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| **ONU-4FE-RFW ONU Manual** |
| **ONU-4FE-RFW ONU** |
| ( 4FE+CATV+WIFI) |
| **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-4FE-RFW has 1 PON port, four10/100BASE-T ports ,one CATV output and support WiFi. |



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| **ONU-4FE-RFW ONU Manual** |
| **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. |
|  |
|  | 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** |  |
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|  | **Interface** | PON Interface |  |
| 1 GEPON optical interface |  |
| Meet 1000BASE-PX20 standard |
| Symmetric 1.25Gbps upstream/downstream |
| SC single-mode fiber |
| split ratio: 1:64 |
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| 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 |
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| **Performance** | Wavelength: Tx 1310nm, Rx1490nm |
| PON | 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 |
| Support IEEE802.3 QAM, ONU can be remotely managed by |
| **Network** | Management | OLT |
| Mode | Support Remote management through SNMP and Telnet |
| **Management** | Local management |
|  | Management | Status monitor, Configuration management, Alarm |  |
| Function | management, |
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| **ONU-4FE-RFW ONU Manual** |
|  |  |  |  | Log management |  |
| **Indicator** |  | LED Indicator | PWR, SYS,PON, LAN1~LAN4, CATV,WIFI |
| Shell | Plastic casing |
|  | Power | External 12V 1A AC/DC power supply adapter |  |
| Power consumption: <6W |
| **Physical Features** |  | 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** |
|  | **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) |
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| **ONU-4FE-RFW ONU Manual** |
| **Application** |
|  |  Typical Solution | ： | FTTx | 、 | PON+EOC |
|  |  Typical Business | ： | INTERNET | 、 | CATV | 、 | IPTV | 、 | VOD | 、 | IP Camera | 、 | WIFI |
| **Network Construction** |
| **●Figure: ONU-4FE-RFW Application Diagram** |