



10G xPON ONT/ ONU with Voice

NOVA-2004
for Residential and Business Subscribers



Deliver high ARPU premium business and residential services with Hitron's NOVA-2004 10G xPON ONT/ONU. With a 10 Gigabit PON fiber interface, this powerful solution delivers speeds up to 10 Gbps* downstream and 10 Gbps* upstream. You can meet everyone's most bandwidth-demanding applications today and tomorrow, including telecommuting, HD and UHD video on demand, ultra high speed Internet access, voice, interactive media services and more.

Flexible Fiber Options: 10G-EPON, XG-PON, and XGS-PON

Deploy the right solution for your network needs with support for IEEE 802.3av 10G-EPON, ITU-T G.987.2 XG-PON and ITU-T G.9807.1 XGS-PON.

Voice Services and Optional Battery Back-up

The NOVA-2004 is a one-box solution with two FXS VoIP ports and a battery backup. You can deliver reliable voice services to residential and SOHO subscribers. The optional backup battery provides uninterruptable voice service for over 24 hours during a commercial power outage (depending on model and utilization).

10G Home/Business Networking

You can make sure your subscriber's LAN network makes full use of the 10G access speeds. The NOVA-2004 supports one 10GigE and one 1GigE port.

Key Features

- IEEE 802.3av 10G-EPON compliant
- ITU-T G.987.2 XG-PON compliant
- ITU-T G.9807.1 XGS-PON compliant
- DOCSIS DPoE 2.0 compliant
- One 1/2.5G/5G/10GBASE-T Ethernet port
- One 10/100/1000BASE-T Ethernet port
- Built-in fiber tray
- Two FXS VoIP ports
- Optional battery back-up
- Extensive operator control via configuration file and IEEE 802.3ah OAM



Interfaces

- 1x SC-UPC/APC 10G Optical Port
- 1x RJ-45 1/2.5/5/10GBASE-T Ethernet Port
- 1x RJ-45 10/100/1000BASE-T Ethernet Port
- 2x RJ-11 FXS Ports
- 1x 3.5mm Jack for Optional Battery Back-up
- 1x DC 12V Power Jack

xPON Uplink

- 1x SC/APC Connector, Single Mode Fiber
 - TX Wavelength: 1270 nm
 - TX Max. Output Power: 7 dBm
 - RX Wavelength: 1577 nm
 - Sensitivity Max.: -29 dBm
- Compliant with IEEE 802.3av 10G-EPON
- Compliant with ITU-T G987.2 XG-PON
- Compliant with ITU-T G.9807.1 XGS-PON

Advanced Features

- 10G-EPON (Choice of Protocol)
 - IEEE 802.3av (Clause 77) Compliance
 - IEEE 802.3ah (Clause 64) Compliance
 - CTC V3.0 Specification Compliance
 - 32 LLIDs in Multiple-LLID (M-LLID) Mode
 - Programmable VoQ per LLID
 - 8 Priority Queues (VoQs) in S-LLID Mode
 - Standard MPCP Protocol fully supported
- XG-PON/XGS-PON (Choice of Protocol)
 - 128 GEM-Port-ID/XGEM-Port-ID
 - 32-TCONT
- Layer 2 Switching, supporting up to 4K MAC addresses
- VLAN Tagging and Stripping with Priority Tag Support and QinQ Support for full 4K VLAN Range
- Jumbo Frame Support up to 12 Kbyte
- QoS Functions (DSCP/802.1p/TC Arbitrary Mapping to Queues and Flows)
- Per Flow Packet Policing and Per Queue Traffic Shaping
- Customizable QoS (with WRED) and powerful ACL support

Voice

General Voice Features

- SIP v2 Call, SIP v2 Call Control
- MGCP
- DNS SRV
- Hook Flash Event Signaling
- RTP Audio Transport
- RFC2833 RTP Payload
- SIP INFO
- InBand DTMF Mode
- HD Voice Ports with 16kHz sampling rates

Voice Audio Codecs

- G.711 (a-law and mu-law)
- G.722 (HD codec)
- G.723.1
- G.726
- G.728
- G.729
- AMR (narrowband)
- Adaptive Jitter Buffer
- G.167 Acoustic Echo Cancellation

FAX Relay Protocols Compliance

- T.38 Pass-through and over IP Fax/Modem Detection Control
- T.28 (IP) Compliant Group 3 and SG3 Fallback to Transport T.30
- V.34 Fax and Modem Bypass
- Automatic Fallback to G.711 support

CLASS Calling Features

- Call Waiting
- Call Hold
- Call Resume
- Call Forward Unconditional, Call Forward on Busy
- Caller ID
- 3-Way Conference
- Call Consultant
- Call Transfer and Network-initiated Class Services - MWI messaging, VMWI via FSK

Management

- IEEE 802.3ah OAM
- Web-based GUI Configuration and Management
- LEDs clearly display network status and activity
- Power On Self-Diagnostic

Mechanical

- LEDs: Phone, Online, Battery
- Factory Default Reset Button
- Dimensions: 51.88mm (H) x 179.95mm (W) x 153.39mm (D)
- Net Weight: 435g
- Built-in Fiber Tray

Electrical

- Input Power: 12VDC
- Power Consumption: ~9.6W
- Surge Protection: Ethernet RJ-45 sustains at least 4KV

Environmental

- Operating Temperature: 0°C (32°F) ~ 40°C (104°F)
- Operating Humidity: 5% ~ 95% (Non condensing)
- Storage Temperature: -20°C (-4°F) ~ 60°C (140°F)

Optional Accessories

- EBBU-0014: External Battery Back-up (24h)
- Replacement Batteries

Regulatory Compliance

- RoHS Compliant
- Compliant with CableLabs DPoE
- Compliant with FDA 21, CFR 1040.10 and 1040.11
- FCC
- UL 62368 with laser safety standard IEC-60825 Class 1



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