FD304HW   4FE+CATV+WIFI ONU

✚ Brief Views

The ONU is designed mainly for FTTH use and FTTO use as well. It support 1000Base-PX10/PX20 standard with 1:64 maximum optical splitting ratio and 20km distance, and provide 1uplink GE PON port.

It work together with OLT could realize flexible network structure and maintenance and provide total FTTx solutions.

It built in CATV Receiver to realize the analog or DVB TV signals transmission.

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.

ONU FD304HW has 1 PON port, four10/100BASE-T ports ,one CATV output and support WiFi.

✚ Functional Feature

- In compliant with IEEE802.3ah Standard and CTC2.1/3.0
- Up to 20KM transmission Distance
- Support VLAN and IGMP
- Support port isolation between different ports
- Integrated OAM remote configuration and maintenance function
- Plug and play, integrated auto detecting, auto configuration, and auto firmware upgrade technology
- EMS network management based on SNMP ,convenient for maintenance
- Full speed non-blocking switching.
- Support QinQ VLAN, 1:1 VLAN, VLAN reusing, VLAN trunk, etc.

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- Integrated port monitoring, port mirroring, port rate limiting, port SLA, etc.
- Support auto polarity detection of Ethernet ports (AUTO MDIX).
- Integrated IEEE802.1p QoS with four level priority queues.
- Support IPv4 IGMP snooping and IPv6 MLD snooping.

- ✧ **CATV Service Functions**
- Turn on/off RF output remotely
- Wavelength：1550 +/- 10nm
- Optical return loss：>45dB
- Input opticl power：-8dBm～+2dBm
- RF frenquency：47MHz~875MHz
- RF output lever：75～80dBuV
- CNR：>46dB，CSO: >58dBc，CTB: >58dBc
- RF output return loss： >14dB
- RF impedance： 75Ohm
- AGC function optional

⊞ Specification

Item		Parameter
Interface	PON Interface	1 GEPON optical interface Meet 1000BASE-PX20 standard Symmetric 1.25Gbps upstream/downstream SC single-mode fiber split ratio: 1:64 Transmission distance 20KM
	User Interface	4*10/100Mauto-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 An external 12V 1A AC/DC power supply adapter
Performance	PON Optical	Wavelength: Tx 1310nm, Rx1490nm Tx Optical Power: -1～4dBm

Parameters	Parameter	Rx Sensitivity: -24dBm
		Saturation Optical Power: -3dBm
		Connector Type: SC
		Optical Fiber: 9/125ɥm single-mode fiber
	Data Transmission Parameter	PON Throughput: Downstream 950Mbps; Upstream 930Mbps
		Ethernet: 100Mbps
		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 RSTP
Network Management	Management Mode	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
Indicator	LED Indicator	PWR, SYS,PON, LAN1~LAN4, CATV,WIFI
Physical Features	Shell	Plastic casing
	Power	External 12V 1A AC/DC power supply adapter
		Power consumption: < 5W
	Dimension and Weight	Item Dimension：200mm(L) x 140mm(W) x 28mm (H)
		Item weight：0.35kg
	Environmental Specifications	Operating temperature: 0 to 50 ºC
		Storage temperature: -40 to 85 ºC
		Operating humidity: 10% to 90% (Non-condensing)
		Storage humidity: 5% to 95% (Non-condensing)

WIFI Specification

Performance parameters	Operating Mode	Router or bridge
	Throughput	IEEE 802.11b: 11Mbps
		IEEE 802.11g: 54 Mbps
		IEEE 802.11n: 135Mbps
	Frequency	2.412 ~ 2.472 GHz
	Channel	13*Channel, configurable to meet the standard of USA, CCanada, Japan and China
	Modulation	DSSS , CCK and OFDM
	Coding	BPSK, QPSK, 16QAM and 64QAM
	RF receive sensitivity	802.11b: -82dBm @ 1 Mbps; -80dBm @ 2 Mbps; -78dBm @ 5.5 Mbps; -76dBm @ 11 Mbps 802.11g: -82dBm @ 6 Mbps; -81dBm @ 9 Mbps; -79dBm @ 12 Mbps; -77dBm @ 18 Mbps; -74dBm @ 24 Mbps; -70dBm @ 36 Mbps; -66dBm @ 48 Mbps; -65dBm @ 54 Mbps
	RF output lever	802.11b: 16.5 ±1dBm 802.11g: 13 ± 1dBm @ 54 Mbps; 14 ± 1dBm @ 48 Mbps; 15 ± 1dBm @ 6 ~ 36 Mbps 802.11n: 13 ± 1dBm @ 54 Mbps; 14 ± 1dBm @ 48 Mbps; 15 ± 1dBm @ 6 ~ 36 Mbps
	Encryption Mode	802.11i security: WEP-64/128, TKIP (WPA-PSK) and AES (WPA2-PSK)

Application

✧ Typical Solution：FTTx、PON+EOC

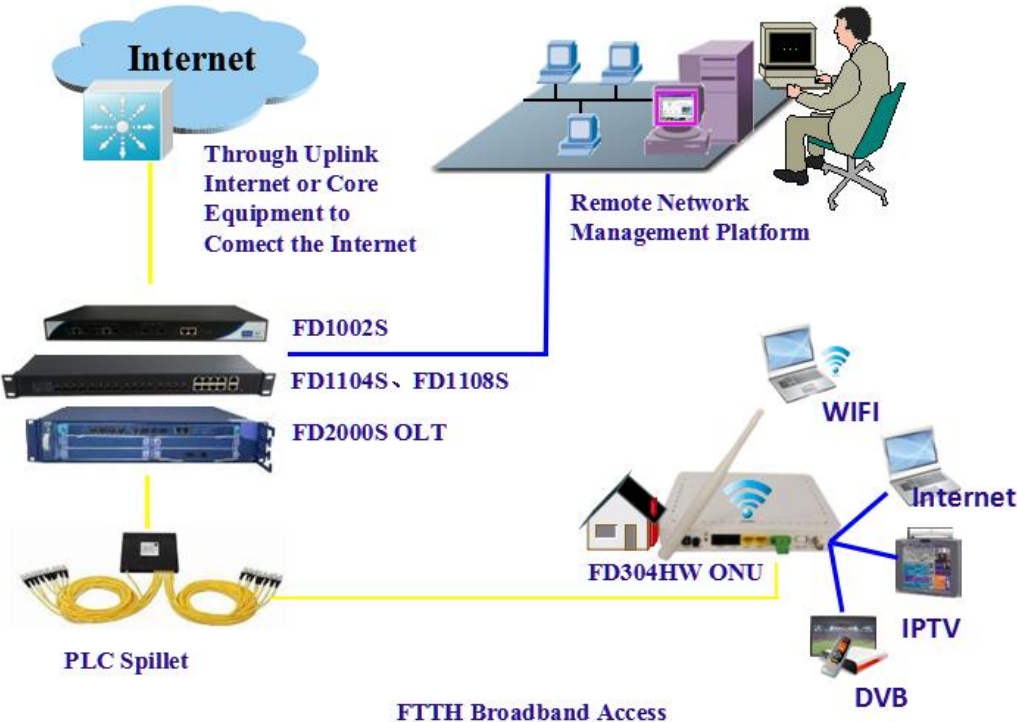✧ Typical Business：INTERNET、CATV、IPTV、VOD、IP Camera、WIFI

Network Construction

Figure: FD304HW Application Diagram