

FS600D-30-4G Datasheet

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Product Overview

Huawei eKitOptiX FS600D-30-4G is an intelligent GPON and Wi-Fi 6 ONU. It uses the GPON Wi-Fi 6 technology to implement ultra-broadband access, high performance and wide coverage for users. It provides 4 GE ports and 2.4G&5G Wi-Fi 6.



Feature Descriptions

Wi-Fi 6 (11ax) Standard

- As the latest generation of the IEEE 802.11 Wi-Fi standard, 802.11ax (Wi-Fi 6) enhances user access capacity and bandwidth in high-density environments, reduces latency, and improves the overall user experience.
- Dual-band MU-MIMO Support (2.4GHz & 5GHz): Enables simultaneous data transmission to multiple devices, significantly improving wireless spectrum efficiency.
- 1024-QAM Modulation: Offers 25% higher data transmission efficiency compared to 802.11ac (which uses 256-QAM).
- OFDMA Technology: Transmits data to multiple terminals using different subcarriers at the same time, reducing latency and increasing network efficiency.
- Spatial Reuse (BSS Coloring): Uses BSS coloring to distinguish overlapping basic service sets (BSS), minimizing co-channel interference.
- Target Wake Time (TWT): Allows the AP and clients to negotiate sleep/wake schedules, reducing unnecessary wake-ups and collisions, saving device power, and extending battery life.

MU-MIMO Technology (Multi-User, Multiple-Input, Multiple-Output)

This allows simultaneous data transmission to multiple terminals, doubling spectrum efficiency, increasing user access capacity and bandwidth, and optimizing the experience in high-density deployment scenarios.

Smart Antenna Technology

Equipped with dual-band intelligent array antennas and adaptive switching algorithms, the AP intelligently senses the environment and user density to optimize coverage and suppress interference. This ensures each mobile device receives the best signal direction and quality, delivering a seamless and smooth wireless experience.

Dual-Layer Wired and Wireless Security

In terms of data security, Huawei achieves comprehensive protection by integrating both wired and wireless safeguards.

- Wireless Access Authentication and Encryption

Supports various authentication/encryption methods including WEP, WPA/WPA2-PSK, WPA3-SAE, WPA/WPA2-PPSK, WPA/WPA2/WPA3-802.1X to ensure the security of wireless networks. The authentication mechanism verifies user identities to restrict access to network resources to authorized users. The encryption mechanism encrypts data on the wireless link to ensure that only intended users can receive and understand the wireless network data.

- Wired Access Authentication and Encryption

Ensures the legitimacy of accessing devices through access control. CAPWAP tunnel link protection and DTLS, IPsec encryption provide security for CAPWAP tunnels, enhancing the security of data transmission.

- Automatic RF Tuning

By collecting surrounding signal strength, channel parameters, etc., a topology is generated. Based on the interference caused by legitimate APs, illegitimate APs, and No Wi-Fi, as well as their respective loads, the transmission power and channels are automatically adjusted to ensure the network is in optimal performance state, thereby improving network reliability and user experience.

Technical Specifications

Product Parameter

Specification	Parameters
Dimensions (H x W x D)	35mm x 155mm x 105mm (without external antenna and pads)
NNI	GPON+4*GE(WAN/LAN multiplexing)
UNI	4*GE(WAN/LAN multiplexing)+2.4GHz/5GHz Wi-Fi 6
Rated power supply	12V DC, 1A
Static power consumption	5.7 W
Maximum power consumption	11.7 W
Operating temperature	0°C to 40°C
Operating humidity	5%–95% RH, non-condensing
Weight (excluding adapter)	About 238 g
Protection rating	IP20
Surge protection	● GE: Common-mode 2.5KV ● AC power adapter: Common mode: 6 kV; differential mode: 4 kV
Heat dissipation	Natural cooling
Installation mode	Desktop Flat Placement/Wall Mounted

Specification	Parameters
Wi-Fi standard	- IEEE 802.11 b/g/n/ax (2.4GHz) - IEEE 802.11 a/n/ac/ax (5GHz)
MIMO spatial streams	2×2 MIMO (2.4GHz&5GHz)
Bandwidth	20/40/80/160 MHz
Antenna	External antenna
Antenna gain	2.4GHz: 5dBi 5GHz: 7dBi
Air interface rate	2.4 GHz: 574 Mbit/s 5 GHz: 2402 Mbit/s
Maximum number of access users	64
Maximum transmit power	2.4 GHz: 26.5 dBm 5 GHz: 33 dBm NOTE The actual transmit power varies according to local laws and regulations.

Port Parameters

Name	Parameter
GPON Port	- Port type: SC/APC - Standards compliance: ITU-T G.984.2, Class B+ - Receiver sensitivity: -27 dBm - Overload optical power: -8 dBm - Transmission rate: 2.488 Gbit/s downstream and 1.244 Gbit/s upstream
LAN1~LAN4 Port	- RJ-45 port - Standards compliance: IEEE802.3 10/100/1000 Mbit/s auto-sensing - Half duplex/full duplex auto-negotiation and configuration - VLAN tag/tag removal, VLAN transparent transmission, and VLAN filtering based on Ethernet ports

Product Functions

Feature	Description
WLAN	- Compliance with IEEE 802.11a/b/g/n/ac/ax - Multi-user multiple-input multiple-output (MU-MIMO) - Orthogonal frequency division multiple access (OFDMA) - preamble puncturing - per-packet bandwidth adjustment by protocol

Feature	Description
	• BSS Color • Compliance with 1024QAM • Frame aggregation, including A-MPDU (Tx/Rx) and A-MSDU (Tx/Rx) • 802.11 dynamic frequency selection (DFS) • 20 MHz, 40 MHz, 80 MHz, and 160 MHz bandwidth • Wi-Fi multimedia (WMM) for priority-based data processing and forwarding • WLAN channel management and channel rate adjustment • Automatic channel scanning and interference avoidance • Service set identifier (SSID) hiding configuration for each AP, supporting Chinese SSIDs • 802.11k and 802.11v smart roaming
Automatic service provisioning	• Authentication exemption • XML/OMCI/TR069
Smart O&M	• XML/Web UI • Centralized management on NMS • Rogue ONT detection and self-regulation • PPPoE/DHCP simulation
L3 features	• Static/Service route • ALG/UPnP • DDNSZ/DNS/NAPT • PPPoE/Static IP address/DHCP • IPv6
Security	• SPI firewall • MAC address filtering/IP address filtering
Multicast	• IGMP v2/v3 snooping • MLDv1/MLDv2 snooping
QoS	• Ethernet port rate limitation • 802.1p priority • SP/WRR/SP+WRR

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Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base Bantian,
Longgang Shenzhen 518129 People's
Republic of China

Website: <https://eKit.huawei.com>