

HOME  FIBER



MESH WIFI XPON ONU FAMILY

MODEL #-HF4AV4001



The HF4AV4001 is a series of 1200M AC Mesh Wi-Fi supported XPON HYBRID ONUs designed for FTTx applications. The family of ONUs support both GPON and GEAPON features on the same device. It supports 2.5G download speed and 1.25G upload speed. The family of ONUs also support the latest Mesh technology, a Mesh kit at its max capacity can cover an entire area of 1500 Square meters with high density Wi-Fi signals.

MAIN CHARACTERS

- Support both ITU-T G.984.x GPON and IEEE802.3ah GEPON standard.
- Compatible with Huawei, ZTE, Fiberhome, Nokia, OLTs.
- IEEE802.11ac 867Mbps + IEEE802.11n 300Mbps Wi-Fi Router
- Mesh controller, support a 1500 square meters of WiFi coverage with multiple Mesh agents
- 1* SC/APC or SC/UPC GPON / GEPON WAN port, 2.5G download and 1.25G upload
- 4 * Gigabit Ethernet LAN ports max, wire-speed data transmission
Max 2*FXS ports for high quality Voice over IP deployments.
- AES 128-bit encrypted and key switching, enhancing transmission security
- Layer 2 Switching, support 802.1Q VLAN, 802.1P QoS, Bandwidth Control, Spanning Tree, etc
- Layer 3 Home Gateway/CPE features with Hardware NAT, support Multiple WAN, Route/Bridge mode, etc

- Port Binding, different LAN ports can be assigned with different WAN services
- Max 1:128 Fiber ratio, max transmission distance can reach 20km
- Max 1:64 Fiber ratio for GE-PON, max transmission distance can reach 20km
- Support FEC (Forward Error Correction), ensures high reliable and precise data transmission.
- Support Dynamic Bandwidth Allocation (DBA), Smarter bandwidth assignment and usage.
- Support OMCI and TR069 Management, manage subscribers remotely.
- Support IPv4 and IPv6, highly applicable in both IP type based networks.
- Support Mesh IEEE802.11 k/v/r, IEEE802.11s protocols

TECHNICAL PARAMETERS

GPON Parameters

ITU-T G.984.x GPON, built-in with a
-30dBm Optical BOSA , SC/UPC or SC/APC
connector optional

1310nm upstream & 1490nm downstream

Support G.984.1 General Characteristics

Support G.984.2 Physical Media

Dependent (PMD) layer Specification

Support G.984.3 Transmission convergence
layer Specification

GPON transceiver transmitting
power: 0.5-5dbm, Optical receiving
sensitivity: -30dBm

Transmission wavelength:

Upstream: 1310nm / Downstream: 1490nm

Support 1:128 Fiber Ratio at 20km
transmission distance.

Fiber Transmission cable: G.652 Single
mode optical fiber cable Configurable
AES decryption on downstream payload.
Configurable FEC on both upstream and
downstream payloads.

Multi-Application Processor queues for
dedicated connections for in-band.

Enhanced GPON debug and
diagnostic functions.

Home Gateway/CPE Features

Multi-WAN, support up to 8 WAN connections

Support Route and/or Bridged WAN

Port Binding, Data/VoIP/IPTV services can be bound to different LAN ports

Configurable VLAN ID for each WAN

Configurable QoS queues for each WAN

Multi-services bound to the same WAN

Networking Features

MAC Learning, 2K MAC address table

Bridged or Route network mode

Support RIP v1, v2 for routing

Static Route, Dynamic Route, DNS Proxy,

IPv4 & IPv6 TCP, UDP, RTP, SNTP, NAT,

DHCP, DNS IEEE802.1Q VLAN, port VLAN

QoS

IEEE802.1P QoS, DSCP, TOS:

SP, WRR, SP+WRR dispatching Algorithm

Source & DST-MAC based QoS

VLAN ID, VLAN Priority based QoS Source

DST-IP based QoS

GEPON Parameters

IEEE802.3ah GEPON standard, support standard OAM

CTC 2.1, 3.0 China Telecom GEPON standard
GEPON BOSA built on board,
SC/APC or SC/UPC connector optional
1310nm wavelength at upstream 1490nm wavelength at downstream GEPON transceiver sending power: 0-4dBm, Optical receiving sensitivity: -28dBm
1:64 Fiber Ratio at 20km transmission distance. Fiber Transmission cable: G.652 Single mode optical fiber cable

VoIP Parameters

Offers 2* FXS ports for Phone connections
2 Calls can be made/received simultaneously
SIP V1, V2 (RFC3261, RFC3262, RFC3264, RFC3265)
SIP & H.248, support registering 2 SIP accounts
G.711, G.723.1, G.729A-8kbps, G.726, G.722, ILBC
voice codes DTMF Tone Detection, DTMF Tone Relay,
Multiple Calling Tone, FSK Caller ID
Calling line Identification Presentation
Calling line Identification Restriction
Call forwarding, call transfer, call hold, three-way conference, etc

Hardware Parameters

Realtek RTL9607C

Dure Core 900Mhz processor for PON

Single Core 500Mhz processor for VoIP

CPU covered with cooling unit.

Support Hardware NAT.

come with a 1Gb 16-bit DDR3 SDRAM

come with a 1Gb Nand Flash

1*GPON SC/APC or SC/UPC port,

2.5G downstream, 1.25G Upstream

4* 10/100/1000Base-Tx Gigabit Ethernet ports

1*300Mbps Wi-Fi Router,

1*867Mbps Wi-Fi Router

4*5dBi directional external antennas

2* FXS ports, support analog phones

IEEE802.3x flow control Full duplex and half duplex,

LED Lights: PWR,PON,Los,Internet,VoIP1-2,

GE1-4, 2.4G Wi-Fi, 5G Wi-Fi, WPS

External power supply, DC 12V,1A- 1.5A.

1200M Mesh Wi-Fi Router Features

IEEE802.11ac 867M Wi-Fi, 5Ghz

IEEE802.11n 300M Wi-Fi, 2.4Ghz

BandSteering and BeamForming

5GHz and 2.4GHz dual band connections

802.11ac and 802.11n Wi-Fi Clients

2*5dBi directional External antennas for 802.11ac. 2*5dBi directional External antennas for 802.11n. 4 Gigabit Ethernet ports, wired speed transmission Support 4-IN-4-OUT, Max 1200Mbps Wi-Fi throughput. Support WDS Wi-Fi bridge. Wi-Fi Transmission Distance: 100m for indoors

Management Features

Serial interface maintenance using UART
Web UI Management. OAM & NMS
Management. CLI command line
management. FTP/TFTP/HTTP Auto
Provision Management
TR069 ACS management

MESH PARAMETERS

Can use as a Mesh Controller only Support mesh up to 6 agents. WiFi coverage up to 1500 square meters. Mesh Backhaul through WiFi or Ethernet cable Mesh Kits/
Capacity:

1*SWR1200AC Mesh Controller+ max
6*SWR1200AC Agents

1*SDN775x-V3 xPON ONT Mesh
Controller + max 6*SWR1200AC agents

INTEROPERABLE OLTS

GPON OLT Models

HUAWEI MA5680T, MA5606T, MA5683T
GPON OLTs [Huawei R11/R13/R15/R17/
R18 versions interoperable]
ZTE C220, C300, C320 GPON OLTs
[All ZTE OLT firmware versions
interoperable] Fiberhome AN5516-01,
AN5516-02 GPON OLTs

GEPON OLT Models

Huawei MA5680T, MA5683T OLTs
Huawei R11/R13/R15/R17/R18 versions
interoperable] ZTE C200, C220, C300
series OLTs [All ZTE OLT firmware versions
interoperable] Fiberhome AN5506,
AN5516 OLTs [Fiberhome RP700, RP1000
versions interoperable]
Furukawa, Corecess GEPON OLTs

HARDWARE INTERFACES

1*GPON SC/
APC or SC /UPC port

4*5dBi directional
external antennas

1*GPON SC/ APC or SC /UPC port	4*5dBi directional external antennas
4*10/100/ 1000Base-Tx GE port	1*Reset button
1*PWR On/Off Switch button	1*USB port
2*FXS VoIP port	1*Wi-Fi on/off button
1*Power Supply Jack	1*WPS button
14 LEDs Indicators	Power, PON, LOS, Internet, VoIP1, VoIP2, GE1-GE4, 2.4G/5GWi-Fi, WPS, USB

SPECIFICATION TABLE

Standards : IEEE 802.3, IEEE 802.3u, IEEE802.3ab, IEEE 802.3x, IEEE802.1Q, IEEE802.1P, IEEE802.1D, IEEE802.11b/g/n, IEEE802.11ac, ITU-T G.984.1, ITU-T G.984.2, ITU-T G.984.3, ITU-T G.984.4, IEEE802.11k/v/r, IEEE802.11s

Topology : Star Topology

Uplink port : 1*GPON /GEAPON WAN port, SC/UPC Connectors or SC/APC connectors optional

Transmission distance : Up to 20Km

Downlink ports : 4*10/100/1000Base-Tx Gigabit Ethernet ports

VoIP Ports : 2*FXS ports

Wi-Fi : IEEE802.11b/g/n 300Mbps + IEEE802.11ac 867Mbps Wi-Fi

LED Indicators : Power, PON, LOS ,Internet, VoIP1, VoIP2, GE1-GE4, Wi-Fi, WPS

Ethernet Cable : 10Base-Tx: UTP category 3, 4,5, up to 100m , 100Base-Tx: UTP category 5, up to 100m 1000Base-Tx: UTP category 5, 5E, 6, up to 100m

Fiber Cable : 8.3μm, 8.7μm, 9μm and 10μm single mode fiber cable

Power Supply : AC110-240V Input, DC 12V, 1A-1.5A output External Power Supply, 4KV Surge Protection

Temperature & Humidity

	Temperature	Humidity
Working	0 to 45°C	10% - 90%
Standby	-40 to 70°C	5% - 90% RH