QT Series

QAM Transcoder

❍ Features & Benefits

- Modular Design Allows One to Eight Transcoder Modules in a Chassis Utilizing 3 Rack Spaces
- Fully Agile Output Frequency Range of 54-860 MHz
- Back-Lit LCD Display Panel with Front Panel Accessible Push Button Controls Provides Access to All Vital Unit Information and Makes Set-Up and Troubleshooting A Breeze
- Design Modularity Provides the Ability to Field Replace Any Module in the Unlikely Event of a Failure
- Off-Site Remote Operation and Control Including Digital Adjustment of the QAM RF Output Level with High Performance QCentral Computer Software
- Optional Redundant/Standby Power Support Capability Built in to Every Unit
- Optional QTM-HD Module Available for Future Support of High Definition Programming Using 8PSK Modulation

The QT Series is the latest Blonder Tongue Transcoder product and it features the ultimate combination of optimum balance of price per channel and top notch performance and functionality. This new unit incorporates a scalable modular design that allows from one to eight transcoder module sections as well as a single combination power supply & control module to be added, removed or swapped at any time. Support for redundant back-up or 'standby' power has been built into every QT power supply & control module. This ability is easily added by an operator at any time by interfacing an optional standby power supply unit. The QT Series also has the ability to easily accommodate future upgrades and advances such as such for 8PSK decoding and 256 QAM processing via a specially designed optional QAM Transcoder Module (QTM-HD).

Each QT Chassis can contain up to eight (8) separate QPSK to QAM transcoder modules. Each QAM Transcoder Module (QTM) is fully agile to allow the reception of any Echostar Dish Network™ or Bell ExpressVu DVB based QPSK transponder signal, (ITU-T J.83 Annex A). The module is housed in a specially designed chassis intended to accommodate the transcoder modules. Control of the modules is easily accomplished with a common power supply & control unit via operator selection from the front panel push button controls and back-lit LCD panel. This module interfaces to any of the QAM transcoder modules through a simple 12-pin connector and cable. The control module's brain is a flash upgradeable microprocessor to ensure support for any future development.

❍ Specifications

Satellite 8PSK Input

Input Frequency Range:
Agile 950-2150 MHz

8PSK Bandwidth: up to 36 MHz

Frequency Step: 1 MHz

Capture Range: ±5 MHz

Input Level Range: -65 to -20 dBm

RF Input Impedance: 75 Ω

Return loss: 8 dB min.

FEC Decoding: DVB

Symbol Rate: 2 to 45 Msps

Code Rate: Viterbi Auto Recognition

I - Q Format: Normal / Inverted

QAM Output

Output Frequency Range:
Agile 54-860 MHz (CATV 2-135)

QAM Bandwidth: 6 MHz

Frequency Step: 6 MHz

Output Level: +40 dBmV *

Display Error: ±2 dB

Level Adjustment Range: 15 dB

Modulation Mode: 16, 32, 64, 128, 256 QAM (8PSK & 256 QAM Capable with optional QTM-HD)

Symbol Rate: 1 Msps to 6.9 Msps

Spectral Inversion: Auto Recognition

Carrier Suppression: 45 dB

Roll off: 12, 15, 18 %

QAM SNR: >40 dB

MER: 38 to 41 dB

RF Output Impedance: 75 Ω

Spurious: -60 dBc

Broadband Noise:
-75 dBc min.
(4 MHz BW @40 dBmV)

Phase Noise @ 10 kHz: -90 dBc

Frequency Stability: ± 10 kHz

QAM I/Q Phase Error: < 1 degree

I/Q Amplitude Imbalance: < 1 dB

Controls and Indicators

PCM
Computer Control:
2 RJ11 Rear Panel RS232

Connectors

Backlit Liquid Crystal Display (LCD)
5 Navigation/Enter Push Buttons

QTM Unit Status Indicator:
1 Green LED Per Module

Mechanical

Chassis Dimensions:
5.25 x 19.0 x 12 inches

QTM Dimensions:
5.25 x 10.625 x 1.5 inches

Mounting:
Standard EIA Unit Height
5.25" x 19" Wide Rack Mount

QTM Unit Weight: 1.7 lbs

QTM-8 Weight: 28 lbs

Power

Requirement: 100 to 265 VAC, 1A

Frequency: 50 to 60 Hz

Power Consumption:
1 QTM & PCM: 15 W
2 QTM & PCM: 25 W
3 QTM & PCM: 35 W
4 QTM & PCM: 45 W
5 QTM & PCM: 56 W
6 QTM & PCM: 66 W
7 QTM & PCM: 76 W
8 QTM & PCM: 87 W

Fuse: 4 Amp, 250 VDC, SB

Environmental

Operating Temperature: 0 to 50 °C

Storage Temperature: -20 to 70 °C

Humidity: 0 to 90 % RH

** Average Measurement*

❍ Ordering Information

QAM Transcoder

Model	Stock No.	Description
QTM	6231	QAM Transcoder Module
QTPCM	6232	QAM Power Supply & Control Module
QTRC	6233	QAM Transcoder Rack Chassis
QTRA-8	6230	QAM Transcoder Rack Assembly (contains 8 QTM and a QTPCM in a QTRC)

Accessories

Model	Stock No.	Description
QTRFCS	6234	QT RF Combiner and Splitter (Contains QTRFC, 6234-1 and QTRFS, 6234-2)
QTHF	6235	QT Headend Fan
QTPB	6236	QT Blank Panel
QTSPS	6237	QT Standby Power Supply with Headend Fan
QC-HSK	2720	QCentral Remote Monitoring and Control Software