

ZTE F600 Series ONT - Official Technical Overview & Hardware Datasheet

PRODUCT OVERVIEW AND DATASHEET: ZTE F600 SERIES OPTICAL NETWORK TERMINAL

EXECUTIVE SUMMARY

ZTE Corporation, a global leader in telecommunications and information technology, presents the F600 Series Optical Network Terminal (ONT), a state-of-the-art customer premises equipment (CPE) meticulously engineered for next-generation Fiber-to-the-Home (FTTH) and Fiber-to-the-Office (FTTO) deployments. The F600 Series serves as the critical demarcation point between the passive optical network (PON) and the subscriber's local area network, converting high-speed optical signals into robust electrical interfaces for data and voice services.

Leveraging ZTE's extensive research and development in access network technologies, the F600 Series is designed to meet the rigorous demands of modern service providers. It offers a compelling combination of high-performance switching, energy efficiency, and carrier-grade reliability, ensuring a superior subscriber experience while simplifying network operations. The platform supports advanced Quality of Service (QoS) mechanisms, comprehensive security protocols, and remote management capabilities,

making it an ideal solution for delivering triple-play services (voice, video, and data) over a single fiber infrastructure.



ARCHITECTURE & CHASSIS DESIGN

The ZTE F600 Series is built upon a highly integrated System-on-Chip (SoC) architecture, optimized for efficient packet processing and forwarding. The hardware design is centered on a robust, compact form factor that facilitates easy installation in diverse subscriber environments, ranging from residential homes to small office spaces.

HARDWARE FEATURES

1. GPON INTERFACE: The network-side interface is a single GPON port

compliant with ITU-T G.984 standards. It utilizes an SC/APC connector to ensure low insertion loss and high return loss, critical for maintaining optical link budgets over distances up to 20 kilometers. The interface supports both upstream (1310nm) and downstream (1490nm) wavelengths, adhering to Class B+ or higher optical power budgets .

2. USER-SIDE ETHERNET: The F600 Series typically provides four (4) Gigabit Ethernet (10/100/1000Base-T) interfaces on the user side. These RJ-45 ports support Auto-MDI/MDIX and are fully compliant with IEEE 802.3 and 802.3u standards, enabling seamless connectivity to PCs, IPTV set-top boxes, routers, and other Ethernet-enabled devices .

3. POWER SUPPLY: The unit is powered by an external 12V DC power supply adapter. An on-board power management circuit, featuring high-efficiency DC-DC converters, steps down the input voltage to the required levels (e.g., 3.3V, 1.8V, 1.2V) for the sensitive digital components, ensuring stable and low-noise operation .

4. LED INDICATORS: The front panel features a comprehensive array of LEDs for at-a-glance system status monitoring. These include indicators for Power, PON (optical registration), LOS (Loss of Signal), and individual Ethernet LAN port activity. The PON and LOS LEDs provide critical diagnostic information, rapidly

signaling if the ONT has successfully registered with the Optical Line Terminal (OLT) and if an optical signal is present .

TECHNICAL SPECIFICATIONS

Parameter	Specification
Form Factor	Desktop / Wall-Mountable
Dimensions (W x D x H)	180mm x 125mm x 36mm
Weight	Approx. 1.5 kg
Network Interface (WAN)	1 x GPON (SC/APC)
User Interface (LAN)	4 x 10/100/1000Base-T (RJ-45)
Power Supply	12 V DC, 1 A
Power Consumption	Typically < 6 W
Operating Temperature	0°C to 40°C (Standard) / -30°C to 60°C (Ruggedized)
Operating Humidity	5% to 95% (Non-condensing)
GPON Standard	ITU-T G.984.1 - G.984.5
Optical Wavelengths	1490nm (Downstream), 1310nm (Upstream)
Management	OMCI (ITU-T G.988)
Security	AES-128 Encryption, Multi-level Authentication

ORDERING OPTIONS

The ZTE F600 Series is available in several versatile variants to cater to a wide spectrum of service provider requirements and evolving network architectures.

Key available models include:

- ZXHN F600 V9.0: An advanced GPON terminal that serves as the primary successor to previous generations, benefiting from an enhanced software platform for improved service delivery and management efficiency.

- ZXHN F600G: An environmentally enhanced model featuring a ruggedized metal chassis and industrial-grade components. It is explicitly designed to operate reliably in harsh outdoor environments, supporting an extended operating temperature range from -30 ° C to 60 ° C, making it ideal for deployment in outdoor cabinets .

- ZXHN F600V9: A dual-mode terminal that supports both EPON and GPON standards, providing a flexible solution for networks transitioning between or operating both PON technologies. It offers 1 GE and 3 FE ports, with a compact design optimized for space-constrained installations .

