHz bandwidth at 4 dBm transmit power
- 16-port vectoring (crosstalk cancellation) with linear precoding now, and will support nonlinear precoding in the future when standards are clearly defined
- Programmable Time-Division Duplexing, to accommodate different asymmetry ratios of downstream/upstream (80/20 and 50/50)
- Full start up sequence takes less than 20 sec, and the fast retrain time, including 16-port vectoring, is under 2 sec.
- Tolerant of inside wire impairments and changing noise conditions
- Fast On-Line Reconfiguration (FRA) to cope with Wall mount series management structure
- Follows BBF G.fast recommendations and TR-167, the DPU and G.fast SFP modem are treated as a GPON fed remote DSLAM
- Currently supports CLI/WEB/SNMP management, and will add the Netconf protocol and Yang data modeling for G.997.2.
- The GPON feed/GPON SFP ONT are managed by OMCI messages from the OLT.

Wall mount Series Specifications

System Features

- G.fast Ports
 1. 16-port G.FAST subscriber interface Comply with ITU-T G.9700/9701,106a Profiles
 2. Total rate up to 800 Mbps, aggregate the downstream and upstream rate
 3. Support resynchronization
 4. Support RFI configuration
 5. Support G.FAST profile setup
 6. 16-port vectoring (crosstalk cancellation) with linear precoding
 7. Programmable Time-Division Duplexing, to accommodate different asymmetry ratios of downstream/upstream (80/20 and 50/50)
 8. Full start up sequence takes less than 20sec, and the fast retrain time, including 16 ports vectoring, is under 2sec.
 9. Tolerant of inside wire impairments and changing noise conditions
 10. Support Fast On-Line Reconfiguration (FRA) to cope with Channel
- Bridging Port
 1. Untagged/Tagged/TLS port
 2. VLAN Ingress Filter Check
 3. Port-based VLAN
 4. Protocol-based VLAN
 5. Priority-based VLAN
 6. S-tag/C-tag Priority Mapping
 7. VLAN Translation
- VLAN
 1. Single or Double tag support
 2. N:1 /1:1 / TLS VLAN
- Forwarding Data Base
 1. 4K entries of MAC address
 2. Dynamic/Static FDB
 3. MAC learning limitation per port
- Multicast
 1. IGMP v1, v2, V3
 2. IGMP proxy
 3. Multicast VLAN mapping
Independent VLAN multicast (IVM).
- QoS:
 1. Policer:
 - Broadcast and Unknown unicast flooding rate limit
 - VLAN+802.1P Priority rate limit
 2. Scheduler:
 - SP - Strict priority
 - WFQ – Weighted Fair Queue
 - WRR – Weighted Round Robin.
 - Shaping: CIR, CIR/EIR
- Access Control List
According to packet field
 1. Source or destination MAC addresses
 2. Source or destination IP addresses
 3. VLAN ID
 4. Ethernet type
 5. Protocol number
 6. TCP/UDP port

To do: Deny, Allow, VLAN Priority, DSCP to 802.1p mapping, Policer to do rate limitation

Protocols Support

- IGMPv1, v2, v3 snooping and proxy
- DHCP L2 Relay – TR101 Appendix B
- IEEE 802.1x
- STP(802.1D) / RSTP (802.1W)
- SNMP Client
- SysLog Client

Uplink ports

Software configuration:

- 2.5G SFP interface
- 1G SFP interface

Management

- Local RS-232 CLI and Ethernet Web/SNMP/TELNET management
- Remote in-band Web/SNMP/TELNET management
- NETCONF/YANG G.997.2 Data Model *
- Firmware upgradeable
- Support SNMP v1, v2.
- Alarm Relay for 4 inputs

Operating Requirements

- Operating Temperature: -40° to 65 °C
- Storage Temperature: -40° to 80 °C
- Operating Humidity: 5% to 95% RH non- condensing

Dimension and Weight

- Indoor type:
 1. Dimension (LxWxH): 322mmx265mmx110mm (TBD)
 2. Weight: 7.2kg (TBD)
- Outdoor type:
 1. Dimension (LxWxH): 426 mm x 285 mm x 180 mm (TBD)
 2. Weight: 13.0 kg (TBD)

Selective Power Source

- Reverse power: From DSL loop 36V~57V *
- Local power:
 1. AC power mode: 90VAC ~ 264 VAC, 50-60 Hz or
 2. DC power mode: -36VDC ~ -75VDC.
- Power Consumption: all 16-ports up needs 75 Watts (25°C)
- Power saving mode *

Certifications

- EMC
 1. FCC Part 15 Class A
 2. CE-EMC Class A
- Safety
 1. EN60950-1
 2. ITU-T K.21 Surge and Lightning protection



www.xenopt.com