

## FD701G-AG-Z310 1GE+CATV GPON ONT



### Brief Views

FD701G-AG-Z310 is fiber to the home multi service access GPON ONT. It's based on the mature, stable, high cost performance GPON technology and has gigabit Ethernet switching, WDM and HFC technology. FD701G-AG-Z310 has a higher bandwidth, higher reliability, easy management and good quality of service (QoS) guarantee with technical performance of equipment meet the ITU G. 984 requirements and have good compatibility with third party manufacturers OLT.

GPON is the latest generations of access network technology. ITU-T G.984 is the standard protocol of GPON. The GPON standard differs from other PON standards in that it achieves higher bandwidth and higher efficiency using larger, variable-length packets. GPON offers efficient packaging of user traffic, with frame segmentation allowing higher quality of service (QoS) for delay-sensitive voice and video communications traffic. GPON network provides the reliability and performance expected for business services and provides an attractive way to deliver residential services. GPON enables fiber to the home (FTTH) deployments economically resulting to accelerated growth worldwide.

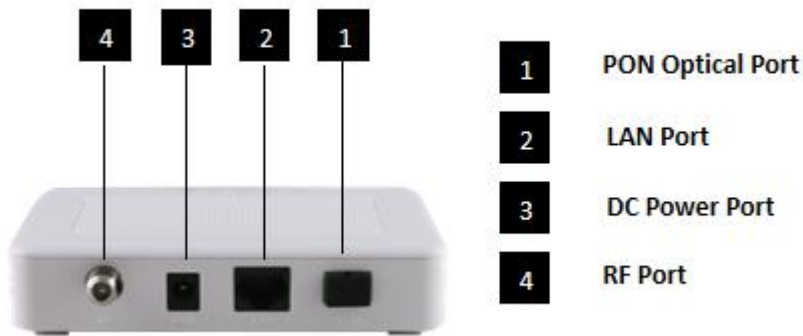
It adopts single fiber WDM technology with downlink wavelength 1550nm and 1490nm, uplink wavelength 1310nm . It only needs one-core fiber to transmit data and CATV service.

### Functional Feature

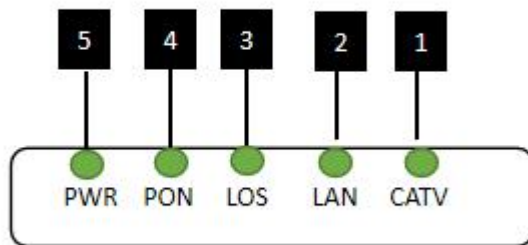
- In compliant with ITU - T G.984 Standard, adapting GPON upstream
- Support ONU auto-discovery/Link detection/remote upgrade of software
- Support SN and LOID+Password multiple registration methods
- Support port VLAN configuration
- Support mac-address learning
- Support port-based rate limitation and bandwidth control
- Support port flow-control
- Support broadcasting storm resistance function
- Support igmp transparent/snooping/proxy mode
- Support remote management configuration
- Support Dynamic Bandwidth Allocation (DBA)

- Support AES encryption and decryption
- Support three layer routing function
- Support remote CATV port management
- EMS network management based on SNMP ,convenient for maintenance
- Support power-off alarm function ,easy for link problem detection

## Product Interface and LED Definitions



- 1 PON Optical Port
- 2 LAN Port
- 3 DC Power Port
- 4 RF Port



- 1 CATV Status
- 2 LAN Port Status
- 3 Optical Signals Status
- 4 ONU Register
- 5 Power Status

Indicator		Description	
1	CATV	CATV status	On: CATV optical normal Off: The CATV signals are not received
2	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
3	LOS	GPON optical signals	On: Optical power lower than receiver sensitivity ; Off: Optical in normal
4	PON	ONU Register	On: Success to register to OLT Blinking: In process of registering to OLT Off: Failed to register to OLT;
5	PWR	Power status	On: The ONU is power on Off: The ONU is Power off


**Specification**

Item	Parameter
PON Interface	1*GPON port, FSAN G.984.2 standard, Class B+ Downstream Data Rate: 2.488Gbps Upstream Data Rate: 1.244Gbps SC/PC single mode fiber 28dB Link loss and 20KM distance with 1:128
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: 0.5~5dBm Rx Sensitivity: -28dBm Saturation Optical Power: -8dBm
Data Transmission Parameter	PON Throughput: Downstream 2.488Gbit/ s; Upstream 1.244Gbit/s Ethernet: 1000Mbps Packet Loss Ratio: <math><1*10E-12</math> latency: <math><1.5ms</math>
Business Capability	Layer 2 wire speed switching Support VLAN TAG/UNTAG, VLAN translation Support Port-based speed limitation Support Priority classification Support storm control of broadcast Support loop detection
Network Management	Standard compliant OMCI interface as defined by ITU-T G.984.4 Support WEB management
Management Function	Status monitor, Configuration management, Alarm management, Log management
Shell	Plastic casing
Power	<math><4.5W</math>, 12V/0.5A power supply adapter
Physical Specifications	Item Dimension: 125mm(L)*80mm(W)*28mm(H) Item weight: 0.2kg
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)

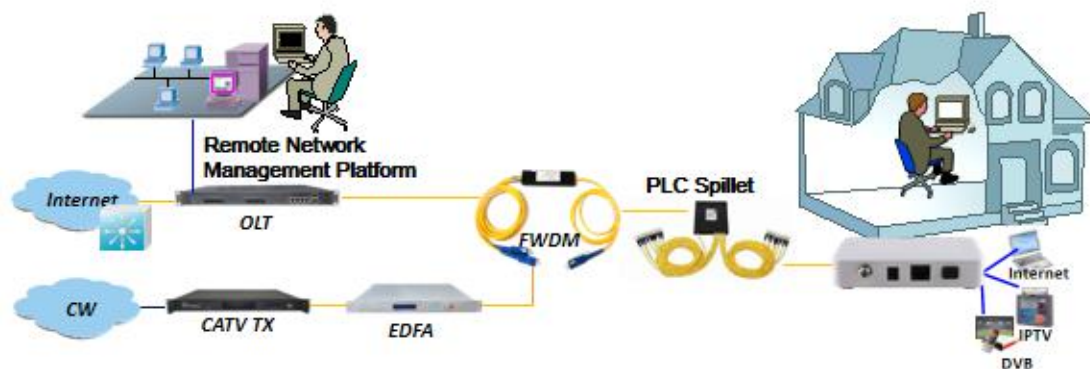
**CATV**

Item	Parameter
Wavelength	1550nm
Optical return loss	>45dB
Input optical power	-18dBm~0dBm
RF frequency	47MHz~1000MHz
RF output lever	≥78dBuV (@-12~-2dBm@85MHz)
AGC control accuracy	<±1db
Flatness	<±1.5db
CNR	>41dB (@-10dBm@DS22 Channel)
CSO	>60dBc (@-10dBm@DS22 Channel)
CTB	>60dBc (@-10dBm@DS22 Channel)
RF output return loss	>14dB
RF impedance	75Ω
AGC function	Support

**Network Application**

Typical Solution: FTTH

Typical Business: INTERNET, CATV



**Figure: FD701G-AG-Z310 GPON ONU Application Diagram**

## Ordering Information

Product Name	Product Model	Descriptions
1GE+CATV Single Fiber	FD701G-AG-Z310	1*10/100/1000M Ethernet interface, 1 RF interface, 1 GPON interface, built-in FWDM, Input optical power -18dBm ~ 0dBm, support AGC function, Plastic casing, external power supply adapter