C-Data FD512XW-X 1GE+1FE+WIFI Dual-Mode ONU

Brief Views

FD512XW-X dual-mode ONU supports EPON and GPON two modes access. It will automatically establish an EPON link with the EPON OLT or GPON link with the GPON OLT by identifying the local OLT mode. It also supports the EPON ONU OAM and GPON ONT OMCI.

FD512XW-X have a high reliability and provide quality of service guarantee, easy management, flexible expansion and networking. It's fully meet the ITU-T technical standards and have good compatibility with third party manufacturers OLT.

FD512XW-X 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 canprovide users with more efficient data transmission security.
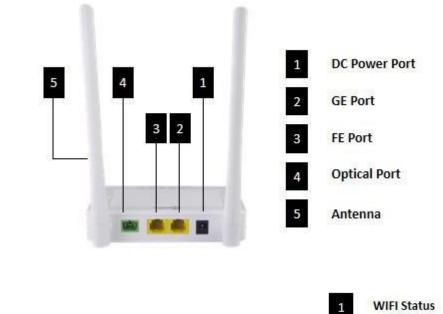
Functional Feature

Adaptive GPON mode:

- In compliant with ITU - T G. 984 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 OMCI+TR069 remote management
- Support data encryption and decryption function
- Support Dynamic Bandwidth Allocation (DBA)
- Support MAC filter and URL access control
- 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

Adaptive EPON mode:

- 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
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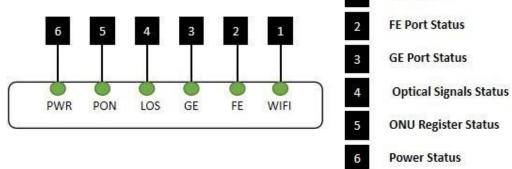- EMS network management based on SNMP ,convenient for maintenance

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🔧 Product Interface and LED Definitions

Indicator			Description
1	WIFI	WIFI	Blinking：Data is being transmitted On：Wi-Fi function Open Off：Wi-Fi function Close
2	FE	FE Port status	On: Ethernet connection is normal; Blinking: Data is being transmitted through the Ethernet port; Off: Ethernet connection is not set up;
3	GE	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	PON optical signals	On: Optical power lower than receiver sensitivity ; Off: Optical in normal
4	PON	ONT Register	On: Success to register to OLT Blinking: In process of registering to OLT; Off: In process of registering to OLT;
5	PWR	Power status	On: The ONU is power on; Off: The ONU is Power off;

📇 Specification

Item		Parameter
Interface	PON Interface	GPON/EPON mode adaptive 1*GPON port, FSAN G.984.2 standard, support for backward compatibility with EPON SC/PC single mode fiber
	Ethernet Interface	1*10/100/1000M and 1*10/100M auto-negotiation 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: 0.5～5dBm Rx Sensitivity: -28dBm Saturation Optical Power: -8dBm
	Data Transmission Parameter	PON Throughput: Downstream 2.488Gbit/s; Upstream 1.244Gbit/s Ethernet: 100Mbps or 1000Mbps Packet Loss Ratio: <1*10E-12 latency: <1.5ms
Network Management	Management Mode	When adaptive to GPON mode, support standard compliant OMCI interface as defined by ITU-T G.984.4, TR069 remote management and WEB management
		When adaptive to EPON mode, Support IEEE802.3 QAM, ONU can be remotely managed by OLT, TR069 remote management and WEB management
	Management Function	Status monitor, Configuration management, Alarm management, Log management
Physical Features	Shell	White plastic casing
	Power	<5W, 12V/0.5A power supply adapter
	Physical Specifications	Item Dimension：125mm(L) x80mm(W) x 25mm (H) Item weight：0.2kg
	Environmental Specifications	Operating temperature: 0 to 50ºC Storage temperature: -40 to 85ºC Operating humidity: 10% to 90%(Non-condensing) Storage humidity: 10% to 90%(Non-condensing)

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WIFI Specification

Item		Parameter
Performance parameters	Operating Mode	Router or bridge
	Technical standard	IEEE802.11b/g/n
	Frequency	2.412 ~ 2.472 GHz
	Antenna gain	5dBi
	Support rate	802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 24, 36, 48, 54Mbps 802.11n: max rate 300Mbps
	Channel	2.4GHz Channel：1,2,3,4,5,6,7,8,9,10,11,12,13
	Modulation mode	11b：DSSS： DBPSK(1Mbps),DQPSK(2Mbps),CCK(5.5/11Mbps) 11g：OFDM:BPSK(6/9Mbps), QPSK(12/18Mbps),16QAM(24/36Mbps) Q64QAM(48/54Mbps) 11n：MIMO-OFDM:BPSK,QPSK,16QAM,64QAM
	Receive sensitivity	11Mbps:≤-90dBm 54 Mbps:≤-76dBm HT20 MCS7:≤-73dBm HT40 MCS7:≤-70dBm
	Transmit power	802.11n: 17dBm
	Encryption mode	AES, TKIP, WPA, WPA2, WPA-PSK/WPA2-PSK

Network Application

Typical Solution：FTTH

Typical Business：INTERNET, WIFI

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Figure: FD512XW-X ONU Application Diagram

Ordering Information

Product Name	Product Model	Descriptions
1GE+1FE+WIFI	FD512XW-X	1*10/100/1000M and 1*10/100M Ethernet interface, 1 EPON/GPON adaptive interface, Support 300Mpbs wifi ;plastic casing, external power supply adapter