

AQT

ATSC/QAM Transcoder 1x 8VSB/QAM ► 1x QAM

AQT (ATSC/QAM Transcoder) accepts one input in 8VSB (digital off-air) or QAM (digital cable) format, and delivers one output in QAM format in the 54-864 MHz range.

AQT can be utilized in a remote headend to “regenerate” a clean QAM channel from a degraded one. It also allows TV sets to receive digital off-air programming on CATV channel assignments by transmodulating the 8VSB broadcast to QAM.



Features

- Input standards supported are digital off-air (8VSB & 16VSB) and digital cable (QAM 16, 32, 64, 128, and 256)
- Agile QAM output at +40 dBmV and in the frequency range of 54-864 MHz range
- Optional AQT-RCS module allows remote monitoring and configuration of up to 80 AQT modules
- Optional AQT-SPS unit provides standby utility power to the primary power supply (AQT Power & Control module)

Ordering Information

Model	Stock #	Description
AQT	6275	ATSC-to-QAM Transcoder
AQT-PCM	6276	AQT Power & Control Module
QTRC	6233	QAM Transcoder Rack Chassis
Options		
AQT-RCS	2736	AQT Remote Configuration Server Module
AQD/AQT-SPS	6253	AQD/AQT Standby Power Supply
QTHF	6235	Headend Fan
HDA Series	6240 xx	Integrated Combiner & Distribution Amplifier



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Specifications

INPUT

Connector:	"F" Female
Standards	
8VSB/16VSB:	ATSC Digital Television A/53E
QAM:	ITU-T J.83 - Annex A & B (16, 32, 64, 128, and 256 QAM)
8VSB/16VSB Modes	
Tuning Range:	VHF (NTSC Ch. 2-13), UHF (NTSC Ch. 14-69)
Data Rate:	19.392 Mbps
Bandwidth:	6 MHz
8VSB Power Level:	-28 to 20 dBmV
16VSB Power Level:	-25 to 20 dBmV
QAM Mode	
Tuning Range:	CATV (NTSC Ch. 2-135)
Data Rate:	38.8 Mbps (QAM 256); 26.97 Mbps (QAM 64) - Auto Detect
Bandwidth:	6 MHz
Power Level:	-20 to +20 dBmV
Impedance:	75 Ω

OUTPUT

Connector:	"F" Female
QAM Modulation Modes:	16, 32, 64, 128, & 256
DVB Symbol Rate:	Variable; 1 to 7 MSymbols/sec (Mbaud)
Frequency Range:	54 to 864 MHz
QAM Tuning	
NTSC:	Per channel's number from 2 to 135
PAL:	Per channel's center-frequency (12.5 kHz increments)
RF Level:	+40 dBmV (100 dBμV)
RF Level LCD Screen Error:	±2 dB
RF Level Adjustment Range:	30 to 40 dBmV
Frequency Tolerance:	±0.5 kHz @ 77°C (25°C)
Frequency Stability:	±0.5 kHz over 32 to 122°F (0 to 50°C)
Amplitude Flatness:	±0.25 dB (over 6 MHz channel)
Phase Noise:	-98 dBc (@ 10 kHz)
Spurious:	-60 dBc
Broadband Noise:	-75 dBc (@ +40 dBmV output level, 4 MHz bandwidth)
Impedance:	75 Ω
Return Loss:	12 dB
Spectral Inversion:	Auto Recognition
Carrier Suppression:	55 dB
SNR:	Greater than 40 dB
MER:	Greater than 40 dB
I/Q Phase Error:	Less than 1 degree
I/Q Amplitude Imbalance:	Less than 1%

GENERAL

Dimensions (W x D x H)	
AQT/AQT-RCS Module:	1.5 x 10.625 x 5.25 inches (38 x 270 x 133 mm)
AQT-PCM Module:	4.5 x 10.625 x 5.25 inches (114 x 270 x 133 mm)
QTRC Chassis:	19 x 12.0 x 5.25 inches (483 x 305 x 133 mm)
Power:	100 to 265 VAC/50 to 60 Hz (Fuse: 1 A, 250 VDC, SloBlo)
Power Dissipation:	10 W (per AQT module)
Weight	
AQT/AQT-RCS Module:	1.7 lbs (0.77 kg)
Fully Loaded Chassis:	28 lbs (12.7 kg)
Operating Temperature:	32 to 122°F (0 to 50°C)
Storage Temperature:	-13 to 158°F (-25 to 70°C)
Operating Humidity:	0 to 95% RH @ 35°C max, non-condensation
Storage Humidity:	0 to 95% RH @ 35°C max, non-condensation

ALARMS / MONITORING / CONTROL

Indicators	
AQT Module:	Status (Green LED)
AQT-RCS Module:	Link/Transmit/Receive (3 x Green LEDs)
Local Monitoring:	Front-panel 16-character, 2-line LCD screen
Local Control:	Front-panel Navigational Key-pad
Remote Monitoring/Control:	GUI-based menu via Web browser (Available if the optional AQT-RCS module is installed)