



QAM256

Digital Video Modulator and Cable Upconverter



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HIGHLIGHTS

- ▶ 1 - 55 Mbps
- ▶ Optional Ethernet Interface
- ▶ MPEG-2 Compliant
- ▶ 4 QAM to 256 QAM Modulation
- ▶ Cost-Effective Headend Solution
- ▶ Internal Cable Upconverter or Fixed IF Output

THE NEW STANDARD IN PERFORMANCE

Radyne ComStream's new DVB-compliant QAM modulator meets all DVB requirements for transmission of digital video on broadband coaxial cable and microwave radio. The QAM256 features 4 QAM to 256 QAM modulation, 1-55 Mbps data rate, 1-8 MHz channel spacing and Reed-Solomon Forward Error Correction. The modulator also supports field-changeable RS422, Parallel, ASI and other standard DVB interfaces. Remote Monitor and Control interface is provided through either an RS485 or Ethernet Remote Port using SNMP protocol.

The QAM256 provides efficient bandwidth utilization for digital video distribution systems. MMDS, LMDS, AML, Cable Television and Multiple Dwelling Unit systems all benefit from this innovative modulator. QAM modulation solves the problem of providing multiple video and data channels within bandwidth limitations. The Radyne ComStream QAM256 has

the versatility to adapt to any terrestrial broadband medium and give system operators full management and control of the available bandwidth.

The space and money-saving internal cable upconverter option conveniently removes the need for an external converter unit.

The modulator meets the specifications of the ITU-T Recommendation; J.83 Annex A&B (Telecommunication Standardization of the ITU for Television and Sound Transmission).

The Interface Module is a field-changeable module that contains either RS422, Parallel, ASI or other standard interface. The interface accepts data in an MPEG-2 transport format. The data is then passed to the channel encoder for processing.

The Channel Encoder synchronizes to the MPEG-2 transport frame and performs scrambling (energy dispersal), and Reed-Solomon encoding (240,188) and interleaving.

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SPECIFICATIONS WITHOUT CABLE UPCONVERTER

Data Rate:	1 - 55 Mbps
Modulation:	4, 16, 32, 64, 128, 256 QAM (7 Msps max.)
Roll Off:	12, 15, and 18% selectable
FEC:	204/188 Reed-Solomon with I = 1-204 programmable Forney convolutional interleaver meets J.83 Annex A, Annex B
IF Interface:	
Frequency:	43-44 MHz, or optional 35-37 MHz, 1 Hz steps
Level:	-5 to -25 dBm
Spurious:	-50 dBc
Impedance:	75 Ohms
Baseband Interface:	
Format:	MPEG-2 Transport
Physical:	Parallel ASI Advanced ASI DVB Parallel M2P Parallel T3 E3 STS-1 HSSI ECL
Remote Interface:	RS485, Ethernet, 10 Base-T SNMP (Optional)
Physical:	
Chassis Size:	1-RU (1-3/4") x 19" x 17-3/4"
Power:	100 to 240 Vac, 50/60 Hz or -48 Vdc (Optional)
Environmental:	0-50° C <95% Humidity @ 25° C

SPECIFICATIONS WITH CABLE UPCONVERTER

Data Rate:	1 - 55 Mbps
Modulation:	4, 16, 32, 64, 128, 256 QAM (7 Msps max.)
Roll Off:	12, 15, and 18% selectable
FEC:	204/188 Reed-Solomon with I = 1-204 programmable Forney convolutional interleaver meets J.83 Annex A, Annex B
RF Interface:	
RF Output frequency:	50 to 862 MHz total, 1 Hz steps
Power Output:	35 to 60 dBmV, 1 dB steps
Power Output Accuracy:	±0.5 dB
Power Output Stability:	±0.5 dB
Power Adjustment:	25 dB
Output Impedance:	75 Ohm
Spurious Emissions:	-50 dBc in band, 45 dB out of band
Phase Noise:	-88 dBc/Hz 10 kHz offset (ssb)
Return Loss:	16 dB
Carrier Mute:	-55 dB, Automatic on frequency change
RF Output Connector:	F Type
RF Output Monitor:	-20 dB, ±3 dB from RF Output, F Type
Baseband Interface:	
Format:	MPEG-2 Transport
Physical:	Parallel ASI Advanced ASI DVB Parallel M2P Parallel T3 E3 STS-1 HSSI ECL
Remote Interface:	RS485, Ethernet, 10 Base-T SNMP (Optional)
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Power:	100 to 240 Vac, 50/60 Hz or -48 Vdc (Optional)
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