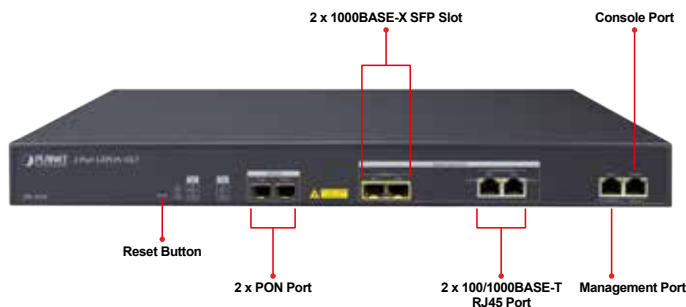


GEPON OLT with 2 PON Ports, 2 1000BASE-X SFP Uplink Slots & 2 100/1000BASE-T RJ45 Slots



Perfectly Designed for FTTx Applications

PLANET EPL-2220 GEPON **Optical Line Terminal (OLT)** consists of **two GEPON ports, two GbE SFP ports, two GbE RJ45 interfaces** and one management port. It is easy to install and maintain a GEPON deployment. With PLANET GEPON **Optical Network Units (ONU)** EPN series, the EPL-2220 can provide highly-effective GEPON solutions and convenient management for broadband network. PLANET GEPON technology provides a high bandwidth of up to **1.25Gbps** for both upstream and downstream, long-distance coverage of up to 20km between equipment nodes, and flexibility for network deployment. It is a cost-effective access technology with reliable and scalable network for triple-play service applications.



High-speed and Long-distance Coverage for Triple Play Services

With growing network services such as HDTV, IPTV, voice-over-IP (VoIP) and multimedia broadband applications, the demand for broadband use rises quickly. The present broadband environment has not accorded with needs; however, **Passive Optical Network (PON)** would be the most promising NGN (Next Generation Networking) technology to fulfill the demand.

High Split Ratio for a Cost-effective Network Solution

The EPL-2220 is an ideal solution for FTTx applications. It helps to minimize the investment cost for carriers by offering a high split ratio of 1:64 per port and supporting the usage of PLANET ONUs. The EPL-2220 provides strong functionalities for Ethernet features such as VLAN, Multicast, DBA (Dynamic Bandwidth Allocation), and Access Control List besides GEPON, a point to multipoint communications protocol based on Gigabit Ethernet. GEPON protocol allows a Gigabit Ethernet communications fiber to be shared by multiple end users using a passive optical splitter. GEPON communication takes place between an Optical Line Terminal (OLT) and multiple Optical Network Units (ONUs). Using standard terminology, downstream traffic flows from OLT to ONU, and upstream traffic flows from ONU to OLT. A protocol called Multi Point Control Protocol (MPCP) is used to arbitrate the channel between the ONUs so that no collisions will occur on the common fiber.

GEPON Port

- 2 SC-type GEPON OLT ports
- Up to 1.25Gbps upstream and downstream
- Maximum transfer distance of up to 20km
- Each PON port supports up to 64 ONUs
- Fully compliant with IEEE 802.3ah
- Point-to-multipoint network topology
- LED indicators for link status

Uplink and Management Port

- Two 1000BASE-SX/LX SFP interfaces, maximum transfer distance of up to 120km
- Two 100/1000BASE-T RJ45 interfaces
- One 10/100BASE-TX RJ45 management port

Layer 2 Features

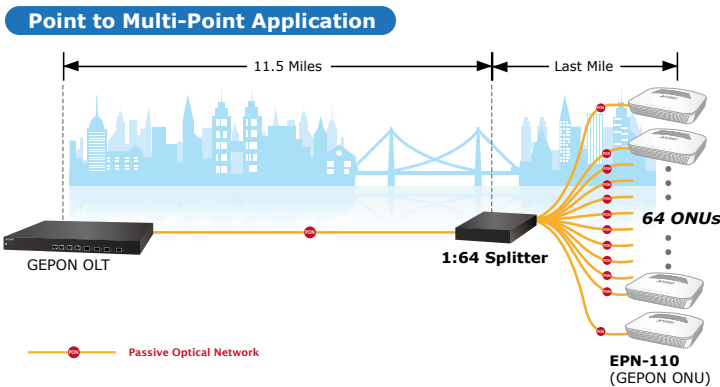
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex)
- High performance Store and Forward architecture, broadcast storm control
- Port Isolate
- Supports VLAN
 - IEEE 802.1Q tagged VLAN
 - Provider Bridging (VLAN Q-in-Q) support (IEEE 802.1ad)
- Supports Spanning Tree Protocol
 - RSTP (Rapid Spanning Tree Protocol)
- Supports Link Aggregation
 - IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- Provides port mirror (many-to-1)
 - Loop protection to avoid broadcast loops(For ONU configuration)

Quality of Service

- Ingress and egress rate limit per port bandwidth control
- Storm control support
 - Broadcast/Unknown unicast/Unknown multicast
- Strict priority and Weighted Round Robin (WRR)

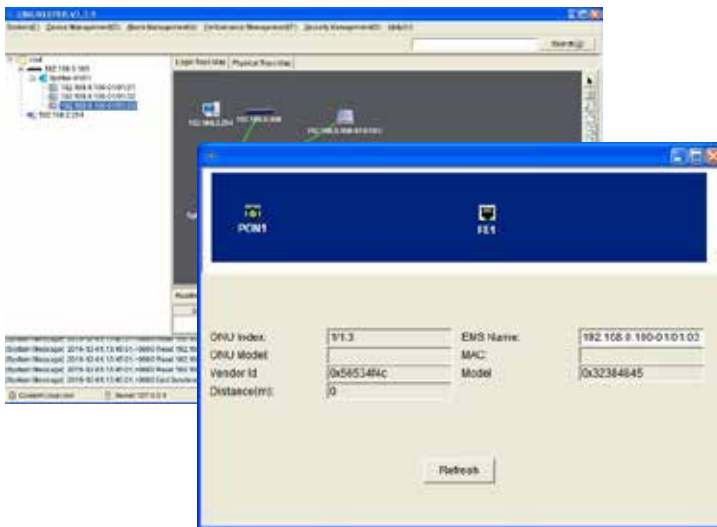
Multicast

- Supports IGMP Snooping V1, V2
- IGMP querier mode support



High Scalability and Flexible OLT Maintenance

For efficient management, the EPL-2220 supports remote management functions. Via its user-friendly GUI utility, the administrators can manage and configure the OLT and ONU equipment on the central side. The GUI utility supports up to 32 EPL-2220 OLTs to be centrally managed through one control screen. The built-in **Element Management System (EMS)** offers an easy-to-use management and configuration facility to add to or remove PLANET OLTs and ONUs from the network architecture easily and economically. Its great flexibility is perfect for deployment among different network architectures. The EPL-2220 also supports standard **Simple Network Management Protocol (SNMP)** and can be managed via any standard-based management software.



Robust ONUs Management

The EPL-2220 supports many operating and monitoring functions for efficient ONU management, such as ONU auto-detection, auto-registration, testing link connection, binding MAC address and filtration, bandwidth control, flow control, and multicast stream control.

Flexible and Extendable Solution

The EPL-2220 has four uplink ports. The two mini-GBIC slots of the uplink ports of the EPL-2220 are compatible with 1000BASE-SX/LX and WDM SFP (Small Form Factor Pluggable) fiber-optic modules. The distance can be extended from 550 meters (Multi-mode fiber cable) to 10/30/50/70/120 kilometers (Single-mode fiber or WDM fiber cable). They are well suited for FTTx applications to distribution data link.

ACL

- Access control list
 - IP-based ACL
 - MAC-based ACL
- MAC security
 - Static MAC
 - MAC filtering
- DHCP snooping to filter distrusted DHCP messages

Management

- User privilege levels control
- Built-in Trivial File Transfer Protocol (TFTP) client
- DHCP Server for assigning IP address
- System maintenance
 - Firmware upload/download via HTTP / TFTP
 - Configuration upload/download through web interface
 - Hardware reset button for system reboot or reset to factory default
- NTP Network Time Protocol
- Event message logging to remote Syslog server

OLT Management

- User-friendly GUI management
- IPTV multicast creation and management
- Up to 32 OLTs management through single GUI
- SNMP v1/v2c monitoring
- Three users levels control
- Supports ONU authentication; averts illegal ONU access to network
- Event message logging to system log
- SNMP trap for alarm notification

ONU Management

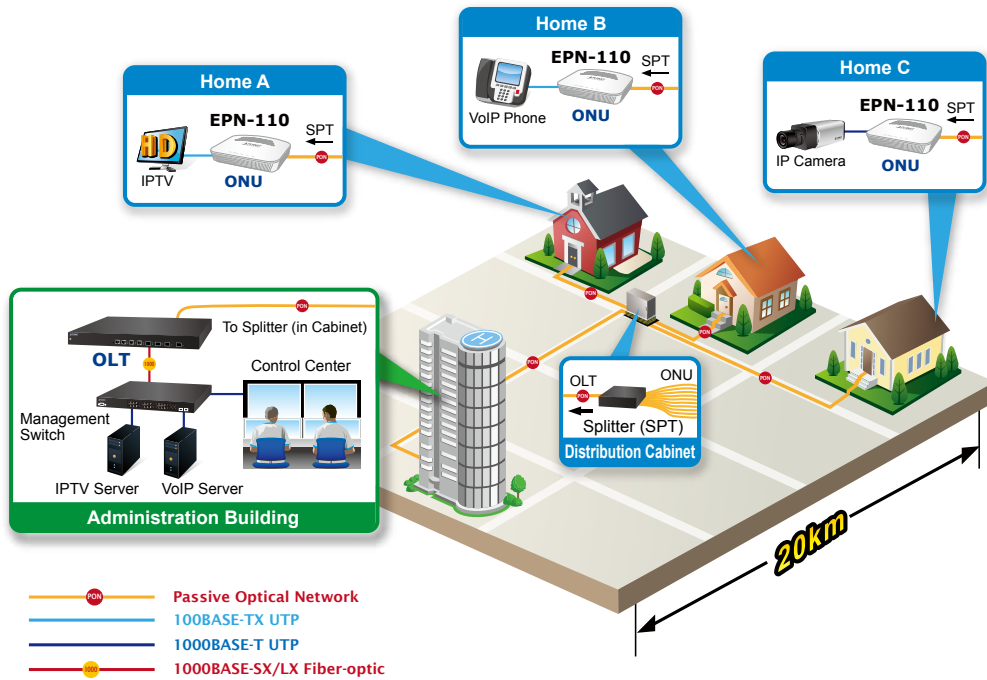
- ONU port control
- ONU multicast control
- ONU IGMP fastleave
- ONU VLAN mode
- ONU DBA (Dynamic Bandwidth Allocation) supported

Applications

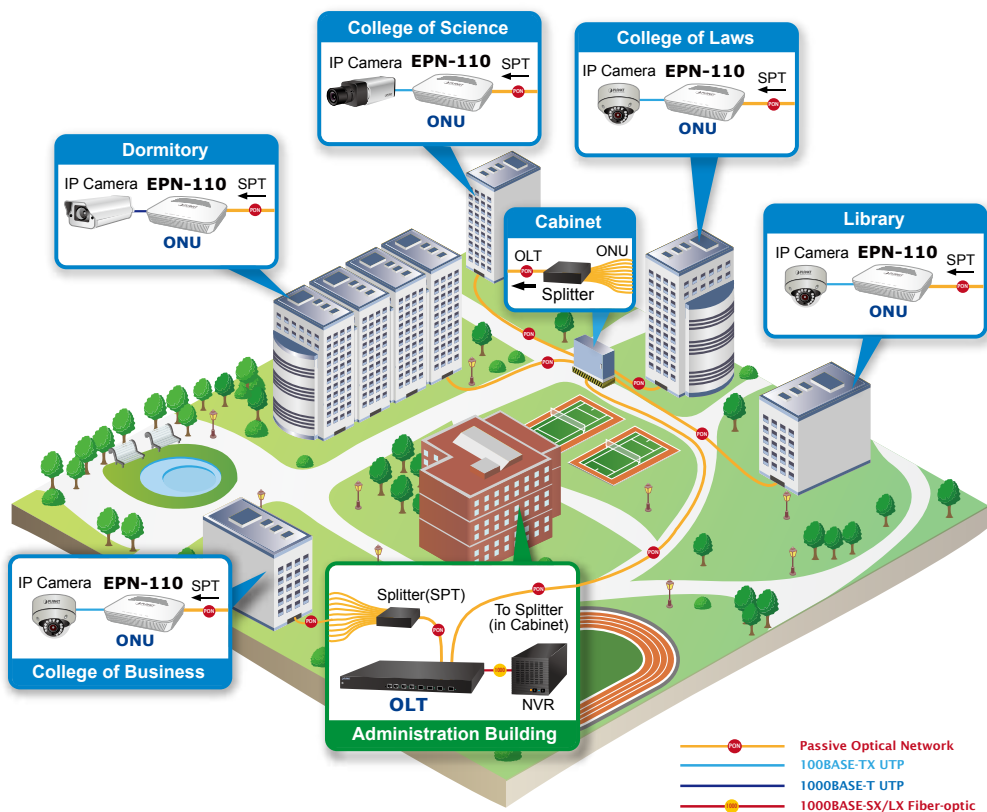
Cost-effective, Long-distance and High-bandwidth Triple Play or Surveillance Applications

PLANET EPL-2220 delivers high-speed voice, data and video services to residential and business subscribers. With the PON technology, the EPL-2220 offers competitive advantages including a long-term life expectancy of the fiber infrastructure, lower operating costs from the reduction of “active” components, support of up to 20km distance between equipment nodes, easy Installation and maintenance, and most importantly, offering of much greater bandwidth. The EPL-2220 is the perfect solution for Triple Play or surveillance applications by offering benefits of cost-effectiveness, scalability and flexibility to network deployment.

Fiber To The Home (FTTH) Application



IP Surveillance System Application for Campus



Specifications

Product		EPL-2220
Hardware Specifications		
Transmission Speed		Downstream: 1.25 Gbps Upstream: 1.25 Gbps
Optical Split Ratio		Up to 1:64
Port	Uplink Port	Two 1000BASE-X SFP slots Two 100/1000BASE-T RJ45 ports
	PON Port	Two 1.25Gbps PON ports
	MGMT Port	One RJ45 port (10/100BASE-TX)
LED Indicators		1 power LED 1 system LED 6 uplink port LEDs (ACT and Link) 2 PON LEDs (Link)
Dimensions (W x D x H)		442 x 200 x 43mm
Weight		2.84kg
Power		100 – 250V AC
EMS Utility Specifications		
Switch Feature		<ul style="list-style-type: none"> - IPTV multicast creation and management - MAC address learning and binding - MAC filtering - Supports IGMP mode - Supports the VLAN division on the basis of port - Up to 4096 VLAN - 16K MAC addresses - ONU multicast control - ONU IGMP fastleave - ONU VLAN mode - ONU port management
Layer 2 Functions		
Port Mirroring		TX/RX/both Many-to-1 monitor
VLAN		802.1Q tagged-based VLAN Up to 256 VLAN groups, out of 4094 VLAN IDs 802.1ad Q-in-Q tunneling
Link Aggregation		IEEE 802.3ad LACP and static trunk
Multicast		IGMP Snooping V1, V2 IGMP querier Up to 256 multicast groups
Access Control List		IP-based ACL/MAC-based ACL
QoS		Traffic classification based, strict priority and WRR
Security		MAC filtering Static MAC address DHCP Snooping
Management Functions		
Basic Management Interfaces		Web browser/Console/SNMP v1, v2c Firmware upgrade by HTTP/TFTP protocol through Ethernet network Remote/Local Syslog Remote ONU management
Standards Conformance		
Safety		CE, LVD
Standards Compliance		IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3z Gigabit SX/LX IEEE 802.3x flow control and back pressure IEEE 802.1Q tagged VLAN
Environment Specifications		
Temperature		Operating temperature: 0 ~ 50 degrees C Storage temperature: -30 ~ 60 degrees C
Humidity		Operating Humidity: 10 ~ 90% non-condensing Storage Humidity: 5 ~ 90% non-condensing

Standard Accessories

Packet Contents	Quick Installation Guide x 1 User's Manual CD x 1 PX20 SFP Transceiver x 2 Power Cord x 1 Two Rack-mounting Brackets with Attachment Screws x 1 (set) Console Cable x 1
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Ordering Information

EPL-2220	GEPON OLT with 2 PON Ports, 2 1000BASE-X SFP Uplink Slots & 2 100/1000BASE-T RJ45 Interfaces
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Related Products

EPN-402NV	GEPON Wi-Fi VoIP ONU
EPN-110	GEPON SFU ONU with one GE Port

Accessories

EPL-SPT-8	GEPON Splitter (1 x 8 PLC Splitter, Wavelength 1230 ~ 1650 nm)
EPL-SPT-32	GEPON Splitter (1 x 32 PLC Splitter, Wavelength 1230 ~ 1650 nm)
EPL-SPT-64	GEPON Splitter (1 x 64 PLC Splitter, Wavelength 1230 ~ 1650 nm)