

## DOCSIS 3.1 4X4 5GHz EMTA GATEWAY w/ MoCA

Intel® Puma™ 7 OFDM 2x2 w/ fixed 5-85MHz US, 4x4 5GHz Wave2 MU-MIMO and 3x3 2.4GHz dual band Wi-Fi, MoCA 2.0 channel bonding, GigE, Voice, BBU



### KEY FEATURES

- DOCSIS 3.1 certified
- DOCSIS 3.1 2x2 multi-carrier OFDM
- DOCSIS 3.0 32x8 channel bonding
- Fixed 5-85MHz upstream
- Wi-Fi 4x4 5GHz 802.11ac Wave 2 MU-MIMO and 3x3 2.4GHz 802.11n dual band concurrent internal antennas
  - 16 SSIDs (8 SSIDs per radio)
  - Individual configuration for each SSID (security, bridging, routing, firewall and Wi-Fi parameters)
- Battery Backup (BBU)
- One USB 3.0 host, supporting NAS functionality
- Integrated DLNA Media Server with support for video, audio and image serving
- 2 HD voice ports with SIP or MGCP support
- MoCA Channel bonding for highest performance
- Extensive operator control via configuration file and SNMP
- TR-069 and H NAP for easy setup and remote management

### UNLEASH YOUR WI-FI WITH FAST WAN AND LAN CONNECTIONS

The CODA-4589 has the capability to receive 5Gbps bi-directional based on 2 OFDM + 32 QAM downstream with 2 OFDMA upstream channels over its DOCSIS 3.1 interface. The integrated Wi-Fi 3x3 2.4GHz 802.11n and 4x4 5GHz 802.11ac Wave 2 dual band MIMO Access Point significantly improves customer experience extending range and coverage with blazing speeds. For wired clients, the four Gigabit Ethernet ports offer ultra-fast connections. MoCA 2.0 bonding provides a Gigabit wired backbone in the customer's home for WiFi extension.

### IPV4/IPV6 DUAL STACK SUPPORT

The CODA-4589 supports full IPv4 routing features, as well as, full support for IPv6 routing and firewall. The CODA-4589 supports both DSLite as well as 6RD for different IPv6 deployment and transition strategies.

### EASY AND SECURE WIRELESS NETWORKING

The CODA-4589 supports pre-configured and pre-enabled Wi-Fi security via Wi-Fi Protected Setup (WPS), allowing the end-user to rapidly set up a secure wireless network without manual configuration. Hitron's AutoSync software provides secure automated setup of extenders in the customer's home or business.



## SPECIFICATIONS

### Connectivity

- RF F-Type 75Ω female connector
- 4x RJ-45 Ethernet port 10/100/1000Mbps
- USB 3.0 type A connector with host interface
- 2x RJ-11 HD voice ports

### Management

- Protocol support: TR-069, HNAP & SNMP v1, v2C, v3
- Web-based GUI control configuration and management
- Hitron proprietary MIBs for extended support on DOCSIS, router management, Wi-Fi management and MoCA management

### 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 5Gps with 2 OFDM 192MHz downstream channels +32 QAM
- DOCSIS 3.0 demodulation: 64QAM, 256QAM
- DOCSIS 3.0 data rate: Up to 1.2Gbps with 32 bonded downstream channels
- Frequency (edge-to-edge): 108-1002MHz
- Channel Bandwidth: 6MHz
- Signal level: -15dBmV to 15dBmV
- Input return loss: >6dB

### 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 700Mbps 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: 5-85MHz
- Upstream transmit signal level: +11 to 65dBmV
- Output return loss: >6dB

### MoCA 2.0 Reception / Transmitter-Modulation

- Demodulation/ Modulation: BPSK, QPSK, 8QAM, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM, 512QAM, 1024QAM
- PHY data rate: 700Mbps (baseline Mode) / 1400Mbps (bonding channel)
- Throughput: 400+Mbps (baseline mode) / 500+Mbps (turbo mode, point to point) / 800Mbps (bonding channel)
- Frequency (center frequencies): 1025-1625MHz
- Channel bandwidth: 100MHz (baseline mode) / 225MHz (bonding channel)

### Voice

- Protocol support: SIP & MGCP
- 2x 8kHz each HD voice

### Compliance Certificates

- FCC, UL
- RoHS compliant



### Routing Support

- Protocol support: IGMP v3 for IPTV service capability
- MAC address filtering (IPv4/IPv6)
- IP source/destination address filtering (IPv4/IPv6)
- DHCP, TFTP and ToD clients (IPv4/IPv6)
- DHCP server supports RFC 1541 (IPv4)
- DHCPv6 obtains prefix from DHCPv6 server through prefix delegation
- Firewall with stateful inspection (IPv4/IPv6)
- Hacker intrusion prevention and detection
- Application content filtering (IPv4/IPv6)
- Complete NAT software implemented as per RFC 1631 with port and address mapping (IPv4)
- DSLite support for IPv4 in-home support with IPv6 MSO backbone
- 6RD support for quick IPv6 deployment over IPv4 backbone
- RIPv2 for static IP support

### Wireless

- 802.11a/b/g/n/ac
- 4T4R 5GHz (5180MHz-5240MHz) 802.11ac Wave 2 MU-MIMO + 3T3R 2.4GHz (2412MHz-2462MHz) 802.11n dual band concurrent with 450Mbps+1733Mbps PHY data rate
- 20/40/80/160MHz channel bandwidth
- Up to 8 SSIDs for each frequency
- Security: WEP-64/WEP-128, WPA-PSK/WPA2-PSK (TKIP/AES), WAPI
- QoS: WMM/WMM-PS
- WPS (Wi-Fi Protected Setup) PBC, PIN
- Fast roaming: 802.11r/k/v and Band Steering (BS)
- Wi-Fi output power Range (FCC):
  - 2.4G (EIRP) 29.07 / 20.07dBm
  - 5G Uni 1 (EIRP) 26.64 / 22.64dBm
  - 5G Uni 2 (EIRP) 26.64 / 22.64 dBm
  - 5G Uni 3 (EIRP) 27.62 / 23.62 dBm
  - 5G Uni 4 (EIRP) 31.12 / 29.12 dBm

### Mechanical

- 10 status LEDs (Power, DS, US, Status, Wi-Fi 2.4G, Wi-Fi 5G, Line 1/2, Battery, MoCA)
- WPS button
- Factory reset button
- Dimensions: 120mm (W) x 120mm (H) x 270mm (D)
- Weight: 1040g ± 10g
- Battery back up with lithium battery cells

### Electrical

- Power: 100-240VAC, 50/60Hz
- Power consumption: 5W (power save mode), 18W (typical), 36W (maximum)
- Surge protection: RF input sustains at least 4KV, Ethernet RJ-45 sustains at least 4KV, Voice sustains at least 1.5KV

### Environmental

- Operating temperature: 0°C (32°F) - 40°C (104°F)
- Operating humidity: 10% - 90% (non-condensing)
- Storage temperature: -40°C (-40°F) - 70°C (158°F)