

704XW-E-Z410 Single-fiber CATV Type WIFI ONU



Brief Views

704XW-E-Z410 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. 704XW-E-Z410 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.

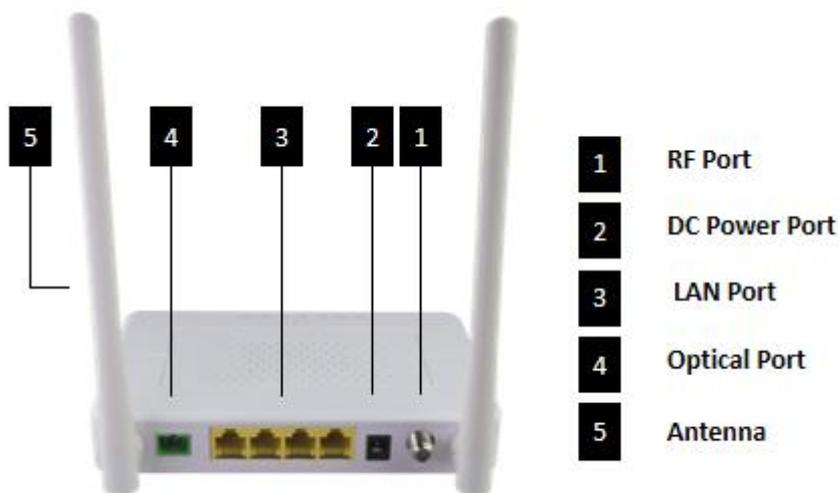
It adopts single fiber WDM technology with downlink wavelength 1550nm and 1490nm, uplink wavelength 1310nm . It only needs one-core fiber to transmit data and CATV service.

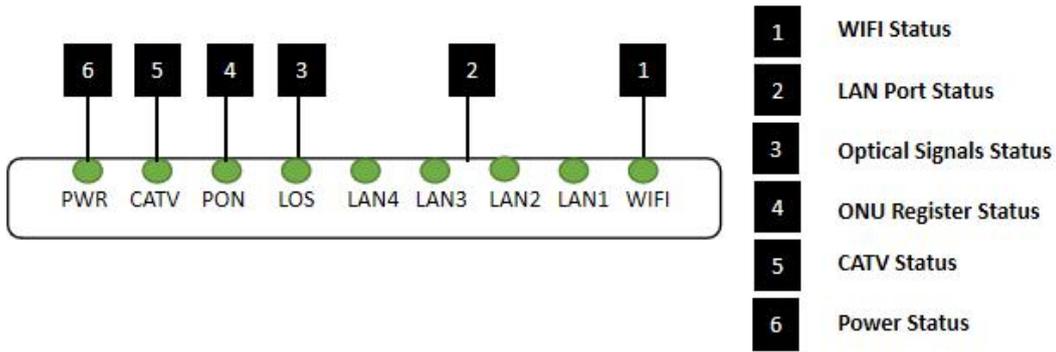
704XW-E-Z410 can integration wireless function with meet 802.11 n/b/g technical standards, It has external high gain directional antenna, the wireless transmission rate up to 300Mbps. It has the characteristics of strong penetrating power and wide coverage. It can provide users with more efficient data transmission security.

Functional Feature

- Single-fiber access, provides internet, CATV, WIFI multiple service
- In compliant with IEEE802.3ah Standard
- Support ONU auto-discovery/Link detection/remote upgrade of software
- Wi-Fi series meet 802.11 n/b/g technical standards
- Support VLAN transparent, tag configuration
- Support multicast function
- Support DHCP/Static/PPPOE internet mode
- Support port-binding
- Support OAM+TR069 remote management
- Support data encryption and decryption function
- Support Dynamic Bandwidth Allocation (DBA)
- Support MAC filter and URL access control
- Support remote CATV port management
- Support power-off alarm function ,easy for link problem detection
- Specialized design for system breakdown prevention to maintain stable system
- EMS network management based on SNMP ,convenient for maintenance

Product Interface and LED Definitions





Indicator		Description	
1	WIFI	WIFI	Blinking: Data is being transmitted On: Wi-Fi function Opens
2	LAN	GE 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	EPON 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	CATV	CATV status	On: CATV optical normal Off: The CATV signals are not received
6	PWR	Power status	On: The ONU is power on Off: The ONU is Power off

Specification

Item		Parameter
Interface	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
	CATV Interface	1 RF output F-Type Connector
	Ethernet Interface	1*10/100/1000M and 3*10/100M auto-negotiation ports Full/half duplex mode RJ45 connector Auto MDI/MDI-X 100m distance
	Power Interface	12V DC Power supply

Performance Parameters	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 980Mbps; Upstream 950Mbps Ethernet: 1000Mbps or 100Mbps Packet Loss Ratio: $<1 \times 10^{-12}$ latency: $<1.5\text{ms}$
Network Management	Management Mode	Support IEEE802.3 QAM, ONU can be remotely managed by OLT Support TR069 remote management and WEB management
	Management Function	Status monitor, Configuration management, Alarm management, Log management
Physical Features	Shell	White plastic casing
	Power	Power supply: DC 12V /1A Power consumption: $<8.5\text{W}$
	Physical Specifications	Item Dimension: 160mm(L)*139.5mm(W)*28.5mm(H) Item weight: 0.35kg
	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	$>45\text{dB}$
CATV optical port input power	-15dBm~+2dBm
RF frequency	47MHz~1000MHz
RF output level	$\geq 65\text{dBuV}$ (@-12dBm@85MHz)
RF flatness	$<\pm 1.5\text{db}$
CNR	$\geq 42\text{dB}$ (@-10dBm@DS22 Channel)
CSO	$\leq -60\text{dBc}$ (@-10dBm@DS22 Channel)
CTB	$\leq -65\text{dBc}$ (@-10dBm@DS22 Channel)
RF output return loss	$>10\text{dB}$
RF output impedance	75Ω


WIFI Specification

Item		Parameter
Performance parameters	Operating Mode	Router or bridge
	Antenna gain	5dBi
	WIFI antenna	2 external antennas
	Throughput	IEEE 802.11b: 11Mbps IEEE 802.11g: 54 Mbps IEEE 802.11n: 300Mbps
	Frequency	2.412 ~ 2.472 GHz
	Channel	13*Channel, configurable to meet the standard of USA, Canada, Japan and China
	Modulation	DSSS , CCK and OFDM
	Coding	BPSK, QPSK, 16QAM and 64QAM
	Receive sensitivity	802.11b: -83dBm @ 1 Mbps; -79dBm @ 5.5 Mbps; -76dBm @ 11 Mbps 802.11g: -85dBm @ 6 Mbps; -77dBm @ 24 Mbps; -68dBm @ 54 Mbps; 802.11n HT20: -85dBm @ MCS0; -73dBm @ MCS4; -67dBm @ MCS7 802.11n HT40: -82dBm @ MCS0; -70dBm @ MCS4; -64dBm @ MCS7
	Output power	802.11b: 19 ± 1dBm @ 1 Mbps 19±1dBm @ 5.5 Mbps; 18 ±1dBm @ 11 Mbps; 802.11g: 18 ± 1dBm @ 6 Mbps 17±1dBm @ 24 Mbps; 16 ±1dBm @ 54 Mbps; 802.11n HT20: 17 ± 1dBm @ MCS0; 16 ± 1dBm @ MCS4 ; 15 ± 1dBm @ MCS7 802.11n HT40: 17 ± 1dBm @ MCS0; 16 ± 1dBm @ MCS4 ; 15 ± 1dBm @ MCS7
Encryption Mode	802.11i security: WEP-64/128, TKIP (WPA-PSK) and AES (WPA2-PSK)	

Network Application

Typical Solution: FTTH

Typical Business: INTERNET, WIFI, CATV

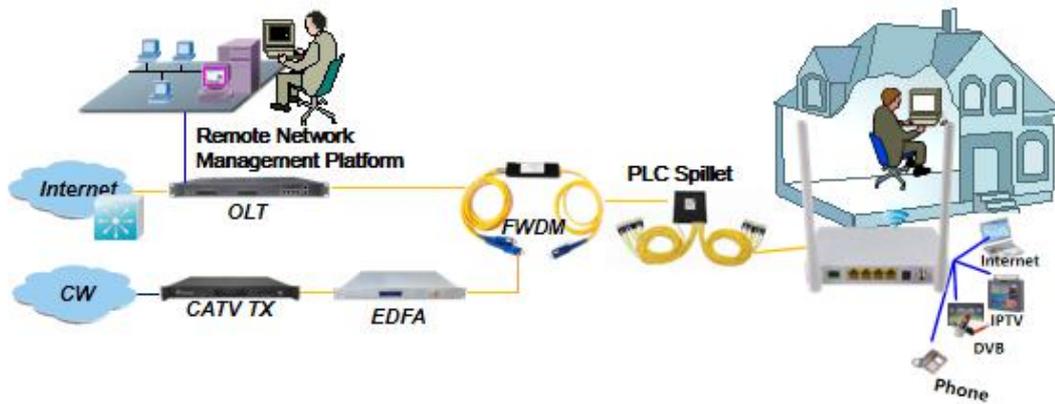


Figure: 704XW-E-Z410 ONU Application Diagram

Ordering Information

Product Name	Product Model	Descriptions
1GE+3FE+CATV+WIFI Single fiber	704XW-E-Z410	1*10/100/1000M and 3*10/100M Ethernet interface, 1 EPON interface, built-in FWDM, 1 RF interface, support WiFi function, Plastic casing, external power supply adapter