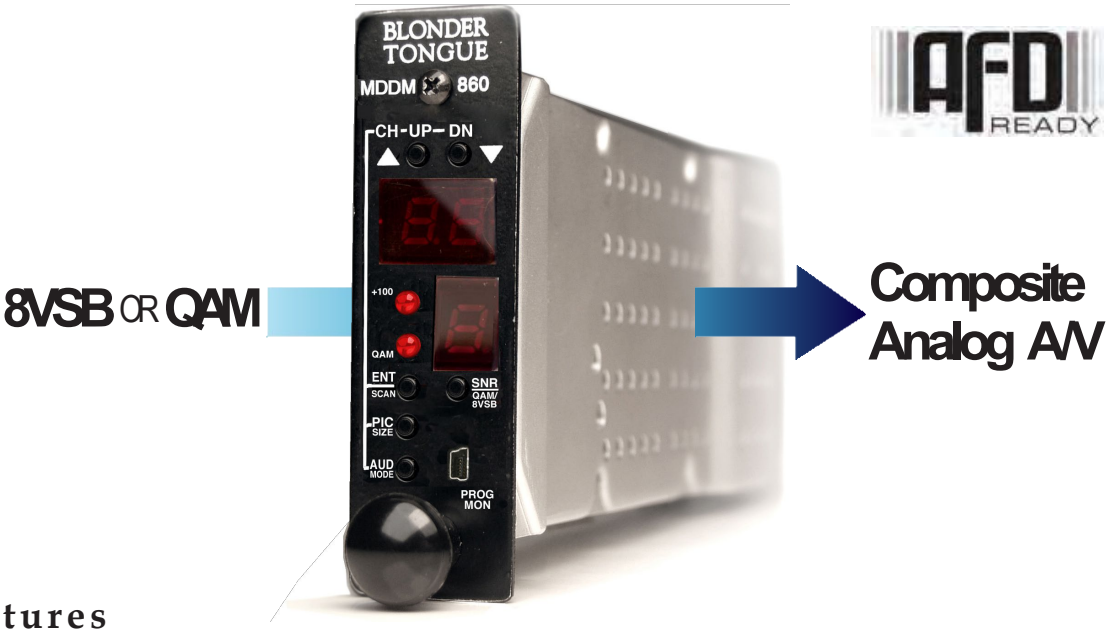
MDDM-860

Micro ATSC/QAM Demodulator
1x 8VSB/QAM ► 1x AV

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

Model	Stock #	Description
MDDM-860	6273	ATSC/QAM Demodulator
MIRC-12V	7715	Rack Chassis (holds up to 6 MDDM + 6 MICM modulators)
MIPS-12D	7722D	100-240 VAC 50/60Hz power supply (one per chassis configuration above)
MICM-45D	7797D	Modular Fixed channel modulator, CALMTones

Rev. No. 110713 (651211000B)

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Specifications

INPUT

Connector:	"F" Female
Standards	
8VSB:	ATSC Digital Television Standard A/53E
QAM:	ITU-T J.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 (QAM256); 5.057 Msymbols/sec (QAM64) – Auto Detect
Bandwidth:	6 MHz
Single Channel Power Level:	-32 to +45 dBmV
8VSB Power Level:	-20 to +30 dBmV
QAM Power Level:	-20 to +20 dBmV
Return Loss:	12dB
Impedance:	75 Ω

OUTPUT

Connector	
Video:	"F" Female
Audio:	RCA; Left & Right
NTSC Composite Video	
Level:	1 Volt Peak-to-Peak
Flatness:	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:	480i
Aspect Ratio:	AFD, Center Cut, Letterbox, Full, Zoom 1, Zoom 2
Closed Captioning:	EIA-608
L/R Analog Audio	
Level:	1.0 to 1.2 Volt Peak-to-Peak (at -20 dBFs input) 10.0 to 10.5 Volt Peak-to-Peak (at 0 dBFs input)
Frequency Response:	2.0 dB p/v (30 Hz to 20 KHz)
Audio Signal-to-Noise Ratio:	67 dB (at -20 dBFs input)
Modes:	Stereo, Mono, SAP

General

Dimensions (W x D x H)	
MDDM-860 Modules:	1.15 x 7.5 x 3.5 inches (29 x 191 x 89 mm)
MIPS-12D Power Supply:	4.2 x 7.5 x 3.5 inches (106 x 191 x 89 mm)
MIRC-12V Chassis:	19 x 12.0 x 5.25 inches (483 x 305 x 133 mm)
MIRC-4D Chassis:	19 x 9.0 x 1.75 inches (483 x 229 x 44 mm)
Power:	
MIPS-12CD Power Supply:	100-240 VAC; 50/60 Hz
MIRC-4D Power Supply:	100-240 VAC; 50/60 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

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 displays) 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&hold-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&hold-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)

Related Products

Model	Description	Notes
DAP	8VSB/QAM-to-Composite Analog Processor	1RU
AQD	8VSB/QAM-to-Composite Analog Demodulator	Eight Demodulators in 3RU
AQT	8VSB/QAM-to-QAM Transcoder	Eight Transcoders in 3RU
AQP	8VSB/QAM-to-QAM Processor with subband input	1RU
AQM	1x1 ASI-to-QAM Modulator	Six modulators in 2RU
DQMx	4x1 ASI and 8VSB/QAM-to-QAM Multiplexer	1RU
DHDP	Digital High Def. Processor	1RU & 2RU
AMCM-860D	Modular Agile A/V Modulator	
MDDA-860		