

QAM Modulator - 4x1 (4 Adjacent Freq)

QAM Modulator - 4x1 (4 Adjacent Freq) is a new compact (1RU only) chassis and cost-effective QAM modulator, which is designed according to the DVB related standards. This device is integrated 4-channel QAM modulating carrier outputs, in which each carrier has independent signal channel encoding and direct RF output. Hence, one PCS 4 in 1 QAM modulator can work as 4 standalone QAM modulators, significantly reducing the network operators' head-end cost. WDC-3244 has 4 ASI input, RF output and RF testing output. The QAM Modulator - 4x1 (4 Adjacent Freq) 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.

Compliant

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



Features

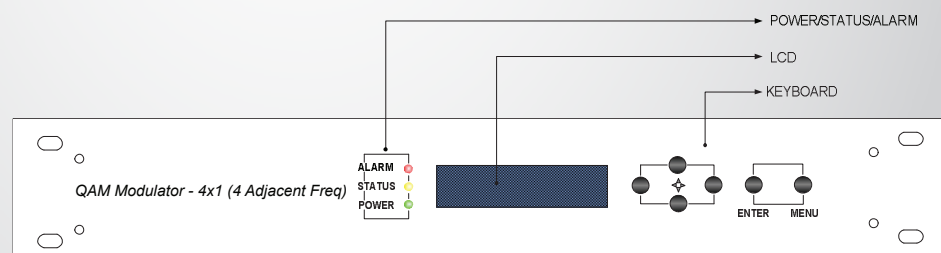
- 4 QAM Frequencies output
- 4 ASI inputs - TS packet format input automatic detection (188 or 204 bytes)
- RF output power 90~100dBuV (with 0~10dB adjustable attenuation range) and 48~863MHz frequency range
- 16~256QAM modulation modes
- Provide RF output monitoring port (-20dB)
- Adjustable Symbol Rate 5 to 7Mbaud
- PSI/SI tables synchronization update
- Excellent RF output performance, MER $\geq$ 40dB
- Memory protection for power-fail
- Local keyboard control and LCD display, or access via Ethernet link

Application

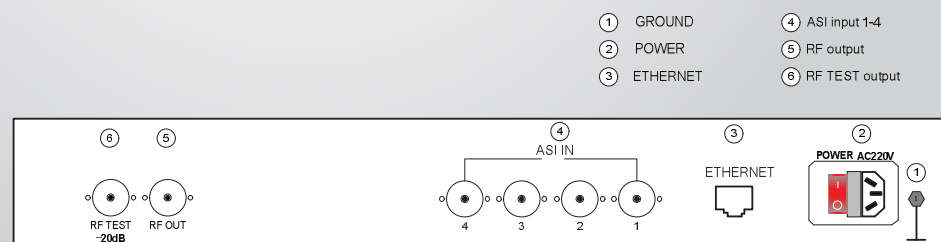
- DVB-C QAM modulation

Panel diagram

Front panel



Rear panel



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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		40	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	-	4		
Impedance	-	75	Ω	
Connector	-	BNC	NA	
TS packet format	-	188 or 204	Byte	Automatic detection
Transmission format	-	Data packet	NA	
RF Output				
Impedance	-	75	Ω	
Connector	-	BNC	NA	
Frequency	-	48~863	MHz	
Output level	-	90 $\pm$ 100	dBuV	Adjustable attenuation of 0~10dB
Modulation Specification				
Modulation scheme	-	16/32/64/128/256QAM	NA	
Symbol Rate	SR	$5 \leq SR \leq 7$	Mbaud	
Bandwidth	BW	≤ 8	MHz	
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	
Carrier suppression	-	≥ 58	dB	
Phase noise	-	@10KHz ≤ -80 dBc/Hz (@100KHz ≤ -100 dBc/Hz		