

QPSK TO QAM Modulator

QPSK TO QAM Modulator is a new compact (1RU only) chassis and cost-effective multifunctional QAM modulator which supports QPSK demodulation, inputting remultiplexing. QPSK TO QAM Modulator has 2 ASI inputs (Max. bit rate of each channel up to 108Mbps), 2 QPSK inputs and one ASI output after re-multiplexing, one IF and RF testing output. The QPSK TO QAM Modulator has very convenient and friendly management interface, the user can complete all operation via local keyboard and LCD display on device, or access through the Ethernet port on device.



Features

- 2 ASI inputs
- 1 QAM frequency output
- Up to 108Mbps bit rate for each DVB-ASI input (cover both data packets and data burst)
- Two independent satellite inputs: DVB-S QPSK MPEG-2, two frequencies
- Support TS (SPTS or MPTS) remultiplexing with ASI output
- 4~256QAM modulation modes with adjustable
- Symbol Rate up to 7Mbaud
- Max. effective bit rate up to 51.6Mbps (SR=7Mbaud, 256QAM)
- Nominal RF Output power $\geq 100\text{dBuV}$ (with 0~25dB adjustable attenuation range) and 48~860MHz frequency range
- IF out 35~45MHz 125KHz step
- TS packet format input automatic detection and output configurable (188 or 204 bytes)
- Local keyboard control and LCD display, or access via Ethernet link

Application

- Re-multiplex for all DVB program Transport Stream related application
- DVB-C QAM modulation
- DVB-S Demodulation

Compliant

- EN 50083-9
- ETSI TR 101 154
- ETSI TR 101 891
- EN 300 429
- ITU-T J.83A



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Recommended Operating Conditions

Stress in excess of the maximum absolute ratings can cause permanent damage to the device (See Table 1)

Table 1 – Recommended Operating Conditions

Parameter	Symbol	Min.	Max.	Unit
Supply Voltage ^{Note}	V	90	250	V
Supply Frequency	F	49	51	Hz
Power consumption	C		25	W
Ambient Operating Temperature	Tw	0	+50	°C
Storage Temperature	Ts	-25	+55	°C
Operating Humidity	H	10	75	%

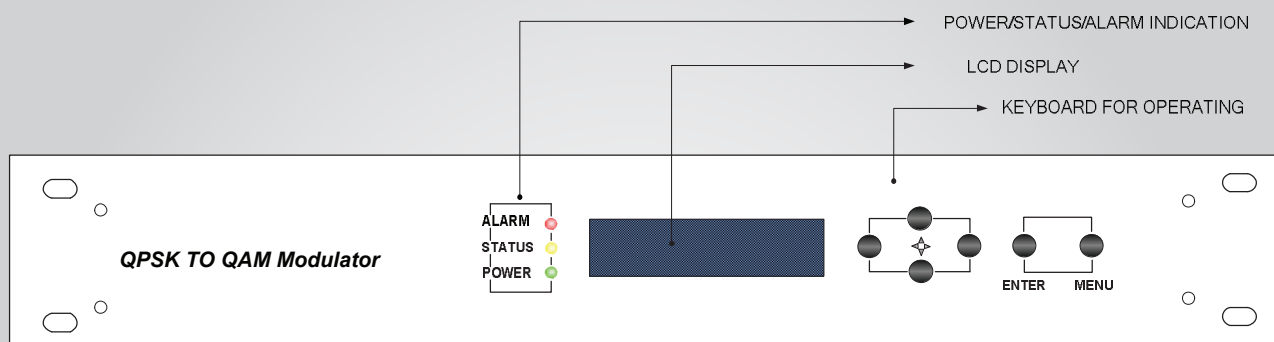
Specifications

Table 2 – Technical Specifications

Parameter	Symbol	Description	Unit	Remark
Mechanical dimension				
Height	H	42	mm	About 1U
Width	W	434	mm	About 17"
Depth	D	340	mm	
ASI Input				
Number of ASI input	-	2		
Impedance	-	75	Ω	
Connector	-	BNC	NA	
Maximum bit rate	-	108	Mbps	
TS packet format	-	188 or 204	Byte	Automatic detection
Transmission format	-	Data packet or data burst	NA	
QPSK Input				
F connector with RF loop out	-	2		
Frequency	-	950~2150	MHz	
Impedance	-	75	Ω	
Input level	-	75~-25	dBm	
Frequency capture range	-	± 2.5	MHz	
Demodulation mode	-	QPSK/SCPCMCPC	NA	
Symbol Rate	-	2~45	Msps	
ASI Output				
Number of ASI output	-	1		
Impedance	-	75	Ω	
Connector	-	BNC	NA	
Effective bit rate	-	≤ 51.6	Mbps	
IF Output				
Impedance	-	75	Ω	
Connector	-	BNC	NA	
Frequency	-	35~45	MHz	Adjustable
Output level	-	>80	dBuV	
RF Output				
Impedance	-	75	Ω	
Connector	-	BNC	NA	
Frequency	-	48~860	MHz	
Output level	-	>100	dBuV	Adjustable
Modulation Specification				
Modulation scheme	-	4QAM~256QAM	NA	
Symbol Rate	SR	≤ 7	Mbaud	
Bandwidth	BW	8	MHz	
Effective output bit rate	-	≤ 51.6	Mbps	
Modulation Error Rate	MER	≥ 40	dB	After equalizer, 64QAM
Bit Error Rate	BER	$\leq 10E-9$		After FEC, 64QAM
Carrier to Noise	C/N	≥ 45	dB	

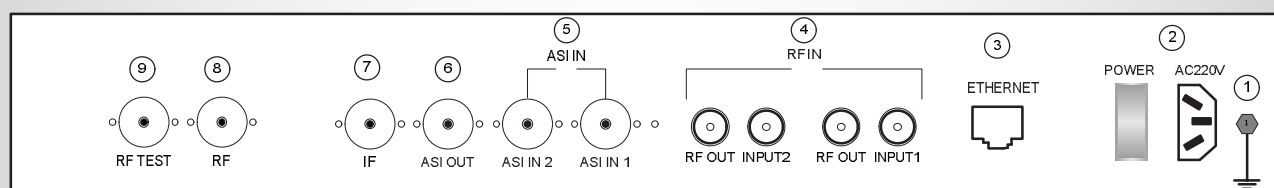
Panel diagram

Front panel



Rear panel

- | | | | |
|---|--------------|---|----------------|
| ① | GROUNDING | ⑤ | ASI INPUT 1-2 |
| ② | POWER | ⑥ | ASI OUTPUT |
| ③ | ETHERNET | ⑦ | IF INPUT |
| ④ | RF INPUT 1-2 | ⑧ | RF OUTPUT |
| | | ⑨ | RF TEST OUTPUT |



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