

BigBand BEQ™ 6000 Broadband Edge QAM

The BigBand BEQ™ (Broadband Edge QAM) is a versatile platform for the edge processing of video services such as switched broadcast and VOD. It is also at the core of the BigBand M-CMTS (modular cable modem termination system) platform that supports delivery of data and VoIP traffic. The BEQ is, therefore, the ideal QAM platform for cable operators wanting to maximize utilization of their network infrastructures.

Up to 48 QAM channels, equivalent to two full Gigabit Ethernet payloads, are terminated in the compact 1.5 RU chassis. The BigBand BEQ holds six hot-swappable QAM modules, each capable of supporting up to eight QAMs, enabling capacity to be added incrementally. A variety of features ensure the highest standards of service reliability. In addition to hot-swappable QAM cards and fan trays, the BEQ operates over a 0° – 50°C temperature range with automatic shut-off at 85°C. Diverse fiber routing with redundant optical GigE ports enables fast switchover in the event of a network failure, and the striping of service groups across the chassis is supported with a 2:1 and 4:1 upconversion.

Switched broadcast allows cable operators to expand programming choices and support greater personalization of content, while on-demand services enhance viewership by offering subscribers greater convenience. The BigBand M-CMTS, with its disaggregated CMTS core and Edge QAM functionalities, quadruples broadband speeds at a fraction of the previous cost per bit. Broadband speeds of 25Mb/s can be achieved with current cable modems, and over 100Mb/s using DOCSIS 3.0 modems with channel bonding.

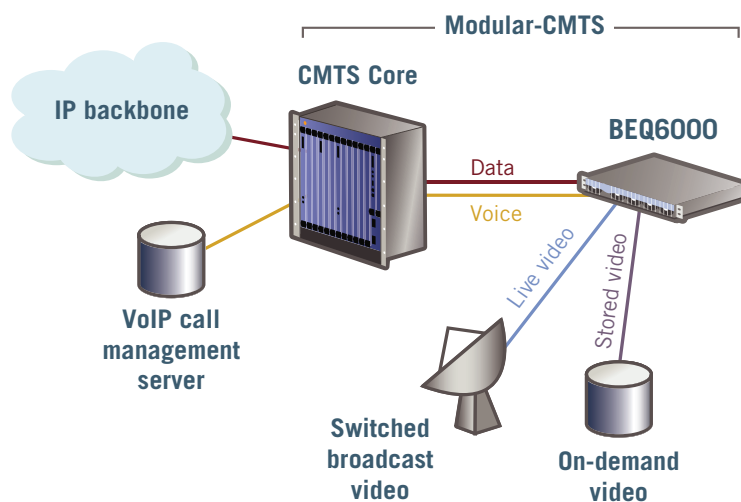
A single BigBand BEQ chassis is designed to support VOD, switched broadcast and DOCSIS services, allowing QAM capacity to be dynamically shared across different service types. Fully compatible with pre- and session-based bulk encryptors, the BigBand BEQ integrates with all leading VOD servers. The platform also supports the DTI (DOCSIS timing interface) standard and the E1 / T1 standards-based timing interface.

A sophisticated management system makes it easy to configure and manage BigBand BEQs from a single location. An intuitive GUI presents a wealth of insightful information, aggregating alarms from multiple platforms using SNMP. During initialization the platform automatically discovers both network topology and the number of QAM modules in each chassis.



BEQ6000

- Compact chassis terminating 48 QAM channels, equivalent to two full GigE payloads, in 1.5 RU chassis
- RF ports support 64 and 256 QAM in Annex A, B and C
- Supports all standard SFP modules for a large variety of GigE transport topologies and distances
- Robust design, leveraging features such as hot-swappable QAM modules and removable fan trays, ensures the highest availability
- Redundant GigE path inputs on optical and copper ports enable 50ms redundancy switchover
- Support for both DTI and E1 / T1 timing interfaces
- Dynamic sharing of QAM capacity across service types, such as VOD and switched broadcast
- Sophisticated Linux-based management system performs all aspects of configuration and monitoring using SNMP



BigBand BEQ supports VOD, switched broadcast and DOCSIS services



BigBand BEQ6000 Broadband Edge QAM

Specifications

General

Video Inputs

MPEG TS format	188 bytes/packet
Encapsulation	SPTS over UDP/IP/GbE, 7 MPEG packets per datagram

MPEG Processing

PCR Handling	Re-stamping
De-jittering	up to 100ms

DEPI

DEPI	DEPI PSP mode as M-CMTS Edge
Encapsulation	Transport packet encapsulation of DEPI data

Input

Optical	4x SFP supporting singlemode, multimode, CWDM and copper
Electrical	1x 10/100/1000 GbE RJ45

RF

Modules	Six hot-swappable QAM modulation modules 1:1, 2:1 and 4:1 upconversion
Output Connectors	2x F-Type, ANSI SP 406-1998, 75 ohm impedance output 2x MCX female (monitoring points)

Management

Software	BigBand EM (Element Manager) CLI
Protocols	DHCP SNMPv2c IGMPv3
Craft Port	RS-232 and 10/100/1000 BaseT (RJ45)

Physical

Dimensions H x W x D	2.63" x 17.72" x 23.0" (68mm x 450mm x 584mm)
Weight (Fully Loaded)	32.5lbs (14.8kg)

External Clock

Type	1.544MHz/2.048MHz T1/E1 BITS Clock input CM-SP-DTI DOCSIS input assembly module
Connector	RJ-45 (two, redundant)

Environmental

Input Voltage	110/220VAC, 50/60Hz auto sensing -48VDC, -36 to -75VDC
Power Consumption	265W (fully loaded)
Operating Temp.	32° to 122°F (0 TO 50°C)
Storage Temp.	-4 to +185°F (-20 to + 85°C)
Cooling Type	Forced air
Airflow	Front to back

Compliance

Safety	UL/cUL 1950: EN 60950
Electro-Magnetic	FCC Part 15 Class A



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