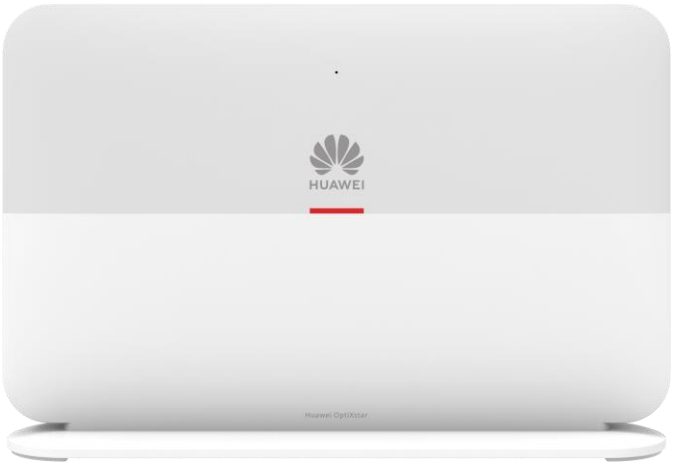
Huawei OptiXstar V163 Datasheet

Master FTTR for Huawei FTTR OptiXstar F30

Overview

Huawei OptiXstar V163 is a Master FTTR for the Huawei FTTR OptiXstar F30. It uses the GPON and Wi-Fi 6 technologies to implement ultra-broadband access, high performance and wide coverage for users. The high forwarding performance ensures the user experience of voice and data services, and provides customers with an ideal all-optical access solution and future-oriented service support capability.

- Ultra gigabit to room
- Unique SRCN (seamless roaming coordinate network) technology, enabling imperceptible roaming in the whole house
- C-WAN architecture, centrally controlling and coordinating network-wide Wi-Fi resources by the Master FTTR to deliver ultra-gigabit broadband experience in a whole house
- Providing E2E assurance for specific games, cross-border education, and e-commerce services, including home Wi-Fi slicing and ONT cross-network acceleration assurance[1]
- Young mode[2] provided to safeguard Internet access by children
- Real-time topology visualization, one-click diagnosis and recovery[2]
- 360-degree coverage and beamforming by built-in smart antennas, ensuring IoT connection reliability
- Vertically placed for less footprint



Device Parameters

Dimensions (H x W x D)	157 mm x 250 mm x 30 mm (excluding the base)	**System power supply**	12 V DC, 2 A

Weight (without power adapter)	About 600 g (excluding the base)	**Static power consumption**	14.2 W
Installation mode	Vertically placed on a desk	**Maximum power consumption**	20 W
Memory	256 MB Flash, 512 MB RAM	**NNI**	GPON
Operating temperature	0°C ~ +40°C	**UNI**	4xGE+1xPOTS+1xUSB2.0+2.4GHz&5GHz Wi-Fi+1xoptical port
Operating humidity	5%–95% RH, non-condensing	**Optical connector**	• NNI: SC/APC • UNI: SC/APC
Power adapter input	100 V to 240 V AC, 50/60 Hz	**Indicator**	• Indicators on front panel • Indicators on rear panel: PON/LOS/TEL/USB/WLAN/WPS/FTTR/LAN port indicator

Interface Parameters

GPON	**Wi-Fi**
• Class B+ • Receiver sensitivity: -27dBm to -29dBm • Overload optical power: -8 dBm • Wavelengths: US 1310 nm, DS 1490 nm • Wavelength blocking filter (WBF) • Flexible mapping between GEM ports and T-CONTs • Authentication mode: SN/Password/SN + Password • Forward error correction (FEC) function in the upstream and downstream directions • SR and NSR DBA • Upstream and downstream rate: 1.244 Gbit/s upstream, 2.488 Gbit/s downstream	• IEEE 802.11 b/g/n/ax (2.4GHz) • IEEE 802.11 a/n/ac/ax (5GHz) • 2×2 MIMO (2.4GHz&5GHz) • WMM(Wi-Fi Multi Media) • Multiple SSIDs • WPS • Air interface rate: 574 Mbps (2.4GHz), 2402 Mbps (5GHz)
	Ethernet port
	• Ethernet port-based VLAN tags and tag removal • 1:1 VLAN, N:1 VLAN, or VLAN transparent transmission • QinQ VLAN • Limitation on the number of learned MAC addresses • MAC address learning • Supporting 10 Mbit/s, 100 Mbit/s and 1000 Mbit/s auto-adaptation
POTS port	**Downstream optical port**
• Maximum REN: 4 • G.711A/μ, G.729a/b, and G.722 encoding/decoding • T.30/T.38/G.711 fax mode • DTMF • Emergency calls (with the SIP protocol)	• P2MP optical port • Theoretic upstream rate: about 1.25 Gbit/s; theoretic downstream rate: about 2.5 Gbit/s • Plug-and-play of the Slave FTTR

Product Function

<table>
<tr><th>Smart interconnection</th><th>Smart O&M</th><th>Multicast</th><th>Layer 3 features</th></tr>
<tr><td>• Smart Wi-Fi coverage
• SIP/H.248 auto-negotiation
• Any port any service
• Parental control</td><td>• IPTV video quality diagnosis
• Rogue ONT detection and isolation from the OLT
• WLAN simulation
• PPPoE/DHCP simulation testing</td><td>• IGMP v2/v3 snooping
• IGMP v2/v3 proxy
• MLD v1/v2 snooping</td><td rowspan="2">• PPPoE/Static IP/DHCP
• NAT/NAPT
• Port forwarding
• ALG, UPnP
• DDNS/DNS server/DNS client
• IPv6/IPv4 dual stack, DS-Lite and IPv6 SPI
• Static/Default routes
• Multiple services on one WAN port</td></tr>
<tr><th>Security</th><th>Common O&M</th><th>QoS</th></tr>
<tr><td>• SPI firewall
• Anti-DOS attack
• Filtering based on MAC/IP/URL addresses</td><td>• OMCI/Web UI/TR069
• Variable-length OMCI messages
• Dual-system software backup and rollback</td><td>• Ethernet port rate limitation
• 802.1p priority
• SP/WRR/SP+WRR
• Broadcast packet rate limitation</td><td>Power saving
• Indicator power saving
• TWT energy saving</td></tr>
<tr><th colspan="2">Home network management</th><th colspan="2">Home network management</th></tr>
<tr><td colspan="2">• Fiber to the room, implementing all-optical home networking
• C-WAN architecture, centrally controlling and coordinating network-wide Wi-Fi resources by the Master FTTR
• Home Wi-Fi slicing and ONT cross-network acceleration assurance
• Intelligent Wi-Fi optimization for a home network
• Seamless Wi-Fi roaming within a home network (SRCN roaming technology, compatible with 802.11k/802.11v[3])</td><td colspan="2">Supports the following functions with NCE:
• Visualized home network management
• Remote management and maintenance
• Network management on a mobile app[4]
– Installation guide
– Visible home network topology
– Wi-Fi settings
– Timed Wi-Fi on/off
– Blacklist and parental control
– One-click network optimization
– One-click diagnosis and recovery</td></tr>
</table>

NOTE

1. This feature applies only to specific games and education websites. For details, contact Huawei HQ for confirmation.
2. Functions such as young mode, one-click diagnosis and recovery must be used together with NCE.
3. The SRCN roaming technology is subject to the version provided by your operator. The 802.11k/802.11v technology must also be supported by user terminals.
4. Huawei provides the basic mobile app for operators. Operators can develop and customize apps based on the SDK provided by Huawei.

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