

Modular QPSK to QAM Transcoder

MQQT Series

Digital



○ Features & Benefits

- Modular Design Allows One to Four Single Transcoder Modules in a Single Rack Space
- 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
- Off-Site Remote Operation and Control Including Digital Adjustment of the QAM RF Output Level with High Performance QCentral Computer Software
- 256 QAM and Null Packet Stuffing Capability Upgradeable with Field Installable Optional PC Board Modules
- Forced Air Cooling and Ventilation for Each Individual Section Allows Units to be Stacked Directly to Minimize Rack Space
- Optional Redundant/Standby Power Support Capability Built in to Every Unit

The digital cable solution that all small system and MDU cable operators have been waiting for has arrived! Quick Take from AT&T HITS & Canada's Starchoice is the program that enables an operator the ability to deliver up to 200 programs of state of the art digital television. The hardware required for this solution is a combination of Motorola QAM decoders in the home and Blonder Tongue Transcoders at the headend. Blonder Tongue Transcoders save precious system bandwidth by transcoding a 24-36 MHz QPSK satellite transponder signal to a 6 MHz QAM signal for distribution on cable television systems. The Motorola QAM decoder in the home provides both digital and analog viewing with an operator branded viewer menu system (program guide).

The MQQT - Modular QPSK to QAM Transcoder builds upon the QQT 4 transcoders in 1 unit concept, but incorporates a modular design. Plus, the MQQT takes QPSK to QAM transcoder performance to a new level, while maintaining Blonder Tongue's long-standing tradition of providing the best price/quality combination available. The product is comprised of individual transcoder modules and a single power supply/control module in a single rack height chassis. The modularity allows for transcoder sections to be added or changed one at a time. Phase noise performance is -95 dBc to meet the DigiCipher® II 256 QAM specification and the MQQT can be upgraded for both 256 QAM processing or null packet stuffing capabilities with a simple field-installable PC board. And finally, the MQQT can be fully controlled remotely via the QCentral Computer Software including digital adjustment of the QAM RF output level.

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○ Specifications

Satellite QPSK Input

Input Frequency Range: Agile
950-2150 MHz
QPSK Bandwidth: up to 36 MHz
Frequency Step: 1 MHz
Capture Range: ±10 MHz
Input Level Range: -65 to -25 dBm
RF Input Impedance: 75 Ω
Return loss: 8 dB min.
FEC Decoding: DigiCipher® II / DVB
Symbol Rate: 2 to 45 Msps
Code Rate: Viterbi Auto Recognition
I - Q Format: Normal / Inverted

EAS Input

IF Bandwidth: 6 MHz
IF Frequency: 44 MHz
Input Impedance: 75 Ω
Input Level: +35 dBmV ±1 dB
Auto Switching Level: Capable

QAM Output

Output Frequency Range: Agile
54-860 MHz (CATV 2-135)
QAM Bandwidth: 6 MHz
Frequency Step: 6 MHz
Output Level: +50 dBmV *
Display Error: ±2 dB max.
Level Adjustment Range: 15 dB
Modulation Mode: 16, 32, 64, 128, 256
QAM (256 QAM field upgradeable with
optional PCB)
Symbol Rate: 1 Msps to 5.4 Msps
Spectral Inversion: Auto Recognition
Carrier Suppression: 45 dB
Roll off: 12, 15, 18 %
QAM SNR: >40 dB
MER: >38 dB
RF Output Impedance: 75 Ω
Spurious: -60 dBc
Broadband Noise: -75 dBc min.
(4 MHz BW)

Phase Controls and Indicators

Computer Control: 2 RJ11 Rear Panel
RS232 Connectors
Backlit Liquid Crystal Display (LCD)

QPSK Signal Status Indicator:
1 LED per module
QAM Signal Status Indicator:
1 LED per module

Mechanical

Dimensions: 1.75 x 19.0 x 18.5 Inches
Mounting: Standard EIA Unit Height 1.75" x
19" Wide Rack Mount
Unit Weight: 10.5 lbs
Shipping Weight: 11.5 lbs

Power

Requirement: 100 to 265 VAC
Frequency: 50 to 60 Hz
Power Consumption: 40 Watts

Environmental

Operating Temperature: 0 to 50 °C
Storage Temperature: -20 to 70 °C
Humidity: 0 to 90 % RH

* Average Measurement

○ Ordering Information

Core MQQT Products

Model	Stock No.	Description
MQQT	6294	Modular QPSK to QAM Transcoder Comes Factory configured w/ 4 STM, 1 PSCM in a 4MCH
MQQT-STM	6291	Modular QPSK to QAM Transcoder - Single Transcoder Module Agile QAM Output 54-860 MHz (CATV 2-135), +50 dBmV
MQQT-PSCM	6292	Modular QPSK to QAM Transcoder-Power Supply & Control Module Supports 4 Single Transcoder Modules & Standby Powering
MQQT-4MCH	6293	Modular QPSK to QAM Transcoder - Four Module Chassis High Performance Lightweight Chassis for 4 STM & 1 PSCM
MQQT-SP 1	6296 1	Modular QPSK to QAM Transcoder - Standby Power Adds automatic Standby/Redundant Power Support for MQQT
MQQT-SP 2	6296 2	Modular QPSK to QAM Transcoder - Standby Power Adds automatic Standby/Redundant Power Support for MQQT
MQQT-SP 3	6296 3	Modular QPSK to QAM Transcoder - Standby Power Adds automatic Standby/Redundant Power Support for MQQT
MQQT-SP 4	6296 4	Modular QPSK to QAM Transcoder - Standby Power Adds automatic Standby/Redundant Power Support for MQQT