**WDS600-104 series EPON ONU(Includes Wi-Fi series)**



## Brief Views

WDS600-104 series is C-Data’s for broadband access market based on the introduction of EPON technology passive optical network terminal products. It’s with EPON OLT are used together to provide a complete broadband access solution.

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.

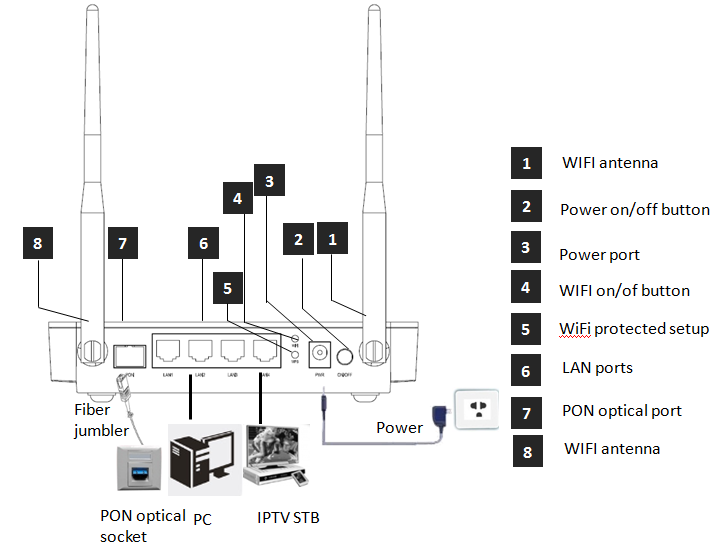
WDS600-104 series fully meet IEE802.3ah and CTC3.0 standard protocol. It has good third-party compatibility to work with the third party OLT, It supports 1Gbps transmission rate up and down and provides users with good QOS, flexible bandwidth allocation of Ethernet services and IP integrated service.

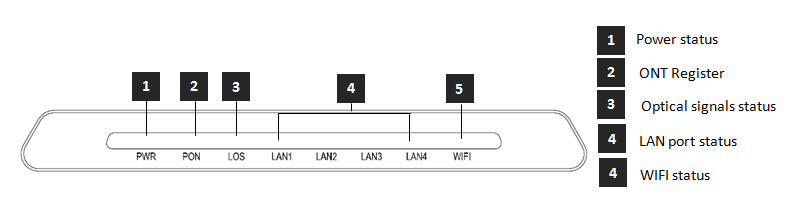
WDS600-104 series can integration wireless function with meet 802.11 n/b/g technical standards, It has built-in high gain directional antenna, the wireless transmission rate up to 300Mbps. It has the characteristics of strong penetrating power and wide coverage. It can provide users with more efficient data transmission security.

## Functional Feature

* + Support port-based rate limitation and bandwidth control;
  + In compliant with IEEE802.3ah Standard
  + Wi-Fi series meet 802.11 n/b/g technical standards
  + Up to 20KM transmission Distance
  + Support data encryption, group broadcasting, port Vlan separation ,etc.
  + Support Dynamic Bandwidth Allocation (DBA)
  + Support ONU auto-discovery/Link detection/remote upgrade of software;
  + Support port mode of VLAN configuration
  + Support power-off alarm function ,easy for link problem detection
  + Support broadcasting storm resistance function
  + Support port isolation between different ports
  + Support port flow control
  + Support ACL and SNMP to configure data packet filter flexibly
  + Specialized design for system breakdown prevention to maintain stable system
  + Support software online upgrading
  + EMS network management based on SNMP ,convenient for maintenance

## Product interface and LED definitions ( Wi-Fi type example)





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

## Specification

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| --- | --- |
| **Item** | **Parameter** |
| PON Interface | 1 EPON optical interface Meet 1000BASE-PX20+ standard Symmetric 1.25Gbps upstream/downstream  SC single-mode fiber split ratio: 1:64 Transmission distance 20KM |
| User Ethernet Interface | 4\*10/100M or 4\*10/100/1000M auto-negotiation  Full/half duplex mode RJ45 connector Auto MDI/MDI-X 100m distance |
| Power Interface | 12V DC Power supply |
| PON  Optical  Parameter | Wavelength: Tx 1310nm, Rx1490nm Tx Optical Power: 0～4dBm Rx Sensitivity: -27dBm 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 or 1000Mbps 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 loop detection |
| Network Management | 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 |
| Shell | Plastic casing |
| Power | 4FE: <3.9W, 12V/0.5A power supply adapter  4FE+WIFI: <4.9W, 12V/0.6A power supply adapter  4GE: <4.3W, 12V/0.5A power supply adapter  4GE+WIFI: <5.3W, 12V/0.6A power supply adapter |
| Physical  Specifications | Item Dimension：160mm(L) x 120mm(W) x 32.5mm (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) |

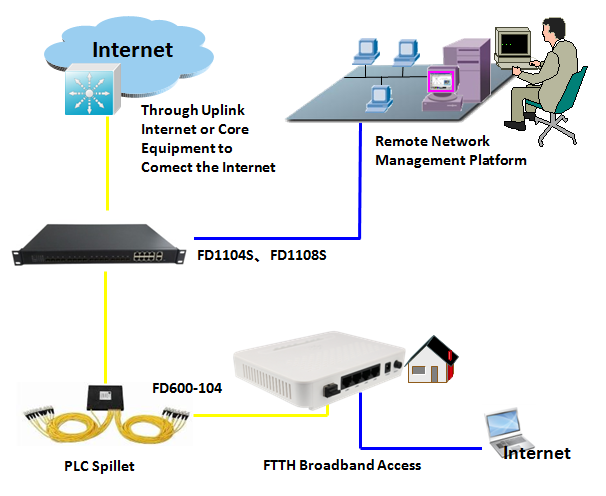
## WIFI Specification (Suitable for the WIFI devices)

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| --- | --- | --- |
| Item | | **Parameter** |
| **Performance parameters** | Operating Mode | Router or bridge |
| 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 |
| 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) |

## Network application

Typical Solution：FTTH, FTTO

Typical Business：INTERNET, IPTV, VOD, IP Camera, WIFI



**Figure: WDS600-104 Application Diagram**

## Ordering Information

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| **Product Name** | **Product Model** | **Descriptions** |
| 4FE | WDS600-104F-HR220 | 4\*10/100M Ethernet interface, 1 EPON interface, plastic casing, external power supply adapter |
| 4GE | WDS600-104G-HR220 | 4\*10/100/1000M Ethernet interface, 1 EPON interface, plastic casing, external power supply adapter |
| 4FE+WIFI | WDS600-104FW-HR220 | 4\*10/100M Ethernet interface, support Wi-Fi function, 1 EPON interface, plastic casing, external power supply adapter |
| 4GE+WIFI | WDS600-104GW-HR220 | 4\*10/100/1000M Ethernet interface, support Wi-Fi function, 1 EPON interface, plastic casing, external power supply adapter |