

ONU-4FE-DRFW GEPON ONU Manual

ONU-4FE-DRFW GEPON ONU

(4FE+1CATV+WIFI with Dual Fiber)

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 1490nm, uplink

wavelength 1310nm . It only needs one-core fiber to transmit data service.

It also have a HFC optical port, received the CATV optical signals and convert into

electric CATV signals.

ONU-4FE-DRFW has 1 PON port , 1 HFC optical port, four10/100BASE-T ports and

support wifi.

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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

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.

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.

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

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Functional Feature

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upgrade technology

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CATV Service Functions

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Specification

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| **Item** | | **Parameter** |
|  | |
| **Interface** | Uplink 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 |

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| CATV Interface: | | |
| 1 HFC Optical input | | |
| SC/APC | | |
|  | 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 | Wavelength: Tx 1310nm, Rx1490nm | | |
| TxOptical Power: -1～4dBm | | |
| Rx Sensitivity: -24dBm | | |
| Optical |
| Saturation Optical Power: -3dBm | | |
| Parameter |
| Connector Type: SC | | |
| Optical Fiber: 9/125 | ɥ | m single-mode fiber |
| Data Transmission | PON Throughput: Downstream 950Mbps; Upstream 930Mbps | | |
| Ethernet: 100Mbps | | |
| **Parameters** | Parameter | Packet Loss Ratio: <1\*10E-12 | | |
| latency: <1.5ms | | |
| Business | Layer 2 wire speed switching | | |
| Support VLAN TAG/UNTAG，VLAN conversion | | |
| Support Port-based speed limitation | | |
| Capability | Support Priority classification | | |
| Support storm control of broadcast | | |
| Support RSTP | | |
| **Network** |  | | Management | Support IEEE802.3 QAM, ONU can be remotely managed by | | |
| OLT | | |
| Mode | Support Remote management through SNMP and Telnet | | |
| **Management** | Local management | | |
| Management | Status monitor, Configuration management, Alarm | | |
| management, | | |
| Function |
| 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: <6W | | |

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VOD IP Camera

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Typical Solution FTTx PON+EOC

Typical Business INTERNET CATV IPTV

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|  | Dimension and Weight | | Item Dimension | | ：200mm(L) x 140mm(W) x 28mm (H) | |
| Item weight | ：0.4kg | | |
|  | Environmental | Operating temperature: | | | 0 to 50 ºC |
| Storage temperature: -40 to 85 ºC | | | |
| Specifications | Operating humidity: 10% to 90% (Non-condensing) | | | |
| Storage humidity: 5% to 95% (Non-condensing) | | | |

WIFI Specification

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| **Performance** | 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 | |
| **parameters** | 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) | |

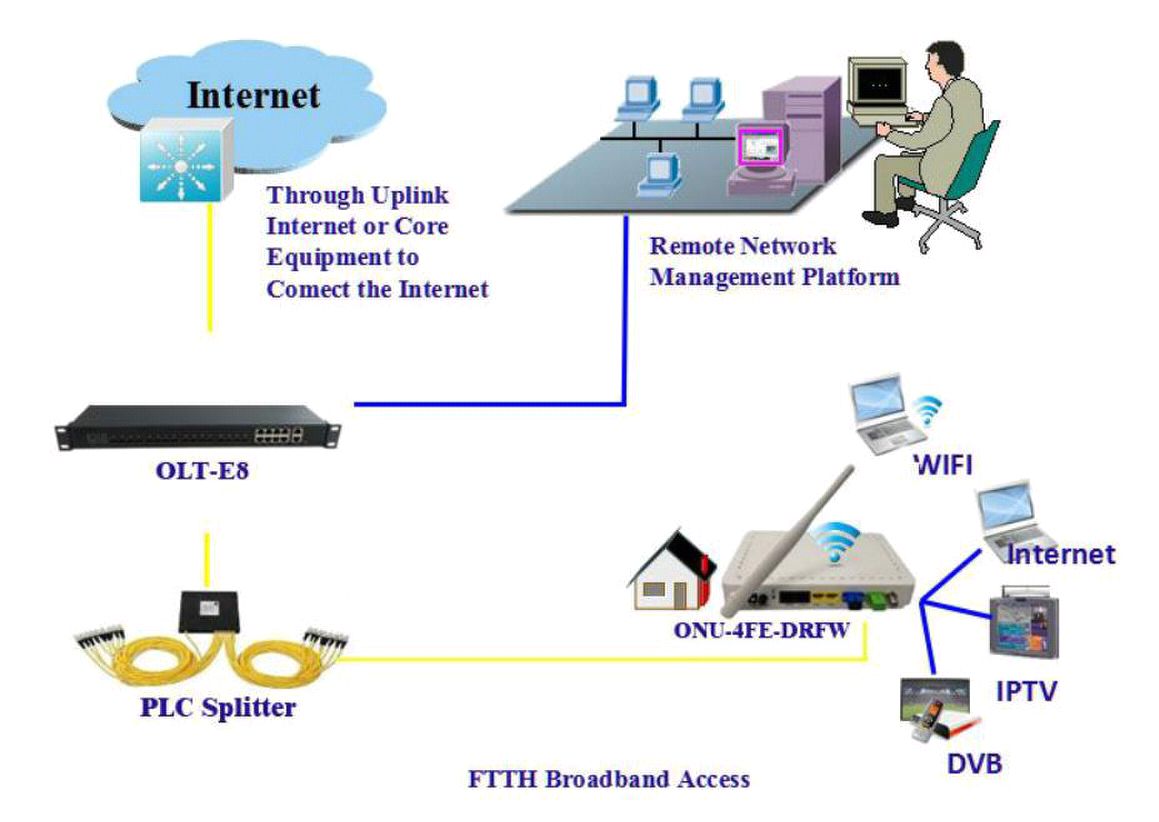
Application

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Network Construction

Figure: ONU-4FE-DRF Application Diagram

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