# Product Specifications

## GEPON SFU ONU with one GE Port

## EPN-110

Version 1.0



**Change History:**

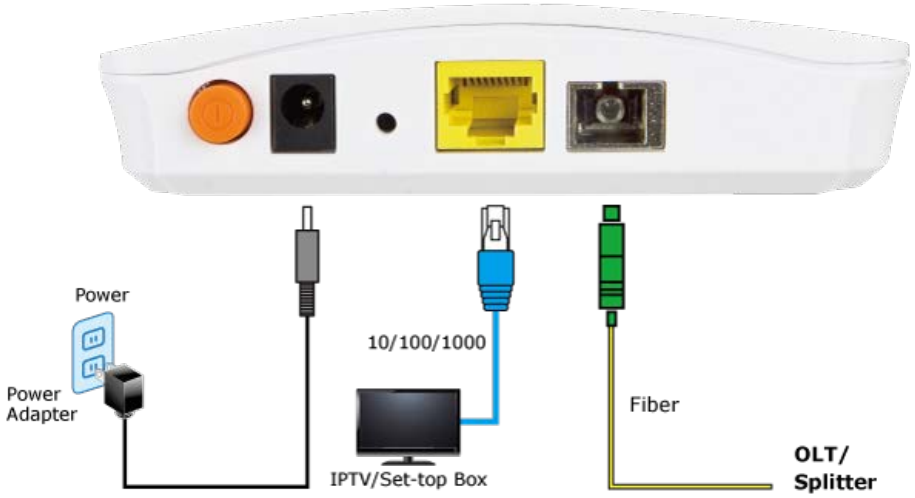
| Revision: | Date: | Author: | Change List |
|---|---|---|---|
| Version 1.0 | 2017/1/20 | Solo Hsu | Initial Release |

| | | | |
|---|---|---|---|
| **Author:** | Solo Hsu | **Editor:** | Solo Hsu |
| **Reviewed By:** | Miki Chou | **Approved By:** | Kent Kang |

# 1. PRODUCT DESCRIPTION

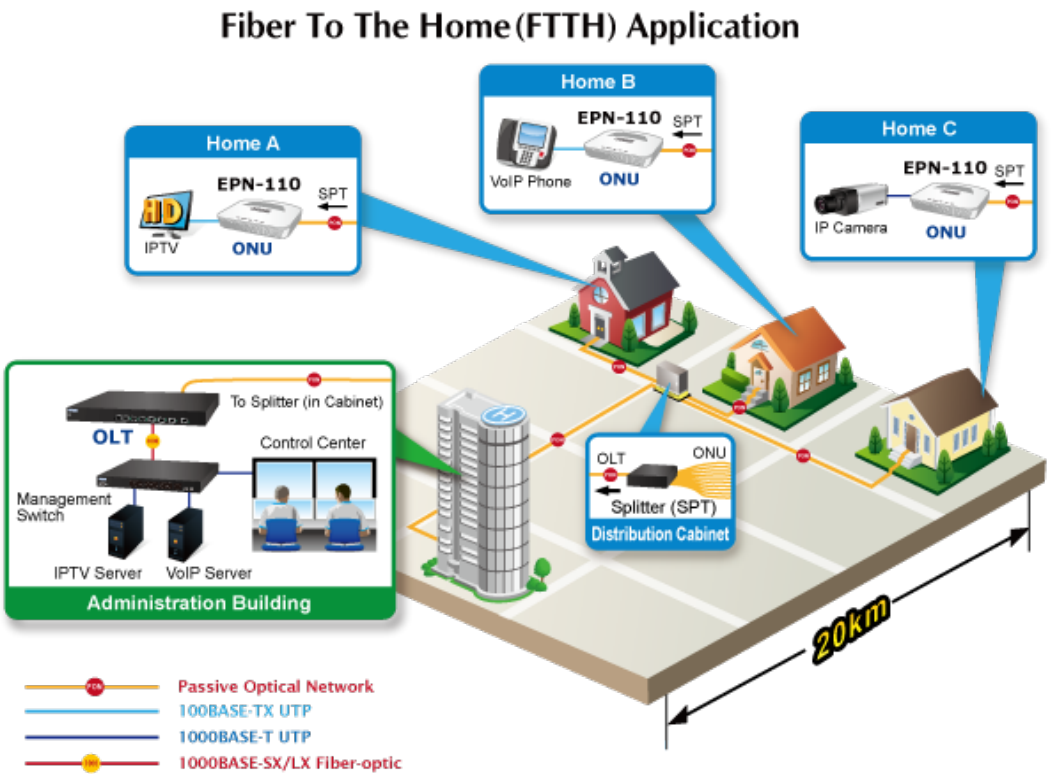
## Perfectly Designed for FTTx Applications

PLANET EPN-110 is a GEPON **Optical Network Unit (ONU)** equipped with **one GEPON port and one Gigabit Ethernet RJ45 interface**. When functioning with PLANET GEPON **Optical Network Terminal (OLT)**, the EPN-110 provides highly-effective GEPON solutions for FTTx network. With the friendly-centralized GUI management, it is easy for the installation and maintenance of GEPON deployment.



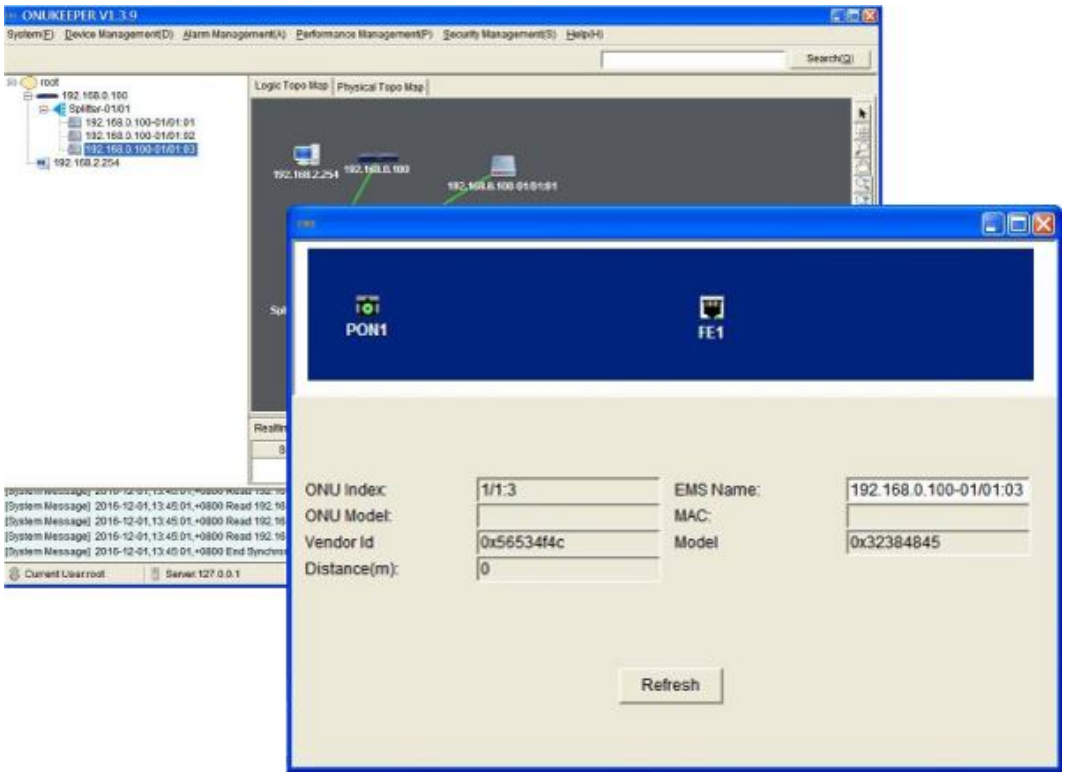

## Cost-effective Passive Optical Network Connection Solution

With increasing network services such as HDTV, IPTV, voice-over-IP (VoIP) and multimedia broadband applications, the demand of broadband communication has grown quickly. Passive Optical Network (PON) is the most promising NGN (Next Generation Networking) technology to meet the needs. As compared to other broadband access technologies such as xDSL and cable modem, Passive Optical Network (PON) technology offers competitive advantages including a long-term life expectancy of the fiber infrastructure, lower operating costs through the reduction of “active” components, support of up to 20km long distance between equipment nodes, and most importantly, offer of much greater bandwidth.




## Robust ONUs Management

The EPN-110 is designed to work with PLANET OLT to provide robust FTTx applications. With the **Element Management System (EMS**) **built** in the PLANET OLT, the administrators can manage and configure the facilities such as adding or removing PLANET OLTs and ONUs to or from the network architecture easily and economically. The EMS also supports many operating and monitoring functions for efficient ONUs management including ONU auto-detection, auto-registration, testing of link connection, binding of MAC address and filtration, bandwidth control, flow control, and multicast stream control.



## 2. PRODUCT FEATURES

- **GEPON Port**
  - 1 SC type GEPON port
  - Up to 1.25Gbps data rate in both upstream and downstream directions.
  - Maximum distance of up to 20km
  - Compliant with IEEE 802.3ah
  - LED indicators for link status

- **Physical Hardware**
  - One 10/100/1000Mbps Gigabit port
  - 1 reset button
  - 1 power switch

- **Features**
  - Dynamic Bandwidth Allocation (DBA) support
  - PON interface complies with IEEE 802.3ah
  - IEEE 802.3ah compliant Forward Error Correction (FEC)
  - Supports up to 64 MAC addresses
  - Enhanced IGMP features
  - 1.5 MB of integrated packet buffering
  - Supports Layer 2/3/4 classification rules
  - Supports IEEE 802.3x flow control
  - Internal Management Information Base (MIB) counters for network statistics

# 3. PRODUCT SPECIFICATIONS

## 3.1 FUNCTION SPECIFICATIONS

| | | |
|---|---|---|
| **Product** | | EPN-110 |
| **Hardware Specifications** | | |
| **Transmission Speed** | | Downstream: 1.25 Gbps<br>Upstream: 1.25 Gbps |
| **Port** | **PON Port** | 1 PON port |
| | **Ethernet Port** | 1 RJ45 port (10/100/1000BASE-T) |
| **Fiber Maximum Distance** | | 20km |
| **Optic Wavelength** | | TX: 1310mm, RX: 1490mm |
| **Optical Receive Sensitivity** | | -27 dBm |
| **Input Saturation Power** | | -3 dBm |
| **Signal Detect – Assert Power** | | -27 dBm |
| **Signal Detect – De-assert Power** | | -42 dBm |
| **LED Indicators** | | 1 Power LED<br>1 PON LED<br>1 Link LED<br>1 LOS LED<br>1 SYS LED |
| **Dimensions (W x D x H)** | | 120 x 96 x 29 mm |
| **Weight** | | 95g |
| **Power Input** | | 12V DC, 0.5A |
| **EMS Utility Specifications** | | |
| **ONU Features** | | MAC address learning<br>Supports IGMP snooping<br>64 MAC addresses<br>Service Level Agreement (SLA)<br>Remote loop-back test<br>ACL and MAC filtering<br>IEEE 802.3ah compliant Forward Error Correction (FEC) |
| **Standards Conformance** | | |
| **Standards Compliance** | | IEEE 802.3 10BASE-T<br>IEEE 802.3u 100BASE-TX<br>IEEE 802.3ab 1000BASE-T<br>IEEE 802.3x flow control and back pressure<br>IEEE 802.1w Rapid Spanning Tree Protocol |
| **Safety** | | CE |
| **Environment Specifications** | | |
| **Temperature** | | Operating temperature: -5 ~ 55 degrees C<br>Storage temperature: -30 ~ 60 degrees C |
| **Humidity** | | Operating humidity: 10 ~ 90% non-condensing<br>Storage humidity: 10 ~ 95% non-condensing |

### 3.3 PHYSICAL SPECIFICATIONS:

- **Dimensions:**

  120 x 78 x 30mm (W x D x H)

- **Weight:**

  120g

- **Top view:**


- **Rear view:**

| Object | Description |
|---|---|
| **PON** | SC type GEPON |
| **LAN** | Connected to Local Area Network. |
| **Reset Button** | Press this button, and hold for 5 seconds for resetting to the default value. |

| | |
|---|---|
| **DC 12V** | Power input port. |
| **Power** | Power switch. |

- LED definitions


| LED | Color | Function | |
|---|---|---|---|
| **PWR** | **Green** | **Light** | Indicates the ONU has power. |
| | | **OFF** | The ONU doesn't receiver power. |
| **LOS** | **Red** | **Blink** | Optical Power is too Low |
| | | **OFF** | Optical Power is normal |
| **PON** | **Green** | **Blink** | Indicates the port is not getting normal Optical Signal. |
| | | **Light** | Indicates the port is getting normal Optical Signal. |
| **LNK/ACT** | **Green** | **OFF** | No Link |
| | | **Blink** | Indicates the link through that port is registering. |
| | | **Light** | Indicates the link through that port is registering successfully and established. |
| **SYS** | **Green** | **Blink** | Device power on |
| | | **OFF** | Device power off |

## 3.4 ENVIRONMENTAL SPECIFICATIONS

**Operating:**

**Temperature:** -5 ~ 55 degrees C

**Relative Humidity:** 10% ~ 90% (non-condensing)

**Storage:**

**Temperature:** -30 ~ 60 degrees C

**Relative Humidity:** 10% ~ 95% (non-condensing)

## 3.5 ELECTRICAL SPECIFICATIONS

**Input Voltage:** 12VDC, 0.5A

## 3.6 BASIC PACKAGING

- GEPON ONU x 1
- User's Manual x 1
- 12V DC, 0.5A Power Adapter x 1