

## FD704X-AE-R410 Single-Fiber 1GE+3FE+CATV ONU



### Brief Views

FD704X-AE-R410 is fiber to the home multiple 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. It has a higher bandwidth, higher reliability, easy management and good quality of service (QoS) guarantee. The technical performance of equipment meets the IEEE802.3ah requirements and have good compatibility with third party OLT.

EPON technology is an emerging technology which takes advantage of PON technology and Ethernet technology. It's also point to multi-point network technology. Combined with single-fiber bidirectional technology, OLT device interconnected with multiple ONU through the passive optical network . EPON network system can use fewer fiber cable to meet the multi-user access needs of operators.

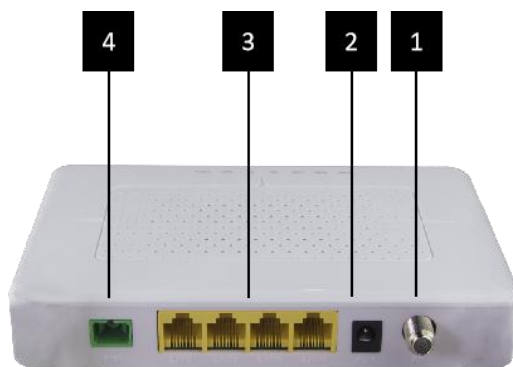
It adopts single fiber WDM technology with downlink wavelength 1550nm and 1490nm, uplink wavelength 1310nm . It only needs one-core fiber to transmit data and CATV service.

### Functional Feature

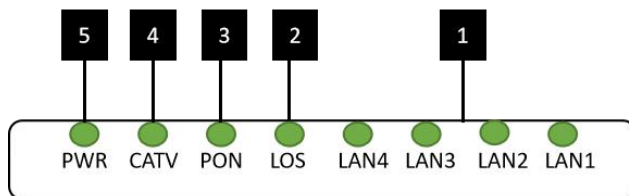
- Single-fiber access, provides internet, CATV multiple service
- In compliant with IEEE802.3ah standard
- Support ONU auto-discovery/Link detection/remote upgrade of software
- Support MAC and LOID+Password multiple registration methods
- Support port VLAN configuration
- Support mac-address learning
- 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 data encryption and decryption
- 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 RF Port
- 2 DC Power Port
- 3 LAN Port
- 4 Optical Port



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

Indicator			Description
1	LAN1-4	LAN port status	On: Ethernet connection is normal Blinking: Data is being transmitted through the Ethernet port Off: Ethernet connection is not set up
2	LOS	EPON optical signals	On: Optical power lower than receiver sensitivity ; Off: Optical in normal
3	PON	ONU Register	On: Success to register to OLT Blinking: In process of registering to OLT Off: Failed to register to OLT;
4	CATV	CATV status	On: CATV optical normal Off: The CATV signals are not received
5	PWR	Power status	On: The ONU is power on Off: The ONU is Power off


**Specification**

Item	Parameter
PON Interface	1 EPON optical interface Meet 1000BASE-PX20+ standard Symmetric 1.25Gbps upstream/downstream SC/APC single-mode fiber split ratio: 1:64 Transmission distance 20KM
User Ethernet Interface	1*10/100/1000M and 3*10/100M 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
Data Transmission Parameter	PON Throughput: Downstream 1.244Gbit/s; Upstream 1.244Gbit/s Ethernet: 1000Mbps and 100Mbps Packet Loss Ratio: <math>1 \times 10^{-12}</math> latency: <math>1.5\text{ms}</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
Management Mode	OAM, WEB, Telnet
Management Function	Status monitor, Configuration management, Alarm management, Log management
Power	<math>6.5\text{W}</math>, 12V/0.6A power supply adapter
Physical Specifications	Item Dimension: 160mm(L)*112mm(W)*28.5mm(H) Item Net Weight: about 258g
Environmental Specifications	Operating temperature: 0 to 40°C Operating humidity: 10% to 90%(Non-condensing)

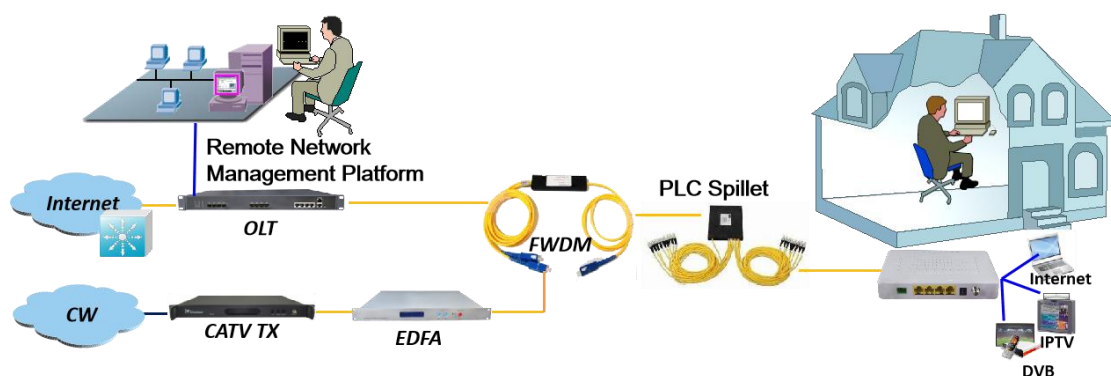
**CATV**

Item	Parameter
Wavelength	1550nm
Optical return loss	>45dB
Input optical power	-18dBm~0dBm
RF frequency	47MHz~1000MHz
RF output lever	82dBuV (@-12~-2dBm@85MHz)
CNR	>41dB (@-10dBm@DS22 Channel)
CSO	>58dBc (@-10dBm@DS22 Channel)
CTB	>58dBc (@-10dBm@DS22 Channel)
RF output return loss	>12dB
RF impedance	75Ω
AGC function	Support

**Network Application**

Typical Solution: FTTH

Typical Business: INTERNET, CATV



## Ordering Information

Product Name	Product Model	Descriptions
1GE+3FE+CATV single fiber	FD704X-AE-R410	1*10/100/1000M and 3*10/100M Ethernet interface, 1 RF interface, 1 EPON interface, built-in FWDM, Input optical power -18dBm~0dBm, support AGC function, plastic casing, external power supply adapter