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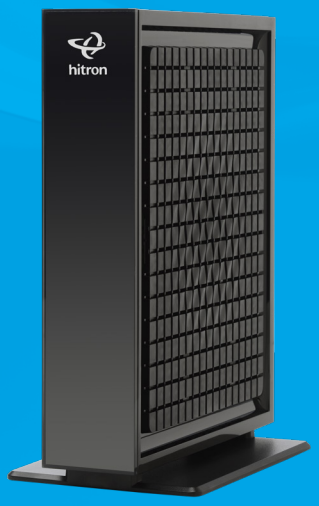
DOCSIS 3.1 Cable Modem

with Switchable Upstream and Downstream Frequency Extended to 1218MHz

EN2251-HSP 2A



With support for DOCSIS 3.1 (download speeds up to 6 Gbps*), residential and business customers will enjoy the ultimate digital experience, today and tomorrow, with richer ultra-HD video streaming, faster online gaming, virtual reality applications, more reliable video conferencing and more. And one 2.5GigE port provides fast wired speeds to connect a Wi-Fi router, computer or other wired device.

DOCSIS 3.1 Certified

DOCSIS 3.1 takes Internet speeds to a new level, increasing the capacity of HFC networks by more than 50 percent and reducing latency. This means your customers can connect more devices, enjoy richer digital experiences, and get fast, reliable Internet service for all of today and tomorrow's needs.

Software-Switchable Frequency

You can seamlessly support today's and tomorrow's upstream bandwidth demands with the software switchable return path. Want to upgrade customers to higher-tier upstream speeds? No problem. You can remotely change to the high-split (5-204MHz) Upstream and (258-1218MHz) Downstream path at any time – there's no need to swap out hardware or send out a technician.

Extended Downstream up to 1218 MHz

Future proof your network and offer even faster speeds by expanding the downstream frequency range up to 1218MHz.

Key Features

- DOCSIS 3.1 2x2 OFDM/OFDMA
- DOCSIS 3.0 32x8 Channel Bonding
- Switchable Upstream: 5-85/5-204MHz
- Switchable Downstream: 108-1218MHz/258-1218MHz
- One 2.5GigE Port
- Built-in MoCA Immunity Filter
- Supports Business Services over DOCSIS
- Two HD Voice Ports, SIP and MGCP Support

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EN2251-HSP 2A Specifications






Interfaces
- 1x RF F-Type 75Ω Female Connector
- 1x RJ-45 2.5GBASE-T Ethernet Port
- 2x RJ-11 HD Voice Ports

Reception-Demodulation
- DOCSIS 3.1/3.0/2.0
- DOCSIS 3.1 Demodulation: Multi-carrier OFDM 16 to 4096QAM
- DOCSIS 3.1 Data Rate: Up to 6Gbps*
- DOCSIS 3.0 Demodulation: 64QAM, 256QAM
- DOCSIS 3.0 Data Rate: Up to 1.2Gbps with 32 Bonded Downstream Channels
- Frequency: Switchable 108-1218MHz/258-1218MHz
- Channel Bandwidth: 6MHz
- Signal Level: 15dBmV

Transmitter-Modulation
- DOCSIS 3.1/3.0/2.0
- DOCSIS 3.1 Modulation: Multi-carrier OFDMA BPSK to 4096QAM
- DOCSIS 3.1 Data Rate: Up to 1 Gbps with OFDMA 96MHz Upstream Channels
- DOCSIS 3.0 Modulation: QPSK, 8QAM, 16QAM, 32QAM, 64QAM, and 128QAM (SCDMA only)
- DOCSIS 3.0 Data Rate: Up to 320Mbps with 8 bonded Upstream Channels
- Frequency: Switchable 5-85MHz/ 5-204MHz
- Upstream Transmit Signal Level: +11 to 65dBmV

Management
- Protocol Support: TFTP, SSHv2, SNMP v2, v3
- Web-based GUI Control, Configuration and Management
- Power-on Self-Diagnostic
- Hitron-proprietary MIBs for Extended Support on DOCSIS

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

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EN2251-HSP Specifications

Mechanical

- LEDs: 5 (Power, DS, US, Status, LAN)
- Factory Default Reset Button
- Dimensions: 204mm (H) x 177mm (W) x 45mm (D)
- Net Weight: 650 +/- 10g

Electrical

- Input Power: 12VDC, 2A
- Power Adaptor: 100-240VAC, 50/60Hz
- Power Consumption: 8.14W (power saving), 9.54W (link.), 16.84W(Max)
- Surge Protection
  - RF Input sustains at least 4KV
  - Ethernet RJ-45 sustains at least 4KV

Environmental

- Operating Temperature: 0°C (32°F) ~ 40°C (104°F)
- Operating Humidity: 10% ~ 90% (Non-condensing)
- Storage Temperature: -40°C (-40°F) ~ 60°C (140°F)

Regulatory Compliance

- RoHS
- CableLabs
- 47 CFR FCC Part 15, Subpart B, Class B
- ANSI C63.4:2014
- ICES-003 Issue 7, Class B
- UL 60950-1 and CAN/CSA C22.2 No. 60950-1-07 Information Technology Equipment -Safety -Part 1: General Requirements.

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Specifications subject to change without further notice. Product photo may differ.

DOCSIS 3.1 is a CableLabs standard for high speed Internet access that defines support for up to 10 Gbps downstream and 1 Gbps upstream. Actual cable operator network speeds will vary and will be less than the calculated maximum possible speeds. Actual upload and download speeds are affected by several factors including, but not limited to: the capacity of your cable operator's network, the services offered by your cable operator, cable and Internet network traffic, your computer equipment etc. Final speeds will also be limited by each device and the quality of its connection to the modem or router. Trademarks owned by Hitron Technologies Inc. © 2023 Hitron Technologies Americas Inc. All rights reserved

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