

BT-CMTS-31000 Cable Modem Termination System DOCSIS 3.1/3.0 Mix Mode



Features

- Best-in-class integrated edge-QAM/CMTS
- Powerful Marvell Octeon™ network processor with hardware acceleration
- Stable, proven industry standard Linux operating system
- Compact 1RU footprint, dual redundant PS



DOCSIS 3.1 - the **BT-CMTS-31000** supports a downstream throughput using a 4096-QAM and 25 kHz subcarrier spacing of up to 1.89 Gbit/s per 192 MHz OFDM channel. The upstream throughput possible is 0.94 Gbit/s per 96 MHz OFDMA channel. Six (6) OFDM and two (2) OFDMA channels are supported.

A maximum of 10 Gb/s is supported, as the total aggregate US/DS bandwidth throughput using higher order modulation schemes.

DOCSIS 3.0 - the BT-CMTS-31000 supports 64 DS and 12 US channels. DOCSIS 3.1 and 3.0 channels can be mixed as desired by the operator up to the 10 Gb/s max US/DS aggregate bandwidth of the CMTS.

Based on optimal SNR conditions in a DOCSIS network, the BT-CMTS-31000 can support up to 2000 modems.

- DOCSIS/EuroDOCSIS 3.1/3.0/2.0 compatible
- Simultaneous mix mode support for 3.0/3.1 CM
- Compact 1RU 19" chassis
- Hot swap dual redundant power supplies
- Intuitive web-based GUI
- Command line interface via serial/SSH/Telnet
- Integrated cable modem load balancing
- Real time CM/CPE statistics
- QoS support
- Multicast IP video in Edge QAM mode
- Internal DHCP/TFTP server
- Support for external provisioning DHCP/TFTP
- Dual-Stacked IPv4/IPv6 compatibility
- VLAN tagging
- L2/L3 DHCP relay
- SFP+/1GbE/Serial port on front panel

Ordering Information

<u>Model</u>	<u>Stock #</u>	<u>Description</u>
BT-CMTS-31000	2341	Mix Mode DOCSIS 3.1/3.0/2.0 Edge-CMTS

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Input/Output Interfaces

Data Port	10GbE: 1x SFP+ (For Optical/Copper SFP Plug-In) 1GbE: Ethernet RS-232: Serial
RF Upstream	Connectors: 4x "F" Conn.
# of Channels	DOCSIS 3.1: 6 OFDM / 2 OFDMA DOCSIS 3.0: 12 SC-QAM
Frequency Range	DOCSIS 3.1: 85/204 MHz DOCSIS 3.0: 42/65/85 MHz with mid-split
Modulation Mode	DOCSIS 3.1: OFDMA (8PSK, QPSK, 16/ 32/ 64/ 128/ 256/ 512/ 1024/ 2048 QAM) DOCSIS 3.0: QPSK 16/ 32/ 64/ 256 QAM
Bandwidth	DOCSIS 3.1: 6.4/ 10/ 192 MHz (sub-spacing dependent) DOCSIS 3.0: 1.6/ 3.2/ 6.4 MHz
Receive Level	DOCSIS 3.1: -4 to 10 dBmV DOCSIS 3.0: -7 to +23 dBmV @ 6.4 MHz -10 to +20 dBmV @ 3.2 MHz -13 to +17 dBmV @ 1.6 MHz
RF Downstream	Connectors: 1x "F" Conn.
Frequency Range	DOCSIS 3.1: 108/258 - 1218 MHz DOCSIS 3.0: 54/87/108 - 1003 MHz
Modulation Scheme	DOCSIS 3.1: OFDM (16/ 64/ 128/ 256/ 512/ 1024/ 2048/ 4096 QAM) DOCSIS 3.0: 64/256/1024 QAM
Maximum QAM Output Level (6 MHz):	38 dBmV @ 64 channels 42 dBmV @ 32 channels 45 dBmV @ 16 channels 49 dBmV @ 8 channels 52 dBmV @ 4 channels 56 dBmV @ 2 channels 60 dBmV @ 1 channel

System Functions

DHCP Internal:	IPv4 and IPv6
DHCP External:	Support via L2/L3 DHCP forward
IPv4 and IPv6:	IPv4 and IPv6 dual-stack
QoS:	802.1ad/802.1q
VLAN:	VLAN addition according to device (option 60)
L2VPN:	L2VPN support, IGMP v2/v3 snooping
Security:	New D3.1 security - BPI+, Shared Secret, PKI
Spread Spectrum:	Upstream automatic frequency hopping
Load balancing:	RLBG/GLBG, Load balance priority
MAC Domain Mgmt.:	13-bit DOCSIS L2 identifier SID
Multicast:	Static Multicast verification; MLD v1&2 IGMP 2&3 ping

Alarms/Monitoring/Control

Local Monitoring:	LED Indicators: Power Supply A, Power Supply B, SFP+ Link, Power, Run, Cable, Alarm
Button:	Front panel concealed reset
Control Port:	Front panel RJ45 with configurable IP address GUI access and Telnet/SSH over IP
Console:	1xRJ45 Front Panel Port, RS-232 serial port

General

Electrical	Power: 90V-264VAC, 50/60Hz (Dual Redundant)
Power Consumption:	61 W
Mechanical	Operating Temp: 32 to 104 °F (0 to 40 °C)
Operating Humidity:	10% to 90% non-condensing
Dimensions (W x D x H):	19 x 11.8 x 1.75 inches
Weight:	12 lbs. (5.5 kg)

Application Drawing

