The MDDM-860 is a digital demodulator and decoder that receives one input in ATSC 8VSB (digital off-air) or “clear” QAM (digital cable) format and delivers one NTSC composite analog video and stereo audio output.

The unit allows delivering of a digital off-air program to viewers with an analog TV set. It also allows operators to cherry-pick channels from a clear QAM cable lineup.

Headends processing analog broadcasts using Blonder Tongue’s MIDM demodulators and MICM modulators can be upgraded seamlessly to process digital broadcasts by simply replacing the MIDM with a MDDM.

**Features**

- Compact design allows for deployment of 6 channels (6 MDDM modules + 6 MICM modulators) in 2RU
- NTSC Composite Analog Video output is in 480i format and supports Closed Captioning (EIA-608)
- Input standards supported are digital off-air (8VSB) and digital cable (ITU-B QAM 64 and 256)
- Scans all 8VSB or QAM channels and stores in memory for quick channel selection
- Demodulates HDTV/SDTV digital signals to NTSC video and analog L/R audio
- On-site firmware updates/status monitoring available through front-panel
- Die-cast Chassis Offers Superior Protection against Ingress or Egress
- Adjustable picture sizes for 16:9 to 4:3 image conversion
- Supports Mono, Stereo, and SAP audio modes

**Ordering Information**

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<thead>
<tr>
<th>Model</th>
<th>Stock #</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>MDDM-860</td>
<td>6273</td>
<td>ATSC/QAM Demodulator</td>
</tr>
<tr>
<td>MIRC-12V</td>
<td>7715</td>
<td>Rack Chassis (holds up to 6 MDDM + 6 MICM modulators)</td>
</tr>
<tr>
<td>MIPS-12C</td>
<td>7722C</td>
<td>110V/60Hz power supply (one per chassis configuration above)</td>
</tr>
<tr>
<td>MICM</td>
<td>7797D</td>
<td>Micro channel modulator</td>
</tr>
</tbody>
</table>

www.amt.com
### Specifications

#### Input

**Connector:**
- “F” Female

**Standards**
- **8VSB:** ATSC Digital Television Standard A/53E
- **QAM:** ITU-T I.83 (64 and 256 QAM)

**8VSB Mode**
- **Tuning Range:** UHF (NTSC Ch. 14-78), VHF (NTSC Ch. 2-13)
- **Symbol Rate:** 10.762 Msymbols/sec
- **Bandwidth:** 6 MHz

**QAM Mode**
- **Tuning Range:** CATV (NTSC Ch. 2-135)
- **Symbol Rate:** 5.3606 Msymbols/sec (QAM 256); 5.057 Msymbols/sec (QAM 64) – Auto Detect
- **Bandwidth:** 6 MHz

**Single Channel Power Level:**
- 8VSB: -32 to +45 dBmV
- QAM: -20 to +30 dBmV

**Return Loss:**
- 12 dB

**Impedance:**
- 75 Ω

#### Output

**Connector**
- “F” Female
- RCA; Left & Right

**NTSC Composite Video**
- **Level:** 1 Volt Peak-to-Peak
- **Flattness:** 1.0 dB p/v (30 Hz to 4.2 MHz)
- **Video to Noise Ratio:** 70 dB
- **Differential Gain:** ± 0.75%
- **Differential Phase:** ± 0.50 degree
- **Format:** AFD, Center Cut, Letterbox, Full, Zoom 1, Zoom 2
- **Aspect Ratio:** EIA-608

**L/R Analog Audio**
- **Level:** 1.0 to 1.2 Volt Peak-to-Peak (at -20 dBmV input)
- **Frequency Response:** 10.0 to 10.5 Volt Peak-to-Peak (at 0 dBmV input)
- **Audio Signal-to-Noise Ratio:** 2.0 dB p/v (30 Hz to 20 KHz)
- **Modes:** Stereo, Mono, SAP

#### Alarms/Monitoring/Control

**Front-Panel Indicators:**
- Major program channel (2-digit LED display)
- Minor program channel (1-digit LED display)
- Channel scan (2- & 1-digit LED displays)
- 100 Channel (Red LED)
- SNR (2- & 1-digit LED displays)
- QAM LED (Red LED)
- No Lock (flashing QAM LED)
- Picture size (2- & 1-digit LED displays)
- Audio mode (2- & 1-digit LED displays)
- Firmware revision (2-digit LED display)
- Software revision (2- & 1-digit LED display)
- Unit reset (2- & 1-digit LED displays)

**Front-Panel Monitoring/Control:**
- CH UP/DN push-buttons (increment major or minor channel up/down)
- ENT push-button (enters or confirms selection)
- SCAN push-button (initiates channel Scan)
- PIC SIZE push-button (adjusts picture size/aspect ratio)
- AUD MODE push-button (adjusts audio mode and closed captioning)
- SNR push-button (measures input signal-to-noise ratio)
- QAM/8VSB push-button (toggles between QAM & 8VSB)
- ENT & SNR simultaneously (stops scan at anytime)
- PIC SIZE & AUD MODE simultaneously (unit reset)
- PROG MON (custom mini USB-to-RS232 interface for control & monitoring)

#### General

**Dimensions (W x D x H):**
- 1.15 x 7.5 x 3.5 inches (29 x 191 x 89 mm)

**Power:**
- 110 VAC/60 Hz or 220 VAC/50 Hz

**Power Dissipation:**
- 7 W (per MDDM module)

**Weight:**
- 0.8 lbs (0.36 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

#### RELATED PRODUCTS

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Notes</th>
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<tbody>
<tr>
<td>DAP</td>
<td>8VSB/QAM-to-Composite Analog Processor</td>
<td>1RU</td>
</tr>
<tr>
<td>AQD</td>
<td>8VSB/QAM-to-Composite Analog Demodulator</td>
<td>Eight Demodulators in 3RU</td>
</tr>
<tr>
<td>AQT</td>
<td>8VSB/QAM-to-QAM Transcoder</td>
<td>Eight Transcoders in 3RU</td>
</tr>
<tr>
<td>AQP</td>
<td>8VSB/QAM-to-QAM Processor with subband input</td>
<td>1RU</td>
</tr>
<tr>
<td>AQM</td>
<td>1x1 ASI-to-QAM Modulator</td>
<td>Six modulators in 2RU</td>
</tr>
<tr>
<td>DQMx</td>
<td>4x1 ASI and 8VSB/QAM-to-QAM Multiplexer</td>
<td>1RU</td>
</tr>
<tr>
<td>DHDP</td>
<td>Digital High Def. Processor</td>
<td>1RU &amp; 2RU</td>
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