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

*Fiber Products, Line Terminals*

TaiTin

## Description

TaiTin's Optical Line Terminal (OLT) utilizes Giga Ethernet Passive Optical Network (GEPON) technology. The compact design is complemented by L2/L3 giga 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

- 1U Height, Allowing for Easy Installation in a Standard 19" Rack
- Adheres to IEEE802.3ah Standard
- Supports 1:64 Splitting Ratio, High Utilization Rate of Optical Fiber
- Transmission Distance of 20 Kilometers
- Integrated L2/L3 Switch Function
- Supports ACL 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
- Provide NMS Based on SNMP, GUI Interface, and Support In-band and Out-band Management

## Ordering Information

OLT - G - 4 - 8 - [x]

***E** for 220 VAC, or **C** for -48 V*

| *Model Number* | *Description* | *Power* |
|---|---|---|
| **OLT-G-4-8-C** | GEPON Optical Line Terminal, 4 Uplink Interface Ports, 8 Downlink Interface Ports | -48 V |
| **OLT-G-4-8-E** | GEPON Optical Line Terminal, 4 Uplink Interface Ports, 8 Downlink Interface Ports | 220 VAC |



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### 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)<br>Address Learning Based on Hardware<br>L2 Forwarding List Based on the Software Configuration<br>16K L2 Unicast List |
| **L2 Multicast** | 512 L2 Multicast Lists<br>Support IGMP-Snooping, IGMP-Proxy |
| **VLAN** | 4094 Tagged (802.1Q) VLANs<br>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<br>Support Back Pressure<br>Support Suspended Frame |

### QoS

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





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## Optical Line Terminal Cont'd

### 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 ~ -72 VDC)<br>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 |
| **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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