

FD600-301 series EPON ONU



Brief Views

FD600-301 series is fiber to the home multi service access EPON ONU. It's based on the mature, stable, high cost performance EPON technology and has gigabit Ethernet switching, WDM and HFC technology. FD600-301 series has a higher bandwidth, higher reliability, easy management and good quality of service (QoS) guarantee with technical performance of equipment meet the IEEE802.3ah requirements and have good compatibility with third party manufacturers OLT.

EPON technology is a kind of emerging technology which takes advantage of PON technology and Ethernet technology also is a kind of point to multi-point network technology. OLT through the passive optical network to connect multiple ONU with single fiber bidirectional technical can rarely used fiber resources to meet the operators of the multi-user access requirements.

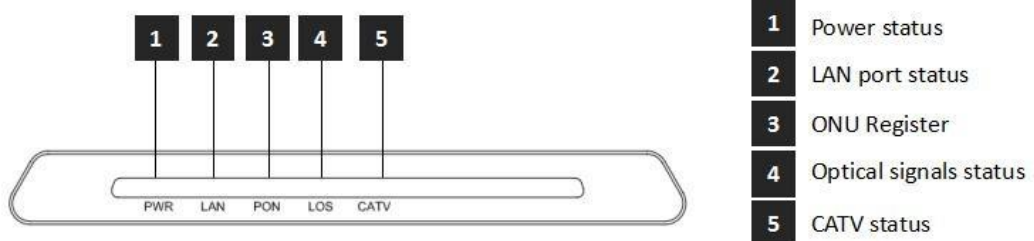
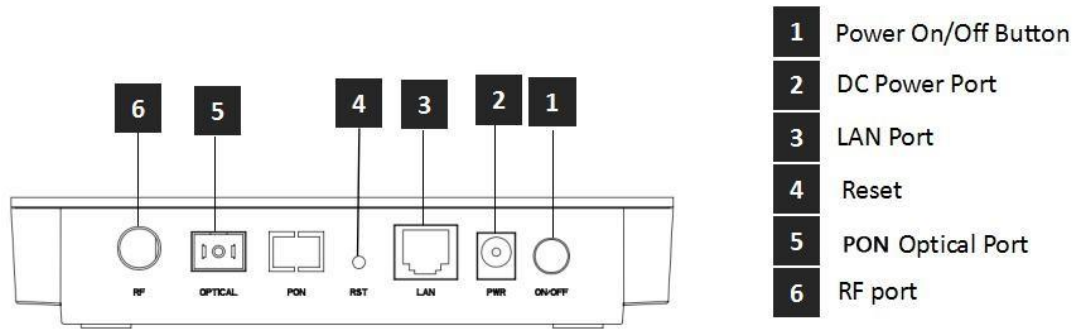
It adopts single fiber WDM technology with downlink wavelength 1550nm and 1490nm, uplink wavelength 1310nm . It only needs one-core fiber to transmit data and CATV service.

Functional Feature

- Support port-based rate limitation and bandwidth control;
- In compliant with IEEE802.3ah Standard
- Up to 20KM transmission Distance
- Support data encryption, group broadcasting, port Vlan separation ,etc.
- Support Dynamic Bandwidth Allocation (DBA)
- Support ONU auto-discovery/Link detection/remote upgrade of software;
- Support port mode of VLAN configuration
- Support power-off alarm function ,easy for link problem detection
- Support broadcasting storm resistance function

- Support port flow control
- Support ACL and SNMP to configure data packet filter flexibly
- Specialized design for system breakdown prevention to maintain stable system
- Support software online upgrading
- EMS network management based on SNMP ,convenient for maintenance

Product interface and LED definitions



| Indicator | | | Description |
|-----------|------|----------------------|--|
| 1 | PWR | Power status | On: The ONU is power on Off: The ONU is Power off |
| 2 | CATV | CATV status | On : CATV optical normal Off : The CATV signals are not received |
| 3 | LAN | LAN port status | On: Ethernet connection is normal Blinking: Data is being transmitted through the Ethernet port Off: Ethernet connection is not set up |
| 4 | LOS | EPON optical signals | On: Optical power lower than receiver sensitivity ; Off: Optical in normal |
| 5 | PON | ONU Register | On: Success to register to OLT Blinking: In process of registering to OLT Off: Failed to register to OLT; |



Specification

| Item | Parameter |
|-----------------------------|---|
| PON Interface | 1 EPON optical interface Meet 1000BASE-PX20+ standard Symmetric 1.25Gbps upstream/downstream SC single-mode fiber split ratio: 1:64 Transmission distance 20KM |
| User Ethernet Interface | 1*10/100/1000M auto-negotiation Full/half duplex mode RJ45 connector Auto MDI/MDI-X 100m distance 1 RF output Female F-Type Connector |
| Power Interface | 12V DC Power supply |
| PON Optical Parameter | Wavelength: Tx 1310nm, Rx1490nm Tx Optical Power: 0~4dBm Rx Sensitivity: -27dBm Saturation Optical Power: -3dBm Connector Type: SC Optical Fiber: 9/125 μ m single-mode fiber |
| Data Transmission Parameter | PON Throughput: Downstream 950Mbps; Upstream 930Mbps Ethernet: 1000Mbps Packet Loss Ratio: <1*10E-12 latency: <1.5ms |
| Business Capability | Layer 2 wire speed switching Support VLAN TAG/UNTAG, VLAN conversion Support Port-based speed limitation Support Priority classification Support storm control of broadcast Support loop detection |
| Network Management | Support IEEE802.3 QAM, ONU can be remotely managed by OLT Support Remote management through SNMP and Telnet Local management |
| Management Function | Status monitor, Configuration management, Alarm management, Log management |
| Shell | Plastic casing |
| Power | <5W, 12V/0.5A power supply adapter |
| Physical Specifications | Item Dimension: 160mm(L)*120mm(W)*32mm(H) Item weight: 0.3kg |

| | |
|------------------------------|--|
| Environmental Specifications | Operating temperature: 0 to 50°C Storage temperature: -40 to 85°C Operating humidity: 10% to 90%(Non-condensing) Storage humidity: 10% to 90%(Non-condensing) |
|------------------------------|--|

 **CATV**

| Item | Parameter |
|-----------------------|---|
| Wavelength | 1100-1650nm |
| Optical return loss | >45dB |
| Input optical power | -18dBm~0dBm |
| RF frequency | 47MHz~1000MHz |
| RF output lever | $\geq 78\text{dBuV}$ (@-12~-2dBm@85MHz) |
| AGC control accuracy | $< \pm 1\text{db}$ |
| Flatness | $< \pm 1.5\text{db}$ |
| CNR | >41dB (@-10dBm@DS22 Channel) |
| CSO | >60dBc (@-10dBm@DS22 Channel) |
| CTB | >60dBc (@-10dBm@DS22 Channel) |
| RF output return loss | >14dB |
| RF impedance | 75Ohm |
| AGC function | Support |

 **Network application**

Typical Solution: FTTH

Typical Business: INTERNET

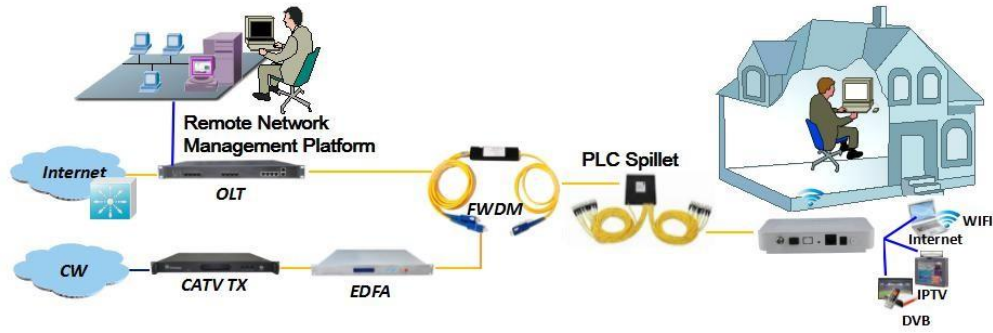


Figure: FD600-301 Application Diagram

Ordering Information

| Product Name | Product Model | Descriptions |
|--------------------------|-------------------|--|
| 1GE+CATV Single Fiber | FD600-301GA-HZ220 | 1*10/100/1000M Ethernet interface, 1 EPON interface, built-in FWDM, Input optical power -18dBm ~ 0dBm, support AGC function, Plastic casing, external power supply adapter |