OPTICAL LINE TERMINAL [OLT-G-x-4-8-x]

Fiber Products, Line Terminals



Description

Taikan's Optical Line Terminal (OLT) utilizes Gigabit Ethernet Passive Optical Network (GEPON) technology. The compact design is complemented by L2/L3 Gigabit switching and routing function. Furthermore the OLT is designed for easy plug and play modules. There are 1-4 optical or electrical ports for the Ethernet/IP network core on the uplink. On the downlink there are 1-8 GEPON optical ports. Final transmission per user is approximately 1 Gbps.



Features

- 1RU Height, Allowing for Easy Installation in a Standard 19" Rack
- Adheres to IEEE802.3ah Standard
- 4, 8, or 16 PON Port Options
- Supports 1:64 Splitting Ratio, High Utilization Rate of Optical Fiber
- Transmission Distance of 20 Kilometers
- Integrated L2/L3 Switch Function
- · Supports Access Control List and DBA (Dynamic Bandwidth Allocation)
- QoS Compatible with IEEE802.1p, IP Precedence, DSCP IP
- Automatic ONU Identification
- MAC Address Limitation
- AES-128 Encryption Technology
- IGMP Snooping and OAM
- Supports IEEE802.1x
- · Provides NMS Based on SNMP, GUI Interface, and Supports In-band

Ordering Information

OLT - G - X - 4 - 8 - X *E* for 220 VAC, or C for -48 V 4, 8, or 16 Ports

Model Number

Description

Power

| OLT-G-4-4-8-C | GEPON Optical Line Terminal, 4 PON Ports, 4 Uplink Interface Ports, 8 Downlink Interface Ports | -48 V |
|----------------|---|---------|
| OLT-G-8-4-8-C | GEPON Optical Line Terminal, 8 PON Ports, 4 Uplink Interface Ports, 8 Downlink Interface Ports | -48 V |
| OLT-G-16-4-8-C | GEPON Optical Line Terminal, 16 PON Ports, 4 Uplink Interface Ports, 8 Downlink Interface Ports | -48 V |
| OLT-G-4-4-8-E | GEPON Optical Line Terminal, 4 PON Ports, 4 Uplink Interface Ports, 8 Downlink Interface Ports | 220 VAC |
| OLT-G-8-4-8-E | GEPON Optical Line Terminal, 8 PON Ports, 4 Uplink Interface Ports, 8 Downlink Interface Ports | 220 VAC |
| OLT-G-16-4-8-E | GEPON Optical Line Terminal, 16 PON Ports, 4 Uplink Interface Ports, 8 Downlink Interface Ports | 220 VAC |

ELM Board

| OLT Ports | 4 |
|-----------------------------|--|
| Standard | IEEE802.3ah |
| Optical Fiber | SMF, Single Mode Fiber |
| Connector | SC |
| Number of Supported ONU | Each OLT Port Supports Up to 64 ONUs |
| Rate | 1 Gbps Uplink and Downlink |
| Light Loss Budget | 29 dB |
| Wavelength | Transmission Wavelength: 1490 nm; Received Wavelength: 1310 nm |
| ONU Customer Authentication | IEEE802.1x |
| QoS | IEEE802.1p |
| DBA | Assign the Maximum Bandwidth or the Assured Bandwidth to Each ONU Customer |

L2 Switch Function

| Non-blocking Switch | Link-speed Forwarding |
|---------------------------------------|---|
| Flexible Address Learning | Independent VLAN Learning (IVL) |
| | Address Learning Based on Hardware |
| | L2 Forwarding List Based on the Software Configuration |
| | 16K L2 Unicast List |
| L2 Multicast | 512 L2 Multicast Lists |
| | Support IGMP-Snooping, IGMP-Proxy |
| VLAN | 4094 Tagged (802.1Q) VLANs |
| | Ingress Filter Mechanism Based on 802.1Q VLAN |
| Link Aggregation | At Most Aggregates 4 Uplink IEEE 802.3ad Link |
| Packet Mirror | Mirror Based on the Port: Ingress, Egress, Ingress and Egress |
| Packet Buffer and Senior Flow Control | HOL Jam Prevention Based on Cos |
| | Support Back Pressure |
| | Support Suspended Frame |
| | |

QoS

| Class of Service (CoS) | Each Egress Supports 4 CoS Queue |
|------------------------------|--|
| | Supports 802.1 Q Priority |
| | Supports Queuing Mechanisms: Strict Method, Time-delay Method and Weighting Method |
| | Supports Priority Remapping of IPv4 TOS Mechanism |
| | Supports IP Precedence, DSCP |
| Rate Shaping for Output Port | From 1 Mbps ~ 1 Gbps Token Bucket Limiting Flow Function |
| | Radio, Multicast and DLF Rate Control Based on the Port |

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Security

| Access Control List (ACL) | Source and Destination IP, Source and Destination TCP/UDP Port and ToS |
|---------------------------|---|
| | Combination Supports Five Actions, Such as Permit, Deny, DSCP Remarking, Rate |
| | Limit or Priority Remarking |
| | |

L3 Route Protocol

| TCP/IP | RFC 0768 | User Datagram Protocol |
|-----------|----------|---|
| | RFC 0791 | Internet Protocol |
| | RFC 0793 | Transmission Control Protocol |
| ICMP | RFC 0792 | Internet Control Message Protocol |
| ARP | RFC 0826 | Ethernet Address Resolution Protocol |
| Proxy ARP | RFC 1027 | Uses ARP to Implement Transparent Subnet Gateways |
| OSPF | RFC 1587 | OSPF NSSA Option |
| | RFC 1745 | BGP-4/IDRP for IP-OSPF Interaction |
| | RFC 1850 | OSPF Version 2 MIB |
| | RFC 2328 | OSPF Version 2 |
| | RFC 1771 | A Border Gateway Protocol 4 (BGP-4) |
| | RFC 1965 | Autonomous System Confederations for BGP |
| | RFC 1966 | BGP Route Reflection |
| | RFC 1997 | BGP Communities Attribute |
| | RFC 1998 | An Application of the BGP Community Attribute in Multi-home Routing |
| PIM-SM | RFC 2362 | Protocol Independent Multicast-sparse Mode (PIM-SM) |
| IGMP | RFC 2236 | Internet Group Management Protocol, Version 2 |

L3 Switch /Route Performance

| L3 Host Table | 8 K |
|--------------------------|-------------------------------|
| L3 LPM Table | 64 K |
| L3 Interface Table | 4 K |
| DeFailure Route | DeFailure Route Based on VLAN |
| L3 Enable | Based on the Port |
| ECMP Routing | Support |
| IP Multicast Replication | Support |
| IPMC Group Table | 1 K |
| IPMC Enable | Based on the Port |
| Jumbo Frame | Up to 9216 Bytes Packet |

Network Management

| FTP | RFC 959 | File Transfer Protocol |
|------------|----------|---|
| Telnet | RFC 0854 | Telnet Protocol Specification |
| SNMP | V2.0 | Simple Network Management Protocol |
| DHCP | RFC 2131 | Dynamic Host Configuration Protocol |
| AAA RADIUS | RFC 2138 | Remote Authentication Dial In User Service (RADIUS) |

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General Specifications

| Power of Single ELM | Maximum: 30 W |
|-----------------------------------|---|
| Power of Two ELM | Maximum: 100 W |
| Power | Two DC power slota: Input voltage -48 V (Allowed Range: -36 V \sim -72 VDC) |
| | Or One AC power slot, input voltage: 110/220 V (Allowed Range: 85 ~ 264 VAC) |
| Power Consumption of Power Supply | 140 W |
| Uplink Port | Four GE Ports which Support SFP Transceiver, can Equipped with the Optical |
| | Module or the Electrical Module |
| OLT Port | Maximum Offer 8 PON Ports which Support SFP Transceiver, Only can be |
| | Equipped with the Optical Module. It's Connected with ONU by the Optical Splitter |
| PON Ports | Option for 4, 8, or 16 PON Ports |
| MGNT Port | RJ45, Offer 10/100 Base-T Out-band Management Port |
| CONSOLE Port | RJ45, Offer Console Port for the System Diagnosis |
| COM Port | RJ45, Offer Connection Alarm Communication |
| Weight | 5.5 kg (12 lb) |
| Dimensions (LxWxH) | 440 x 275 x 43.6 mm (17.3 x 10.8 x 1.7 in.) |

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