QAM6248

Multifunctional QAM Modulator



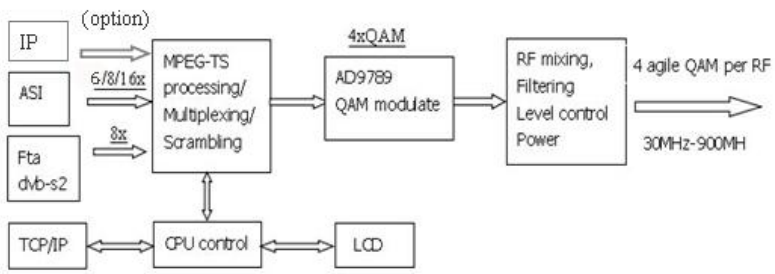
QAM6248 is a new generation of Multi-functional QAM modulator, which can receive one channel of TS from IP interface or up to 16 channels of TS from ASI interfaces, and then multiplex, scramble and multi-modulate it with channel coding, as well as four channels of IP loop output. It adopts our newly developed functions such as “Module Management”, device scrambling, and channel modulation. The flexible customization and high expansibility can satisfy the user’s current and future DTV system requirements.

The product is mainly applied to the DTV network head end room, edge of DTV backbone network, and DTV branch head end room.

Features

- Support ITU-T J.83A/B/C, output frequency range: 54MHz ~ 870 MHz
- Up to 6/8/16 ASI or 8 FTA dvb-s2 RF ports or GbE IP port in per chassis with Max.4 agile QAM channels out
- Simultaneous outputs via MPTS over GbE IP and RF Port
- Capable of working with 16QAM, 32QAM, 64QAM, 128QAM, 256QAM modulation methods
- The single device offers multiple configurations, the functions of scrambling and multi-channel RF output can be released by software authorization
- Support up to 4 simul-crypt CAS and DVB-CSA scrambling
- Support SI/PSI auto-generation and manual uploading during re-multiplexing
- Support auto-generation or manual editing of network information, as well as local network information sectors uploading
- Adopt extra-large cache memory for both constant and inconstant input bit stream at ASI interface
- Flexible network configuration, support input stream auto-detection and user configuration auto-saving
- 188/204 data packet length, and real-time display the data format
- Support PID filtering, mapping and pass-through
- PCR auto-correction
- Bit rate range of single output data: 15.5 ~ 51.6Mbps
- Output data symbol rate range of single RF channel: 4.2 ~ 7Mbaud/s
- Output EPL range: 95 dBuV ~ 115 dBuV (8 channels, step size: 0.25 dB)
- Support gain fine-tune and in-band EPL balancing, EPL adjustment range: -2.5 ~ 10.5 dB
- Support -20dB RF test port
- Tracking filter circuit design to ensure outstanding out-of-band rejection
- Support device configuration import/export
- Easy-to-Use System Management with Web/SNMP-based management and online remote update
- Multi-lingual management user interfaces and related documents, suit for both regional and overseas markets
- Support monitoring of operation temperature and power supply status.

Principle Chart



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TECHNICAL SPECIFICATIONS

Input

ASI Input	6/8/16x ASI Inputs, accordance to EN50083-9
Connector	BNC, 75ohm
Bit Rate	≤160Mbps (Single ASI)
Packet Length	188/204 bytes auto-adaptive
DVB-S/S2 RF Input (option)	8xRF Inputs and loop out, F-Female
Frequency range	950- 2150Mhz
Level	-65-25dbm
DVB-C Input (Option)	
Constellations	16/32/64/128/256 QAM
Frequency Range	50 to 860MHz
Input Signal Level	-20 to +20dBm (64QAM)
GbE IP input (option)	
	1x100/1000M Base-T Ethernet
	7x188 Bytes
	MPEG TS over UDP/RTP
	128 MPTS or SPTS of Number
	Unicast and multicast
	RJ45 Connector

Multiplexing Specifications

TS input	
Input TS number	0 ~ 8
Total services number (total)	0 ~ 512
Service number per input TS	0 ~ 64
TS mode	RF out as mirror of IP out
PSI for output TS	Standard (syntax and send period): ISO/IEC 13818-1 DVB SI (ESI EN300468)
Table type	
PAT/PMT	Generated automatically
SDT	Generated automatically or use uploaded files
NIT/BAT	Use uploaded files
TDT/TOT	Optional

Scrambling & CAS interfaces

Scrambling	
Scrambling algorithm	DVB-CSA
Embedded scramblers number	4
Table update	CAT/PMT
CAS Interface	
Simul-Crypt CAS number	0 ~ 4
SCS interface	ETSI TS 103 197
ECMG interface	TCP
EMMG interface	TCP/UDP
EMM bandwidth	0 ~ 3Mbps/TS

RF Output Technical Specifications

Output Frequency	54MHz ~ 870MHz
Maximum Output EPL (main)	90-110dBuV (4 Channels, 0.5dB as step size)
Maximum Output EPL (monitoring)	70-90dBuV (4 Channels, 0.5dB as step size)
Impedance	75Ω
Reflection Loss	≥12dB
Carrier Suppression	>58dB
MER	≥40dB (QAM Constellation: 64QAM Symbol Rate: 6.857MBaud)
SNR (Out of band)	≥50dB
Gain fine-tune	0.00 ~ 5.00dB (Step size is 0.25dB)
Phase Noise	@1KHz: ≥90dBc/Hz
@10KHz	≥100dBc/Hz
@100KHz	≥105dBc/Hz
Accuracy of center Frequency	±25KHz

Interfaces

Data Input Interface	Connector: BNC-Female
Quantity	9
Data Format	188 Bytes
Impedance	75Ω
Input Data Rate	0 ~ 270Mbps
Management Port	Connector: RJ45
Quantity	1
Functionality	Management and CAS
MAC	IEEE 802.3 1000BASET
Network Protocol	TCP/IP
Application	HTTP4.0/HTML1.1/XML/CGI (Web Management)NTP

Environment

Power Supply	110 ~ 240VAC, 50 ~ 60Hz
Power consumption	25W
Working temperature	5°C ~ 40°C (41°F ~104°F)
Storage temperature	-25°C ~ 70°C (-13°F~158°F)
Air Pressure	86 ~ 106KPa
Humidity	10% ~ 90%
Dimensions	490mm × 490mm × 45mm
Weight	8kg

Ordering Information

Models	Inputs	No.Scrambling	No.Modulation	IP out
QAM6248	8x ASI	4(default), 1/2 (option)	4(default), 1/2 (option)	○
QAM6248A	16xASI	4	4	●
QAM6248C	8x ASI plus 4 FTA DVB-C	4(default), 1/2 (option)	4(default), 1/2 (option)	○
QAM6248S2	6x ASI plus 8 FTA DVB-S2	4	4	●
QAM6248I	8x ASI plus 128x IP	4(default), 1/2 (option)	4(default), 1/2 (option)	●
QAM6248I2	12x DVB-S/S2 FTA Tuner plus 128x IP	4	4	●
QAM6248CI	4x CI IRD plus 1x ASI	4	4	○

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