



MQM860 Multiplexing QAM Modulator with built-in Agile Upconverter



Providing economical multiplex of two ATSC format streams from dual ASI inputs.

High performance QAM modulator with 61 dBmV low noise agile upconverter.

The R. L. Drake model MQM860 is a professional quality, digital headend product that accepts one or two MPEG2 digital inputs via two Asynchronous Serial Input (ASI) connectors. These signals must be ATSC compatible streams if multiplexing is to be performed and usually will have originated from a local TV broadcast station and may have been transported over fiber links to the MQM860. After multiplexing and null packet management, the MQM860 QAM modulates and upconverts onto any desired CATV or off-air output channel between 54 and 860 MHz. The MQM860 can also operate as a non-multiplexing QAM modulator when a single ASI input is selected.

- Front panel display and buttons allow easy setup and monitoring of operating mode and parameters.
- High output, 61 dBmV, agile QAM modulator and upconverter are built in.
- Dual ASI Inputs.
- TS Multiplexer for ATSC streams.
- ATSC PSIP is supported.
- MPEG program and minor channel number offsetting with user selected offsets when multiplexing.
- Major channel number pass through or remarking is selectable when multiplexing.
- Rewriting of the MPEG tables is provided when two input streams are multiplexed.
- PCR correction is performed when necessary.
- QAM Modulator and high output, 61 dBmV, agile upconverter are built-in.

- QAM low phase noise output is agile on CATV or broadcast channels from 54 to 860 MHz.
- High MER output signal quality.
- Meets or exceeds DOCSIS 2.0 Downstream output specifications.
- 1U tall package with internal power supply conserves rack space.
- Manufactured in the USA.

Drake Digital MQM860 Technical Specifications

ASI Inputs	
Inputs:	Two DVB Asynchronous Serial Inputs (ASI). 270 MHz ASI clock rate.
QAM Modulator	
Modulation Modes:	16QAM, 32QAM, 64QAM, 128QAM or 256QAM. With two ATSC input streams at 19.4 Mbps each, 256QAM outmodulation will be required.
Symbol Rate:	1 Ms/S to 7 Ms/S.
Forward Error Correction (FEC):	ITU-A (DVB) or ITU-B (DigiCipher® II).
I/Q Phase Error:	Less than 1 degree.
Carrier Suppression:	45 dB.
Channel Amplitude Error:	Less than 1dB.
MER:	Greater than 38 dB with blind equalizer.
Analog EAS IF Input	
Input Impedance:	75 Ohms with a return loss of 20 dB.
Operating Input Level:	+30 dBmV \pm 5 dB @ 45.75 MHz.
Auto Switching Level:	+20 dBmV minimum.
RF Output	
Output Frequency Range	54 MHz to 864 MHz.
Channel Plan:	Standard CATV, HRC, IRC or Broadcast.
FCC Offsets:	Automatic, +12.5 or +25 kHz.
Frequency Stability:	\pm 5 ppm.

Maximum Output Level:	+61 dBmV minimum, adjustable downward.
Minimum Output Level:	+45 dBmV.
Output Level Accuracy:	±1 dB.
Output Impedance:	75 Ohms with return loss better than 14 dB (within output filter passband).
Spurious Outputs:	-60 dBc from 40 MHz to 1000 MHz.
Broadband Noise:	Less than -12 dBmV (6 MHz bandwidth @ ±12 MHz).
Phase Noise:	-95 dBc @ 10 kHz offset, -OR- 1 kHz to 10 kHz: Less than -36 dBc double sideband noise power. 10 kHz to 50 kHz: Less than -54 dBc double sideband noise power. 50 kHz to 3 MHz: Less than -54 dBc double sideband noise power.
General	
Power:	90-260 VAC, 47-63 Hz, 30 W
Weight:	7 lbs. (3.2 Kg.)
Size:	19" (48.3 cm) W x 1.75" (4.45 cm) H x 11.5" (29.2 cm) D
Operating Temperature:	0° C (32° F) to 50° C (122° F)

Specifications, price, and availability are subject to change without notice or obligation.



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