



## Broadband Passive Optical Networks Enriching Access Network Services

- Sixteen ITU-T G.984-compliant GPON ports; each port supports up to 64 ONT
- Two management switching cards plus two power module redundancy
- Four 10 GbE & two GbE uplink ports
- 10 GbE backplane bandwidth per line card slot for non-blocking service
- Four PON or GbE port per line card
- ITU-T G.984.1 type A, type B, protection
- Temperature-hardened
- All front-access and hot-swappable

### Benefits

#### Flexible FTTH Application

OLT2406 is able to provide up to 1024 FTTH subscribers with four PON line cards that supports four ITU-T G.984 GPON fiber links, or four GbE line cards for 16 active non-blocking Gigabit Ethernet fiber links. GPON line card supports at least 1:64 split ratio. Each of the four SFP slots supports both class C+ and class B+ transceivers for different service reach. Temperature-hardened design allows service providers to install OLT2406 in a street cabinet to provide service to more subscribers.

#### IPv6 Ready

OLT2406 supports Dual Stack and by supporting both MLD and IGMP with other comprehensive IPTV functions, OLT2406 can be deployed in either IPv4 or IPv6 environment. User can also provision protocol-based VLAN for IPv6 traffic or assign various IPv6 access control list profiles for each subscriber.

#### Traffic Protection

OLT2406 provides two types of PON protection defined in ITU-T G.984: type A and type B to prevent fiber cut or PON card failure. With all common modules support redundancy, OLT2406 is able to avoid single point of failure to ensure non-stop user traffic. Service provider can benefit by applying VLAN bridging, VLAN translation, VLAN isolation and Multicast VLAN to quickly setup service for various types of subscribers. OLT2406 also supports comprehensive QoS and complete traffic management for efficient triple play service.

**OLT2406**  
**2U Temperature-**  
**Hardened 6-slot**  
**Chassis GPON OLT**

## Specifications

### System Specifications

#### Standard Compliance

- ITU-T 984.1
- ITU-T 984.2
- ITU-T 984.3
- ITU-T 984.4
- ITU-T 988
- IEEE 802.3u Fast Ethernet
- IEEE 802.3z Gigabit Ethernet
- IEEE 802.3x flow control
- IEEE 802.3ad LACP aggregation
- IEEE 802.1d spanning tree protocol
- IEEE 802.1s multiple spanning tree protocol
- IEEE 802.1w rapid spanning tree protocol
- IEEE 802.1Q VLAN tagging
- IEEE 802.1p QoS
- IEEE 802.1X port authentication
- IEEE 802.1ag CFM

#### MAC and Packet Buffer

- 32K MAC entries

#### Traffic Management and QoS

- Dynamic Bandwidth Allocation for upstream bandwidth dynamic adjustment
- Forward Error Correction for upstream and downstream
- GPON Encapsulation Method Fragmentation
- IEEE 802.1p QoS with 8 priority queues per port
- IEEE 802.1Q tag-based VLAN
- 2K Static VLAN
- VLAN bridging
- VLAN trunking
- VLAN translation
- VLAN stacking
- VLAN mapping to GEM Port
- GEM Port mapping to T-CONT
- Rate limit control per GEM
- Port isolation
- Ingress and Egress bandwidth profile
- DSCP and ToS
- Classification policy based on
  - VLAN
  - Ethertype
  - VLAN and Ethertype
  - VLAN+ CoS

#### IGMP

- IGMP v2 & v3
- IGMP snooping and proxy
- 1024 multicast groups
- IGMP fast leave
- Channel preview
- Multiple Set-Top Box
- Multicast IGMP Snooping on all VLAN

#### User Security and Authentication

- MAC filtering per port, secure access to each port
- Specific MAC forwarding per port
- Limits to the number of MAC address per port
- Anti-MAC spoofing
- IP source guard
- 802.1X port-based security that prevent unauthorized client access to the network
- AES-128 encryption
- Broadcast/Multicast storm control
- STP BPDU filtering
- MAC/ARP attack protection
- PPPoE relay agent
- DHCP option 82(RFC 3046)
- DHCP relay agent
- DHCP snooping

#### Network Administration Security

- User name/password required for Telnet/local console administrators
- Two-level security by specific SNMP read/write community
- SSH provides network security by encryption administration traffic

#### Network Management

- Management via ZyXEL NB GUI
- Telnet CLI: up to five concurrent users
- SNMP v2c & v3
- RJ45 local console
- Out-of-band management
- NetAtlas EMS

#### Remote ONU Management through OMCI

- Firmware upgrade(TFTP/FTP)
- Configuration/provisioning
- Status/alarm report
- Loopback test SNMP manageable

#### Hardware Specifications

##### Power Specification

- 48V DC

##### Physical Specifications

- OLT2406 Chassis
  - ◆ Dimensions (WxDxH): 440 x 250 x 88 mm (17.32" x 9.84" x 3.46")
  - ◆ Four slots for hot-swappable line cards
  - ◆ Two slots for hot-swappable management cards
  - ◆ Two slots for hot-swappable DC power modules
  - ◆ One slot for hot-swappable FAN module
  - ◆ One slot for Alarm module
  - ◆ 10G backplane switching capacity per line card slot
  - ◆ Rack-mountable for 19-inch and 21-inch rack
  - ◆ Front access for all interface, including all line cards, power and FAN modules
- OMU2442 Management switching card
  - ◆ Six SFP open slots for uplink or subtending – 4\*10 GbE (SFP+) /1GbE + 2\*1GbE
  - ◆ One console for local craft interface connection
  - ◆ One 10/100 RJ45 out-of-band management
  - ◆ One alarm cut-off dip switch (ACO)
  - ◆ 1:1 redundancy with another OMU2442
  - ◆ 320G system switching capacity
- OLC2404-22 GPON line card
  - ◆ Four GPON SFP open slots compatible with class B+ and class C+ SFP
  - ◆ Four GPON class C+ SFP with SC Optical Receptacle
  - ◆ Upstream signaling speed: 1.244 Gbps
  - ◆ Downstream signaling speed: 2.488 Gbps
  - ◆ 1024 T-CON & 4,096 GEM port per PON port
  - ◆ 4K MAC per card
  - ◆ 1:1 redundancy with another OLC2404-22
  - ◆ Fiber protection with another PON port from another OLC2404-22 when using 2:N splitter
  - ◆ DDM readout
  - ◆ 10G switching capacity to backplane
- OLC2504-42 Gigabit Ethernet line card
  - ◆ Four Gigabit Ethernet SFP open slots
  - ◆ 1:1 redundancy with another OLC2504-42
  - ◆ DDM readout
  - ◆ 10G switching capacity to backplane
- OPA2406DC Power module
  - ◆ One master switch
  - ◆ One +/- 48V DC power connector with dual inputs
  - ◆ DC power input can be monitored and displayed via OMU
  - ◆ 1+1 redundancy with another OPA2406DC
- OFC2406 FAN module
  - ◆ One FAN tray with replaceable FAN modules
  - ◆ One replaceable dust filter
  - ◆ Individual FAN speed controllable via temperature detection or by provisioning
- ALM2406 Alarm
  - ◆ One slot for hot-swappable Alarm module
  - ◆ One alarm connector with four inputs and three outputs
- Power consumption
  - ◆ OMU2442: 45W
  - ◆ OLC2404-22: 18W
  - ◆ OLC2504-42: 18W
  - ◆ OFC2406: 17W
- PON Transceiver
  - ◆ class C+
    - ◆ Average output power: 5 dBm
    - ◆ Receiver sensitivity: -30 dBm
    - ◆ Wavelength: 1310 nm for upstream and 1490 nm for downstream
  - ◆ class B+
    - ◆ Average output power: 3.25 dBm
    - ◆ Receiver sensitivity: -28 dBm
    - ◆ Wavelength: 1310 nm for upstream and 1490 nm for downstream
- MTBF
  - ◆ More than 44,000 hours

### Environmental Specifications

- Operation Temperature: -40° C to 65° C (-40°F to 149°F)
- Storage Temperature : -40° C to 70° C (-40°F to 158°F)
- Operation Humidity: 10% to 95% RH (Non-condensing)
- Storage Humidity: 10% to 95% RH (Non-condensing)

### Certification

- EMC:
  - FCC Part 15 Class A
  - EN 55022
  - EN 55024
  - EN 300 386
- Safety:
  - CSA60950-1
  - EN60950-1
  - IEC60950-1

### Compatible MDU/ONT

- IES4005M (MSC1401G)
- PMG5323-B20A
- PMG5023-B20A
- PMG5318-B20A
- PMG3000-D20A
- PMG1006-B20A

### Element Management System

- NetAtlas EMS

For more product information, visit us on the web at [www.ZyXEL.com](http://www.ZyXEL.com)



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