GP-2508 & GP-2516 OLT
GP-250 ONU

GPON ACCESS PLATFORM

GPON

FTTH FTTO

ITU-T G.984-988

———————————

HIGH DENSITY

16xGPON

1U / 19''

———————————

VERSATILE

UPLINKS

4x 10GE SFP+

8x GE

———————————

EXTENSIVE

FEATURES

L2, L3, Security

———————————

NMS

GPON OLT

L3 Ethernet switch

Introduction

GP-2500 is a standalone **GPON OLT** providing **8 or 16 GPON** interfaces, 8x Gigabit and 4x 10-Gigabit up-link ports in a compact 1U/19'' and low power package. It complies with the latest GPON ITU-T G984 / G988 standards and delivers 2.5GE / 1.25GE high speed Triple-Play services.
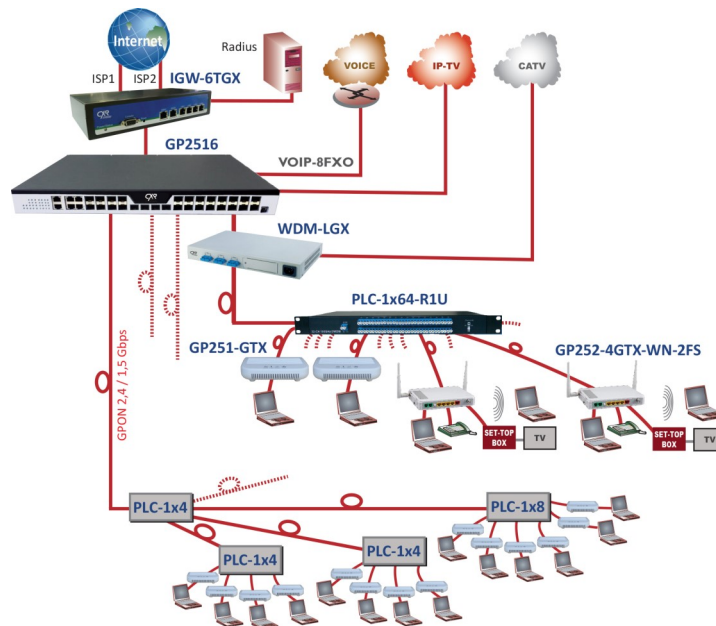
GP-2500 is perfectly serving the requirements of **Internet Service Providers, Enterprises, Communities and Hospitalities** with high performance, secured and cost effective fiber access. It embeds high bandwidth and low latency switching ASICS with a full set of QoS, VLAN, routing and ACL features to enable guaranteed Service Level Agreement (SLA) to each user.

GP-2500 **suits both standalone and large network requirements** thanks to a choice of management options from either a user friendly web interface or a Network Management Software. The network operation is controlled with a click of a mouse on a clear graphical interface.

GP-2500 preserves **network security** and user's excellent **quality of experience** through consistent SLA and security features.

GP-2500 offers the **best values for price** with unequalled performances, flexibility and scalability. Its easy deployment, resiliency and extensive management functionalities enable significant CAPEX and OPEX reductions.

Applications

GP-2500 connects up to 2,048 GPON users and provides high throughput Ethernet access on a GPON cost-effective infrastructure. GP-2500 works as a standalone and plug & play solution or it may be part of a larger access network with a NMS platform. CXR GPON ONT's provide users with Triple Play services with Gigabit Ethernet, Wi-Fi, VoIP and CATV interfaces.

OLT specifications

- **System Capacity**
  Maximum coupling ratio : 1:128
  Backplane bandwidth : 205 Gbps
  Mac Table capacity : 64K

- **Interfaces**
  GPON : 8 or 16 GPON ports
  Uplink interfaces : 4 Gigabit SFP ports, 4 Gigabit combo ports, 4 x 10GbE SFP+ ports

- **Attribute of the PON interface**
  The transmission rate with downlink 2.5Gbps / Uplink 1.25Gbps
  Class B+ and class C+ GPON Module
  Security : ONU authentication mechanism

- **Standards**
  ITU-T G.984/G.988
  IEEE 802.1D, Spanning Tree
  IEEE 802.1Q, VLAN
  IEEE 802.1w, RSTP
  IEEE 802.3ad physical link static/dynamic aggregation (LACP)
  Ethernet-II

- **QoS**
  Backpressure flow control (half duplex)
  IEEE 802.3x flow control (full duplex)
  IEEE 802.1p, CoS
  WRR, SP and FIFO queue schedule
  Limiting the uplink/downlink rate based on each ONU
  DBA and SLA

- **VLAN**
  Port-Based VLAN
  QinQ and flexible QinQ

- **Multicast**
  L2 Multicast
  IGMP Snooping
  MLD Snooping

- **Layer-3 routing functions**
  Static routing, RIP and OSPF, OSPF/OSPFv3

- **Reliability**
  Unidirectional Link Detection (UDLD)
  Hot swap of the GPON optical module on the expanded slot
  GPON optical path protection (b/c, hand-in-hand)
  Abnormal luminescence ONU detection such as long luminescence

- **Network Security**
  Per port user limiting
  Port isolation
  Packet storm control
  Flow-based ACL access control function
  Transmission data encryption on the PON interface

- **Configuration Management**
  Web, CLI, SNMP, Telnet
  TFTP for software upgrade
  Debug Output

- **Physical characteristics**
  Dimensions mm (WxDxH):442.5x304x44
  Weight : 5.25 kg

- **Environment**
  Operating temperature: 0°C to 45°C
  Hygrometry: 10-85% non-condensing
  Storage temperature: -40°C to 80°C
  Storage hygrometry: 5-95% non-condensing

- **Power supply**
  Two power slots, redundant and hot-swappable
  GP2500-AC: 110-230 Vac, 50-60 Hz, 150 W
  GP2500-DC: 40-56 Vdc, 150 W

GPON ONU with Ethernet, Wi-Fi, VoIP, CATV services

CXR GP250's are new generation smart ONT with 1 or 4 Gigabit Ethernet ports, 802.11N or 11AC wifi, VoIP and CATV interfaces to support Triple-Play services. They comply with the latest ITU-T G.984/988 standards for GPON Access Technology Requirements.

- **Excellent Access Capacity**

  ONTUs support the GPON transmission rate of Downlink/Uplink 2.5/1.25Gbps. Connected with CXR OLT, they can realize 1:128 splitting ratio. The fibber link may reach up to 20km.

- **Secure Services**

  CXR OLT and ONT products embed a complete set of VLAN, STP, port isolation, ACL, QoS and Broadcast Storm Control functionalities to ensure secured and robust services to GPON users.

- **High Service Control Capability**

  CXR ONT support Rate-Limiting, advanced dynamic bandwidth distribution and accurate bandwidth limit, which provides users with the best quality of experience in best sharing the 2.5 Gbps resources.

- **Rich OMCI functions**

  CXR GPON solutions support the latest OMCI functions defined by the ITU-T G.988 standard, including configuration, alarm, performance monitoring, fault isolation and security management, but also CXR specific innovative management features.

GPON ONU with Ethernet, Wi-Fi, VoIP, CATV services

Attributes	GP251	GP253	GP254	GP255	GP256
Ethernet 10/100/1000	1	4	4	4 POE+	4
Wi-Fi	na	802,11b/g/n/**ac** **2.4Ghz 300Mbps** **5Ghz 400Mbps**	802,11b/g/n 300 Mbps	na	802,11b/g/n 300 Mbps . 4SSID
VoIP	na	2xFXS	2xFXS	na	2xFXS
CATV	na	na	1x RF	na	na
Router	na	Bridge & router	Bridge & router	Bridge	Bridge & Router
USB	na	na	na	na	1 Host Mode
Fiber	SC/UPC	SC/UPC	**SC/APC**	SC/UPC	SC/UPC
PON interface	Downlink 2.5Gbps / Uplink 1.25Gbps - RX : 1490nm / TX : 1310nm - CATV TX : 1550nm Distance : 20Km Hi-Sensitivity optical receiver : -27dBm Security : ONU authentication mechanism				
Standards	ITU-T G.984/988 IEEE 802.1D, STP IEEE 802.1Q, VLAN IEEE 802.1w, RSTP				
VLAN	Port Based VLAN IEEE 802.1Q VLAN				
Multicast	IGMP-Snooping MLD-Snooping				
QoS	Backpressure flow control (half duplex) IEEE 802.3x flow control (full duplex) Head of Line (HOL) mechanism IEEE 802.1p, CoS Four priority queues on each port WR, SP and FiFo Rate limit				
Reliability	Loop detect Dying-gasp				
Security	Per port MAC address limitation Port protection Port storm control				
Management	CLI, Web, SNMP, Syslog and Telnet Software upgrade through TFTP and WEB				
Power Supply	12 Vdc external adapter	12 Vdc external adapter	12 Vdc external adapter	54Vdc external adapter	12 Vdc external adapter
Pwr consumption	<6W	<10W	<12W	<90w	<12W
Dimensions WxDxH mm	178x126x35	138x205x50	150x240x37	130x209x40	140x205x36 w/o antenna
Operating temperature	0 - 45°C	-5 - 55 °C	-5 - 55 °C	-5 - 45°C	0 - 45 °C
Weight kg	0,2	0,4	0,6	0,4	0,4

GP251

GP253
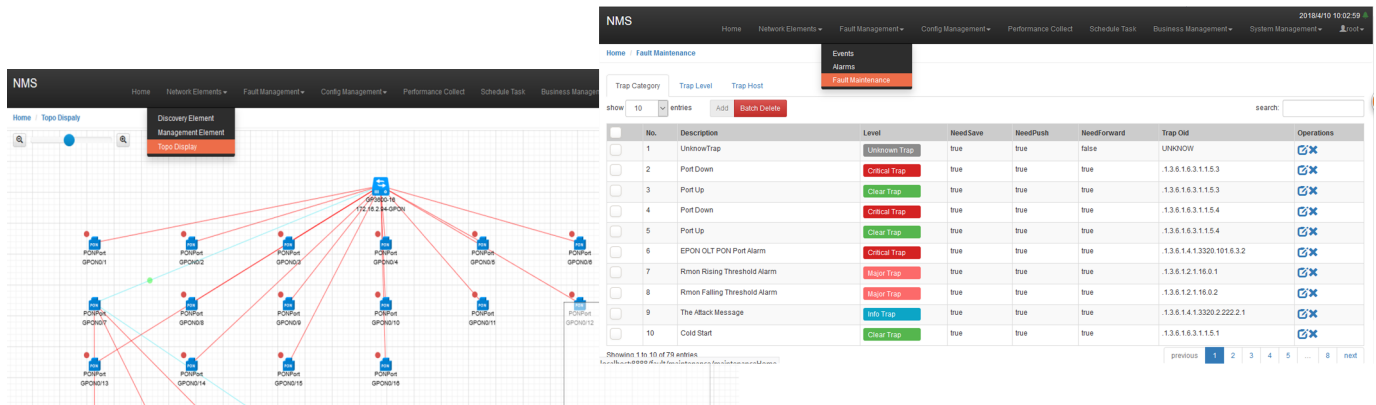
GP254

GP255

GP256

NMS Software

NMS software is a unified Network Management platform for CXR GPON OLT, GPON OLT and Layer 3 Ethernet switches that enable flexible FTTH / FTTO Internet access network deployment. The NMS provides extensive network topology, element management and fault management.

NMS is a high performance and cost effective solution that simply requires any light Web software for user access.

NMS supports all network management functions including

♦ Network topology management including layout, discovery

♦ Element management including inventory, configuration, updates, scheduling

♦ Fault management including event collection and alarm management

Ordering Information

P/N	GPO OLT
GP2508	GPON OLT with 8x GPON, 4x Gigabit, 4x Combo Gigabit and 4x 10GE SFP+ uplinks, 2x redundant power supplies, provided with 1x AC power card but no GPON SFP
GP2516	GPON OLT with 16x GPON, 4x Gigabit, 4x Combo Gigabit and 4x 10GE SFP+ uplinks, 2x redundant power supplies, provided with 1x AC power card but no GPON SFP
GP2500-AC	AC Power supply card for GP2500 OLT, 110-230 V-AC input range, 150 W
GP2500-DC	48 V-DC power supply card for GP2500 OLT, 150 W
SFP-GP-OLT-SM20H	High budget Class C+ GPON SFP
P/N	**GPON ONT**
GP251	GPON ONT bridge, one GPON transceiver SC/UPC, 1x 10/100/1000 GE port, 12 Vdc external mains adaptor
GP253	GPON ONT bridge - router, one GPON transceiver SC/UPC, 4x 10/100/1000 GE port, Wi-Fi 802.11ac, 2x VoIP POTS RJ11, 12 Vdc external mains adapter
GP254	GPON ONT bridge - router, one GPON transceiver SC/APC, 4x 10/100/1000 GE port, Wi-Fi 802.11b/g/n, 2x VoIP POTS RJ11, 1x CATV RF port, 12 Vdc external mains adapter
GP255	GPON ONT Bridge, one GPON trancsceiver 1310/1490nm SC/UPC, 4x 10/100/1000GE POE PSE 802.3at 30W, VLAN, QoS, rate limiting. 54 Vdc external mains adapter.
GP256	GPON ONT Bridge and Router, one GPON transceiver SC/UPC, 4x 10/100/1000BaseT GE LAN ports, Wifi 802.11b/g/n, 300 Mbps, 2T2R, 2x FXS/VoIP SIP. 1USB host, VLAN , QoS, rate control. 12 Vdc external mains adapter.
P/N	**GPON NMS**
NMS-GPON-250	NMS software license to manage up to 250 network elements - GPON OLT & ONT, Ethernet switches
NMS-GPON-500	NMS software license to manage up to 500 network elements - GPON OLT & ONT, Ethernet switches
NMS-GPON-INF	NMS software license to manage an unlimited network elements - GPON OLT & ONT, Ethernet switches

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