

openONU



Overview

To deliver triple-play services to the subscriber in FTTx applications, the openONU SFU (Single Family Unit) XG-99K incorporates interoperability and cost-efficiency.

Equipped with ITU-T G.9807 compliant 10G Downstream and 10G Upstream XGS-PON interface, XG-99K supports the full Triple Play of services including voice, video, and high speed internet access service.

Compliant with standard OMCI definition, XG-99K is manageable at remote side and supports the full range FCAPS functions including supervision, monitoring and maintenance.

Service

Data

The XG-99K ONU is delivered with one 10G Base-T, and three 10/100/1000 Base-T Ethernet data interfaces, supporting:

- Auto-negotiation and MDI/MDIX auto-sensing
- Built-in layer-2 switch
- Advanced data features such as VLAN tag manipulation, classification, and filtering

Video

The XG-99K ONU supports video delivered in form of data (by multicast or unicast).

In case where multicast technology is used for delivering video content through data channel, the ONU supports the dedicated multicast GEM port on the Downstream. So the video content are received and processed by all the ONUs through the unified channel and this greatly improves the bandwidth efficiency.

In addition, the ONU supports IGMP snooping function to be applied for further optimization. When IGMP snooping is enabled, the ONU monitors the member joining and leaving activities at the Ethernet service port, and then selectively delivers the multicast streams.

Interfaces

| Product | PON Interface | 10G Base-T | 10/100/1000 Base-T |
|---------|---------------------------------------|------------|--------------------|
| XG-99K | SFP+ Cage for Optics and XGS-PON BOSA | 1 | 3 |

Specifications:

Dimensions (H x W x D)

- 190mm x 149mm x 38mm

Working environment

- Temperature: -10° ~ 45°
- Humidity: 10% ~ 95% relative humidity

Power supply

- +12V (feed via external AC/DC adapter)
- 2-PIN power adaptor input
- Dying Gasp support
- Power switch
- Power consumption: less than 10W

Safety & EMI

- CE certificate

Installation

- Desktop mounting

OAM

- Standard compliant OMCI (the embedded operations channel) interface as defined by ITU-T G.988
- Alarming and AVC report, performance monitoring
- Remotely software image download over OMCI, as well as activation and rebooting
- Hold two software sets with software image integrity checking and automatic rollback

PON interface

- Compliant with ITU-T G.9807 XGS-PON standards
- SFP+ cage
- 10 Gbps Burst Mode Upstream Transmitter 10 Gbps Downstream Receiver
- Compliant with ITU-T G.9807 Class N1
 - +4dBm ~+9dBm launch power, -28dBm sensitivity, and -9dBm overload
- Wavelengths: US 1260nm to 1280nm, DS 1575nm to 1580nm

PON QoS

- Multiple T-CONTs per device
- Multiple GEM Ports per device
- Flexible mapping between GEM Ports and T-CONT
- Activation with automatic discovered SN and password in conformance with ITU-T G.984.3
- AES-128 decryption with key generation and switching
- FEC (Forward Error Correction) in both directions
- DBA reporting by piggyback reports in the DBRu (mode 0 and mode 1)
- 802.1p mapper service profile on U/S
- Mapping of GEM Ports into a T-CONT with priority queues based scheduling
- Support Multicast GEM port and incidental broadcast GEM port

Ethernet interface

- 10/100/1000 Base-T interface with RJ-45 connector
- 10G Base-T interface with RJ-45 connectors
- Ethernet port auto negotiation or manual configuration
- MDI/MDIX automatically sense
- Hardware priority queues on the downstream direction in support of CoS
- 802.1D bridging
- VLAN tagging/detagging per Ethernet port
- VLAN stacking (Q-in-Q) and VLAN translation
- IP ToS/DSCP to 802.1p mapping
- Class of service based on UNI, VLAN-ID, 802.1p bit, and combination
- Marking/remarking of 802.1p
- IGMP v2/v3 snooping and IGMP snooping with proxy report
- Broadcast/Multicast rate limiting