



FLEX QAM

FLEXIBLE TRANSMODULATOR



KEY FEATURES

- » Multiplexes SPTS to MPTS via IP and/or QAM outputs; MPEG-2 or H.264/H.265
- » De-multiplexes MPTS to SPTS; MPEG-2 or H.264/H.265
- » Can pass-thru or modify PSIP information such as major/minor channels, short names, and corresponding program IDs (PIDs)
- » Allows for null packet insertions or deletion supporting Constant Bit Rate (CBR)
- » Supports UDP Unicast or Multicast and UDP delivery of IP packets
- » Remote Control port for local or remote web-based management
- » Audio formats supported: AC3, AAC and MPEG-1 Layer 2, E-AC3

PRODUCT OVERVIEW

The **FLEX QAM** combines IP grooming and edge QAM technology into one integrated package. By providing a wide-range of functionality in a compact solution, the FLEX QAM brings remarkable cost savings. The unit can convert ASI to IP video streams, as well as Mux and Demux ASI and IP streams. A separate web-based management port is provided for local and remote control.

ORDERING INFORMATION



MODEL	STOCK #	DESCRIPTION
FLEX QAM	6582	Flexible Transmodulator
FLEX QAM RP-2	6591	Rack Panel for 2 Flex QAM units across 1RU

INPUT	
IP MODE	
Connector	1x RJ45 (Rear Panel)
Standard	1000Base-T Ethernet (GigE)
UDP/RTP	Supported (User-Selectable)
Protocols Supported	IGMPv2 / IGMPv3
STREAM PORTFOLIO	
Standard	ISO / IEC 13818-1 Systems
TS Packet Length	188 bytes
Sync Byte	0x47
SPTS and MPTS	Supported
Muxing	32 SPTS to 4 MPTS
Bit Rate	Constant
ASI	
Connector	4x BNC Female
Rates	DVB-ASI; EN 50083-9

OUTPUT	
QAM	
# of Output Modules	1x Quad-QAM (total of 4 QAM channels)
Connector	1x "F" Female (for combined output)
Modulation	QAM 16, 32, 64, 128, and 256
Standards	ITU-T J.83; Annex A and B
DVB Symbol Rate	Variable; up to 7 MSymbol/sec (MBaud)
Frequency Range	54 to 1002 MHz
Tuning	CATV Channel Selectable (Ch. 2 to 158)
Channels' Bandwidth	24 MHz (4x Adjacent 6 MHz)
RF Level	+40 dBmV (± 1 dB increment)

OUTPUT	
RF Level Adjustment Range	+35 to +42 dBmV (± 1 dB increment)
Frequency Tolerance	± 0.5 kHz @ 77 °F (25 °C)
Frequency Stability	± 5 kHz over 32 to 122 °F (0 to 50 °C)
Amplitude Flatness	± 0.25 dB (over 6 MHz channel)
Phase Noise	-98 dBc (@ 10 kHz)
Spurious	-60 dBc
Broadband Noise	-70 dBc (@ +40 dBmV output level, 5.5 MHz bandwidth)
Impedance	75 Ω
Spectral Inversion	Auto Recognition
Carrier Suppression	45 dB
Return Loss	14 dB typical
Signal to Noise Ratio	40 dB typical
MER	39 dB typical
I/Q Phase Error	Less than 1 degree
I/Q Amplitude Imbalance	Less than 1%
IP	
Connector	1x RJ45 (Rear Panel)
Standard	1000Base-T Ethernet (GigE)
UDP / RTP	Supported (User-Selectable)
Address Assignment	IPv4 addresses & port numbers (User-Selectable)
ASI	
Connector	1x BNC Female
Standard	DVB-ASI; EN 50083-9

GENERAL

Dimensions (W x H x D)	8.69 x 1.97 x 12.70 in (220.7 x 50.0 x 322.6 mm)
Weight	3.0 lbs (1.36 kg)
Power	12 VDC External Power Supply
Power Consumption	20 W
Operating Temp.	32 to 122 °F (0 to 50 °C)
Storage Temp.	-13 to 158 °F (-25 to 70 °C)
Operating/Storage Humidity	0 to 95% RH @ 35 °C max, non-condensing

ALARMS & MONITORING

Local Monitoring	1x Power LED (bicolor) 1x Status LED (bicolor)
Local Control	1x IP Reset Button
Remote Device Monitoring/Control	1x RJ45 (10/100Base-T; Rear Panel) GUI-Based Menu via Web Browser

MODES OF OPERATION

MODE	INPUT	FUNCTIONS AND NOTES	OUTPUT TS SELECT
1 PASS-THRU	(RJ45) GigE Full Duplex ⁽¹⁾ ; 4xMPTS (16 prog./3 audio each max)	<ul style="list-style-type: none"> May select up to four (4) input sources to present four (4) transport streams (TS) over QAM and/or IP. 	^(2,3) 4xQAM (16 prog. each max) ^(2,3) 4xMPTS (16 prog. each max)
	(BNC) 4xASI	<ul style="list-style-type: none"> Limited PSIP Manipulation, e.g. Re-PID Capability May direct any one (1) of the TS to the ASI output (5th Output) 	1xASI (214 Mbps)
2 DEMUX	(RJ45) GigE Full Duplex ⁽¹⁾ ; 4xMPTS (16 prog./3 audio each max)	<ul style="list-style-type: none"> Defines 32xSPTS max Full PSIP Manipulation and Program Filtering Capability 	32xSPTS; 40 Mbps max each
	(BNC) 4xASI		
3 MUX	(RJ45) GigE Full Duplex ⁽¹⁾ ; <ul style="list-style-type: none"> 32xSPTS (3 audio each max); or 4xMPTS (16 prog./3 audio each max) 	<ul style="list-style-type: none"> A total of 32 TS inputs can be multiplexed over a total of four (4) TS in any combination on QAM and IP. Full PSIP Manipulation and Program Filtering Capability 	^(2,3) 4x MPTS ^(2,3) 4xQAM
	(BNC) 4xASI	<ul style="list-style-type: none"> May direct any of the output TS to the ASI output (5th Output) 	1xASI

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I/O OVERVIEW



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