

## QAM Modulator

QAM Modulator is a new compact (1RU only) chassis and cost-effective QAM modulator, which is designed according to the DVB related standards. QAM Modulator has one ASI input and output, the RF output supports 16QAM~256QAM modes. The QAM Modulator has very convenient 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

- 1 ASI input and 1 ASI output
- Up to 270Mbps bit rate for DVB-ASI input (cover both data packets and data burst)
- 1 QAM frequency output
- Support 1.15MHz~8.05MHz bandwidth
- Support 16QAM/32QAM/64QAM/128QAM/256QAM modulation modes
- provide RF output monitoring port (-20dB)
- 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
- PSI/SI tables regeneration
- PID filtering and re-mapping
- 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

### 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 <sup>Note</sup>	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	%

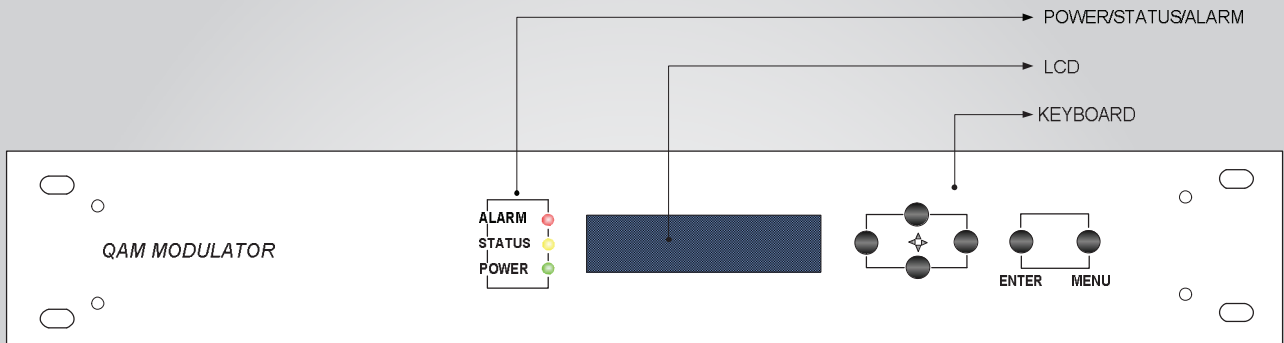
## Specifications

**Table 2 – Technical Specifications**

Parameter	Symbol	Description	Unit	Remark
<b>Mechanical dimension</b>				
Height	H	42	mm	About 1U
Width	W	434	mm	About 17"
Depth	D	340	mm	
<b>ASI Input</b>				
Number of ASI input	-	1	4	
Impedance	-	75	$\Omega$	
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	
<b>ASI Output</b>				
Number of ASI output	-	1		
Impedance	-	75	$\Omega$	
Connector	-	BNC	NA	
Effective bit rate	-	$\leq 51.6$	Mbps	
<b>IF Output</b>				
Impedance	-	75	$\Omega$	
Connector	-	BNC	NA	
Frequency	-	35~45	MHz	Adjustable
Output level	-	>80	dBuV	
<b>RF Output</b>				
Impedance	-	75	$\Omega$	
Connector	-	BNC	NA	
Frequency	-	48~860	MHz	
Output level	-	>110	dBuV	Adjustable
<b>Modulation Specification</b>				
Modulation scheme		QPSK, 16~256QAM		
Symbol Rate	SR	1~7	Mbaud	
Bandwidth	BW	1.15~8.05	MHz	
Effective output bit rate		$\leq 51.6$	Mbps	
Modulation Error Rate	MER	$\geq 40$	dB	After equalizer, 64QAM
Bit Error Rate	BER	$\geq 9 \times 10^{-9}$		After FEC, 64QAM
Carrier to Noise	C/N	$\geq 45$	dB	

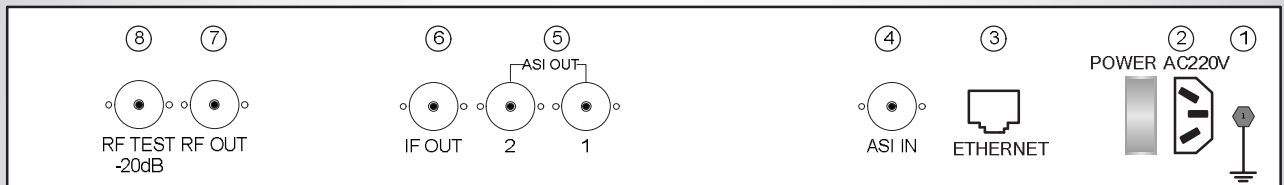
# Panel diagram

## Front panel



## Rear panel

- ① GROUND
- ② POWER
- ③ ETHERNET
- ④ ASI INPUT
- ⑤ ASI OUT 1-2
- ⑥ IF OUT
- ⑦ RF OUT
- ⑧ RF TEST OUT



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