



## AQT8 Series

### ATSC/QAM Transcoder 8x8 VSB / QAM to QAM / IP

**AQT8 Series** transcoder allows the user to build a custom channel lineup via IP output by selecting input programs from 8VSB (Digital off-air) or QAM (Clear digital cable) formats. The unit provides a combination of SPTS and/or MPTS IP output across eight (8) IP addresses. The AQT8 maps QAM/8VSB input programs directly to QAM output channels. The AQT8 Series features Emergency Alert System (EAS) program switching through either an ASI or IP format EAS input and terminal block contacts for triggering.

Comprehensive remote monitoring and control is accomplished using any standard Web browser via a rear-panel 10/100BaseT Ethernet connection.



## Features

- Accepts up to eight 8VSB or QAM channel inputs
- Provides a combination of eight SPTS or MPTS via one GigE RJ45 port
- Maps QAM/8VSB input programs directly to QAM output channels
- Provides comprehensive GUI-based monitoring and control via standard Web browsers
- Supports Closed Captioning EIA-608 and EIA-708 when embedded in RF input(s)
- Accepts EAS input in ASI or IP formats (IP delivered services only)
- Provides in-service monitoring of selected input/output ports via RF Test connector and ASI output

## Ordering Information

| Model       | Stock # | Description  |
|-------------|---------|--|
| AQT8-QAM/IP | 6281    | ATSC/QAM Transcoder; 8xATSC/QAM inputs; IP + QAM outputs |

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### ATSC/QAM Transcoder 8x8 VSB / QAM to QAM / IP

## Specifications

### Input

|                                   |  |
|-----------------------------------|--|
| <b>Connectors</b>                 |  |
| <b>8VSB/QAM:</b>                  | "F" Female   |
| <b>8VSB Mode</b>                  | <p><b>Standard:</b> ATSC Digital Television A/53E<br/> <b>Tuning Range:</b> UHF (Ch. 14-69), VHF (Ch. 2-13)<br/> <b>Data Rate:</b> 19.392 Mbps<br/> <b>Bandwidth:</b> 6 MHz<br/> <b>Power Level:</b> -20 to +20 dBmV<br/> <b>Impedance:</b> 75 Ω</p>   |
| <b>QAM Mode</b>                   | <p><b>Standard:</b> ITU-T J.83 - Annex A &amp; B (64 and 256 QAM)<br/> <b>Tuning Range:</b> CATV Ch. 2-135 (STD, HRC, IRC)<br/> <b>Data Rate:</b> 38.8 Mbps (QAM 256); 26.97 Mbps (QAM 64) – Auto Detect<br/> <b>Bandwidth:</b> 6 MHz<br/> <b>Power Level:</b> -15 to 20 dBmV (@ QAM 256)<br/> -20 to 20 dBmV (@ QAM 64)<br/> <b>Impedance:</b> 75 Ω</p> |
| <b>Emergency Alert System ASI</b> | <p><b>Connector:</b> 1x BNC Female<br/> <b>Standard:</b> DVB-ASI; EN 50083-9 (SPTS)</p>  |
| <b>IP</b>                         | <p><b>Connector:</b> 1x RJ45<br/> <b>Standard:</b> 10/100Base-T<br/> <b>UDP/RTP:</b> Supported (user-selectable)</p> <p><b>Transport Rate:</b> Single program at 3 Mbps. Higher data rates can be used with a lower number of output programs as to not exceed the maximum allowable bit rate on the QAM output channel.</p>                             |
| <b>Trigger</b>                    | <p><b>Connectors:</b> Terminal Block<br/> <b>Trigger Mechanism:</b> 5-12 VDC &amp; Dry Contact Closure</p>   |

### Output

|                             |   |
|-----------------------------|---|
| <b>IP:</b>                  | <p><b>Connectors:</b> 1x RJ45 (Rear-panel)<br/> <b>Standard:</b> 1000Base-T Ethernet (GigE)<br/> <b>UDP/RTP:</b> Supported (user-selectable)<br/> <b>Address Assignment:</b> 8x IPv4 addresses &amp; port numbers (user-selectable)</p>   |
| <b>QAM (Stock No. 6281)</b> | <p><b>No. of Output Modules:</b> 2 Quad-QAM<br/> <b>Connector:</b> 1x "F" Female (rear-panel; for combined outputs)<br/> <b>Modulation:</b> QAM 16, 32, 64, 128, and 256<br/> <b>Standards:</b> ITU-T J.83; Annex A and B<br/> <b>DVB Symbol Rate:</b> Variable; up to 7 MSymbol/sec (MBaud)<br/> <b>Frequency Range:</b> 54 to 996 MHz<br/> <b>Tuning:</b> CATV Channel Selectable (Ch. 2 to 158)<br/> <b>Channels' Bandwidth:</b> 2x 24 MHz (4x Adjacent 6MHz)<br/> <b>No. of Programs:</b> Variable (not to exceed 38.8 Mbps)<br/> <b>RF Level:</b> +40 dBmV, ± 1 dB increment<br/> <b>RF Level Adjustment Range:</b> +35 to +42 dBmV, 1 dB increment<br/> <b>Frequency Tolerance:</b> ± 0.5 kHz @ 77 °F (25 °C)<br/> <b>Frequency Stability:</b> ± 5 kHz over 32 to 122 °F (0 to 50 °C)<br/> <b>Amplitude Flatness:</b> ± 0.25 dB (over 6 MHz channel)<br/> <b>Phase Noise:</b> -98 dBc (@ 10 kHz)<br/> <b>Spurious:</b> -60 dBc<br/> <b>Broadband Noise:</b> -70 dBc (@ +35 dBmV output level, 5.5 MHz bandwidth)<br/> <b>Impedance:</b> 75 Ω<br/> <b>Spectral Inversion:</b> Auto Recognition<br/> <b>Carrier Suppression:</b> 45 dB<br/> <b>Return Loss:</b> 14 dB typical<br/> <b>Signal-to-Noise Ratio (SNR):</b> 40 dB typical<br/> <b>MER:</b> 39 dB typical<br/> <b>I/Q Phase Error:</b> Less than 1 degree<br/> <b>I/Q Amplitude Imbalance:</b> Less than 1%</p> |
| <b>ASI</b>                  | <p><b>Connector:</b> 1x BNC Female<br/> <b>Standard:</b> DVB-ASI; EN 50083-9</p>  |

### General

|                                |   |
|--------------------------------|---|
| <b>Dimensions (W x D x H):</b> | 19.0 x 16.0 x 1.75 inches (483 x 363 x 44 mm) |
| <b>Power:</b>                  | 110 /230 VAC 60/50 Hz                         |
| <b>Power Dissipation:</b>      | 70 W  |
| <b>Weight:</b>                 | 12 lbs (5.5 kg)                               |
| <b>Operating Temperature:</b>  | 32 to 122 °F (0 to 50 °C)                     |
| <b>Storage Temperature:</b>    | -13 to 158 °F (-25 to 70 °C)                  |
| <b>Operating Humidity:</b>     | 0 to 95% RH @ 35 °C max, non-condensation     |
| <b>Storage Humidity:</b>       | 0 to 95% RH @ 35 °C max, non-condensation     |

### Alarms/Monitoring/Control

|                                   |   |
|-----------------------------------|---|
| <b>Local Monitoring:</b>          | 8 Channel LEDs<br>1x Power LED  |
| <b>Local Control:</b>             | 1x IP Reset Button  |
| <b>Remote Monitoring/Control:</b> | GUI-based menu via standard Web browser<br>(1x RJ45 rear panel connector; 10/100Base-T) |