

**Blonder
Tongue**

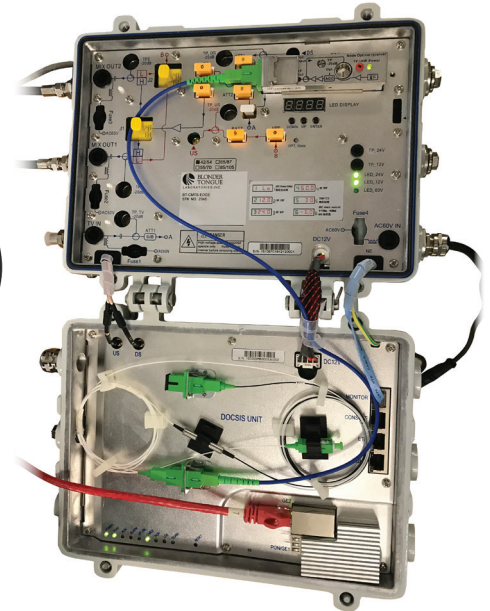
BT-CMTS-EDGE

**Outdoor Cable Modem
Termination System**

SOLUTIONS FOR ALL YOUR APPLICATIONS

The **BT-CMTS-EDGE** is a remote MAC/PHY, self-contained CMTS that utilizes a single device to deliver video and data services to existing coax infrastructures. This edge device allows the operator to go fiber deep and move closer to the subscriber. The BT-CMTS-EDGE can deliver up to 16 downstream channels, and 4 upstream channels to hundreds of subscribers in DOCSIS 3.0 or even more in DOCSIS 2.0.

The BT-CMTS-EDGE features superior RF performance, and can be pedestal, wall, or strand-mounted for outdoor installations.



Features & Benefits

- DOCSIS Module supports GE/EPON uplink (SFP module required), and DOCSIS/EQAM functions
- Fiber Optic Receiver module with AGC for Broadband CATV Input (54-1002 MHz)
- Provides either a Cable-based Power Supply (AC 60V/90V), or a Local Power Supply (AC 110V/220V)
- Provides Two High Level RF Outputs at 48 dBmV
- Supports passive optical networking (PON) to preserve fiber resources
- Accommodates upgrade to 10 Gigabit PON
- Provides high-bandwidth support of 960 Mbps per fiber node
- Provides ability to create a separate service flow and classifier for each cable modem automatically
- Supports PacketCable/PCMM and multi-service applications, including internet, video, and interactive VOD
- Supports strand-mounted and wall-mounted installations
- Provides overall management and maintenance modes

Ordering Information

Model	Stock #	Description	Subject to Change
BT-CMTS-EDGE	2345 F6090	DOCSIS 3.0 Outdoor CMTS; 60/90 VAC CATV Network Power	
	2345 F120	DOCSIS 3.0 Outdoor CMTS; 110/220 VAC Utility Power	

PRELIMINARY

Pre-Production Specifications

Subject to Change

Stock#	Model	Description	Stock#	Model	Description
1002622	SFP-SMF-1310-10KM	1000BASE-LX SFP, 1310NM, 10KM, SMF, DDM	1002628	SFP-SMF-CWDM-1550NM-80KM	1.25GBASE-CWDM-SFP, 1550NM, 80KM, SMF, DDM
1002623	SFP-SMF-1550-80KM	1000BASE-ZX SFP, 1550NM, 80KM, SMF, DDM	1002629	SFP-SMF-CWDM-1570NM-80KM	1.25GBASE-CWDM-SFP, 1570NM, 80KM, SMF, DDM
1002624	SFP-SMF-CWDM-1470NM-80KM	1.25GBASE-CWDM-SFP, 1470NM, 80KM, SMF, DDM	1002630	SFP-SMF-CWDM-1590NM-80KM	1.25GBASE-CWDM-SFP, 1590NM, 80KM, SMF, DDM
1002625	SFP-SMF-CWDM-1490NM-80KM	1.25GBASE-CWDM-SFP, 1490NM, 80KM, SMF, DDM	1002631	SFP-SMF-CWDM-1610NM-80KM	1.25GBASE-CWDM-SFP, 1610NM, 80KM, SMF, DDM
1002626	SFP-SMF-CWDM-1510NM-80KM	1.25GBASE-CWDM-SFP, 1510NM, 80KM, SMF, DDM	1002632-XX	SFP-SMF-DWDM-CHXX-40KM	1.25GBASE-DWDM-SFP, CH. 20-59, 40KM, SMF, DDM
1002627	SFP-SMF-CWDM-1530NM-80KM	1.25GBASE-CWDM-SFP, 1530NM, 80KM, SMF, DDM	1002633-XX	SFP-SMF-DWDM-CHXX-80KM	1.25GBASE-DWDM-SFP, CH. 20-59, 80KM, SMF, DDM

Last 2 numbers indicate channel number (22-27).

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Specifications

DOCSIS Module

Standard:	DOCSIS 3.0 DOCSIS 2.0 C-DOCSIS
SNI:	1 SFP (GE/EPON ONU)
UNI:	1 GE RJ45 1 GE RJ45
Management Interface:	1 GE RJ45 management interface 1 RJ45 console interface
RF Upstream	# of Channels: 4 Frequency Range: 5-42 MHz (Operational with diplexers) Modulation Mode: QPSK/QAM 16, QAM 32, QAM 64 Bandwidth: 1.6, 3.2 or 6.4 MHz Receive Level: -7 to +23 dBmV @ 6.4 MHz -10 to +20 dBmV @ 3.2 MHz -13 to +17 dBmV @ 1.6 MHz Qty of Service Flow: 1024
RF Downstream	# of Channels: 16 Frequency Range: 54-1002 MHz Modulation Mode: QAM 64, QAM 256 Bandwidth: 6.0 MHz RF Level: +44 dBmV Qty of Service Flow: 2048 Channel Selection: Optional Channels within 192 MHz

Fiber Receiver Module

Forward Optical Receiver Module (only)	Wavelength: 1290~1600nm Optical Connector: SC/APC Optical Input Range (for AGC): -7~+2dBm Passband: ±0.75dB Optical Input Test Point (±20%): 1V/mW
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RF Section

Passband:	54-1002 MHz	Reverse	5-42 MHz
Amplifier Type:	PHD		
Return loss:	≥16 dB (87-550 MHz) ≥14 dB (550-1002 MHz)		≥16 dB
RF Test Points (±1 dB):	-20 dB		-20 dB
Port to Port Isolation:	20 dB		20 dB
Maximum Output Level:	+48.0 dBmV		
Reference Output Level			
1002 MHz:	+48.0 dBmV		
550 MHz:	+45.3 dBmV		
54 MHz:	+40.0 dBmV		
Default Output Tilt (54-1002 MHz):	8 dB		
Tilt Range (±1.0 dB):	20 dB		
Operational Gain:	16 dB		
Flatness:	±0.75 dB		
Level Stability (-40~+55 °C):	±1.5 dB		
MER (no CATV signals)			13 dB
Equalizer Off:	≥35 dB		±0.75 dB
Equalizer On:	≥43 dB		±1.5 dB
CSO:	>60 dBc		
CTB:	>65 dBc		
C/N:	>65 dBc		

Based on analog channel loading from 54-550 MHz and Digital channel loading from 550-1002 MHz (at -10 dB) with a fiber optic input of 0 dBm.

General

Cable-based Power Supply:	AC60V/AC90V, 36-110V, 50/60 Hz
Local Power Supply:	AC110V/AC220V, 90-265V, 50/60 Hz
Power Dissipation:	60W
Operating Temperature:	32 to 131 °F (startup on -25 °C)
Operating Humidity:	5% to 95% (Non-condensing)
Dimensions (W x D x H):	10.4"x 7.7" x 5.1" (265mm×195mm×129mm)
Weight:	11 lbs (5 kg)

System Functions

DHCP	DHCP relay/snooping DHCP bundle DHCP lease query
DHCPv6:	DHCPv6 relay/snooping DHCPv6 bundle DHCPv6 lease query DHCPv6-PD Supports Vendor Class string to identify equipment type Supports Insert Remote-ID, Interface-ID, CMTS capabilities and CM MAC
IPv6:	IPv4 and IPv6 dual-stack
VLAN & L2VPN:	802.1ad/802.1q/subnet VLAN Service flow-based VLAN addition or deletion VLAN addition according to option60 L2VPN support VLAN conversion
QoS:	Static service flow/dynamic service flow/service class DOCSIS 3.0 USCB scheduling PowerBoost
MAC Domain Management:	MDD & MDF enable and disable MTC & MRC enable and disable UDC enable and disable Piggyback, shared-secret, channel bonding
Multicast:	Multicast authentication Static Multicast IGMP V2/V3 Snooping
Load balance:	RLBG/GLBG
Spectrum Monitor:	Reverse spectrum monitoring (0~81 MHz)
Automatic Opening:	Automatic Opening and upgrade based on DHCP and TFTP PN8600 series OLT unified opening and upgrade support

EQAM Functions

Frequency Range:	87-1002 MHz
Channel Width:	8 MHz/6 MHz
Symbol Rate:	6.875/6.900/6.952Mband/s; 5.057/5.361Mband/s
Modulation Mode:	64/256 QAM
Phase Noise	1 kHz: < -75 dBc/Hz 10 kHz: < -85 dBc/Hz >100 kHz: < -100 dBc/Hz
Delay Jitter Tolerance:	1000 ms
PCR Jitter Tolerance:	≤500 ns
Transmission:	UDP/IP/GE
Multiplexing Capability:	PMT PID, and other PSI/SI multiplexing capabilities
TS Multiplexing:	1: VOD service, single frequency supports 32 programs, with each program supporting 16 PIDs simultaneously (default) 2: a single program can configure to transmit 50 PIDs 3: 256 UDP ports, and 4,096 PIDs (entire unit) 4: Supports DATA stream of a single frequency multiplexing with other frequency
Stream parameters	1: MPEG-2, MPEG-4, H.264, AVS, DATA (including VBR & CBR) 2: Simultaneous Unicast, Multicast, & DATA Streams (1xFreq.) 3: Each frequency support 4 business UDP port 4: UDP port can be configured with PMT PID and service flow type information according to different frequencies 5: Stream overflow protection 6: In-data broadcasting services, PID value offset in the transport stream (remapping)

Related Products

Model	Description
BT-CMTS-3000	DOCSIS/EuroDOCSIS 3.0 CMTS
DMM-5500	DOCSIS Modem Module
BTPRO-7000 CM8FO	HD Tablet w/ Modem & Fiber Options