Q6

Multi-Channel AV MPRG-2 Encoder

(Option Modulator ISDB-T DVB-T ATSC DVB-C DTMB)

DVB C CABLE DVB T TERRESTRIAL ISDB-T ATSC DTMB

MPEG2



Q6 This platform, with MPEG-2 video encoding mode by default, supports MPTS/SPTS/ASI independent multiplexing output and IP out channel switch.

It includes and supports the majority of Modulation standards found in the world; like Clear QAM Annex A, Annex B and Annex C, ATSC-8VSB, DVB-T, ISDB-T and DTMB. The Encoder modulator support MPEG-2 video encoding, Audio encoding MPEG-1 Layer 2.

Q6 supports to edit program number and name of the output video stream, and the logical channel number setting is also added to the encoder.

Many outstanding features are integrated into Q6, making it a very suitable platform for the CATV, IPTV, OTT projects. This unit is designed primarily for high channel density environments where rapid deployment, advanced management, and compatibility are critical.

Key Features

- Distribute Up to 8/12/16/20/24 channels of SD content over RF (DVB-T/DVB-C/DTMB/ISDB-T/ATSC) to an unlimited number of TVs
- Optional DVB-C (QAM), DVB-T (COFDM), ATSC-T, ISDB-T, DTMB Modulation (can selectable in WEB management) 4*Carrier RF Out
- In modulation Mode, support 128*IP input
- Two separate ASI input for External TS Multiplexing
- Simulaneously MPTS and SPTS over UDP/RTP IP out
- Audio encoding: MPEG-1 Layer 2
- Audio gain adjustment supported
- 4 separate multiplexing and Up-converter modulating adjacent carrier out
- Support TTL editing
- Selectable the Value of PCR PID same as Video PID
- LCN (Logical Channel Number) support
- PSI/SI editing & inserting
- PID Remapping & Filtering
- Support PCR correct and PCR interval adjusting
- Easy-to-Use System Management via Web

Highlights

Works both Coax Cable & IPTV networks: Distribute MPEG-2 encoding to all kinds of Modulation and All SPTS/ MPTS Over UDP IP out.

Operation via LCD Screen and Web Management : easy to read LCD color front panel that makes it easy to setup and monitor your channels, check firmware, and identify IP addresses without a computer.

Multi-Modulation: Optional DVB-C (QAM), DVB-T (COFDM), ATSC-T, ISDB-T, DTMB Modulation (can selectable in one device).

Flexible selection of different input modules: four tuner, four AV encoding in one device.

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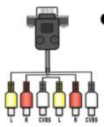
Application

- Distribute IP source to All TVs Over Existing TV Coax
- Advertising, monitoring, training and educating
- Upgrade all your analog Head-ends to digital TV Solution
- Enterprise, Hotel, campus, hospital, Public Place
- Works with Digital TV transmitter in wireless TV broadcasting
- Low cost Digital TV distribution

TECHNICAL SPECIFICATIONS

Encoder Part

AV inputs



24 Composite inputs(Option 4,8,12,16 Channels)
6 module in total
48 Pairs of R/L unbalanced Analog inputs
PAL, NTSC,75Ω
Connector 9-pin sub-D female
Return loss ⩾ 35 dB, 10Hz to 5.5MHz

DVB-ASI inputs

Connector	BNC female, 75Ω
Signal Level	200-800mVp-p
Packet Length	188 bytes
Max bit-rate per port	≤100Mbps
Number of Input Ports	Dual separate ASI ports

Video Processing

Input Resolution	720*576i/ 720*480i (PAL/NTSC)
Output Resolution	720*576 / 720*480 (PAL/NTSC) 544*576 / 544*480 (PAL/NTSC) 480*576 / 480*480 (PAL/NTSC) 352*576 / 352*480 (PAL/NTSC) 352*288 / 352*240 (PAL/NTSC) 176*144 / 176*112 (PAL/NTSC)
Encoding	MPEG-2
Bit-rate	1Mbps~13Mbps
Rate Control	CBR
GOP Structure	IBBP, IIII, IPPPP, IBPBP, IBBP

Audio Processing

Encoding	MPEG-1 Layer 2
Sampling rate	48KHz
Resolution	24-bit
Bit-rate	64,128,192,256,320,384kbps
Audio Gain	0-128

Multiplexing

Max PID Remapping	180 input per channel

PID remapping by automatically or manually
PSI/SI SDI/PMT/TOT/PAT/BAT/CAT/TDT/NIT Insert
Accurate PCR adjusting

Max Numbers	7 Group
in modulation mode	4 RF output (4 RF can Separate mux) 1 IP (MPTS) out

(Separate modulation channels or MTPS channels mux out)

Stream Output

DVB-ASI	2 Separate ASI (Select from modulation Channels or MPTS channel) 75Ω, BNC, 188Bytes MPEG TS over DVB-ASI (EN 50083-9)
RJ45 Port	100/1000M GbE Port
In ENCODER mode	Simultaneous output with 512*SPTS and 4*MPTS
In Modulator mode	Simultaneous output with 128*SPTS and 1*MPTS MPEG TS over UDP, unicast, and multicast streaming MPEG TS over RTP/RTSP Configurable packet size(2-7)x188Bytes Filter Null Packet
Total Bitrate	1-200Mbps (Should be More than Encoding bitrate)

Modulation Part

Connector	1 Port, F-Type, 75
Output Return Loss	14 dB
MER	≥40dB
RF output level	-30 ~ -10dbm, 1db step
RF frequency	47-860Mhz, 1KHz step
Numbers of RF Channel	4
Modulation Mode	DVB-C, DVB-T, ATSC, ISDB-T, DTMB

DVB-T Standard EN300744

FFT mode	2K, 8K
Bandwidth	6M, 7M, 8M
Constellation	QPSK, 16QAM, 64QAM
Guard Interval	1/4, 1/8, 1/16, 1/32
FEC	1/2, 2/3, 3/4, 5/6, 7/8

DVB-C Standard **J83.A (DVB-C, J83.B, J83.C)**

Carrier	ANNEX A	Annex B		Annex C
Constellation (QAM)	16,32,64,128, 256	**64**	**256**	**64/256**
Bandwidth (Mhz)	**8**	**6**	**6**	**6**
Symbol Rate (Mbaud)	**5-7**	**5.057**	**5.361**	**4.2-5.3**

ISDB-T Standard ARIB STD-B31

Constellation	DQPSK, QPSK, 16QAM, 64QAM
Guard Interval	1/32, 1/16, 1/8, 1/4
Transmission Mode	2K, 4K, 8K(this mode do not support SPTS out)
Guard Interval	1/32, 1/16, 1/8, 1/4
Code rate	1/2, 3/4, 5/6, 7/8
BandWidth	6Mhz

ATSC Standard ATSC A/53

Constellation	8 VSB

DTMB Standard GB20600-2006

Constellation	4QAM, 16QAM, 32QAM, 64QAM
Code rate	0.4, 0.6, 0.8
Guard Interval	420, 595, 945

System

Local interface	LCD + control buttons
Remote management	Web/NMS
NMS interface	RJ45, 100M
Language	English

Environment

Voltage range	100 to 240V AC; 50/60Hz
Power consumption	60W
Operation Temperature	0 ~ 45℃
Storage Temperature	-20 ~ 80℃
Dimensions	482mm (L) * 380mm (W) * 44mm (H)
Weight	4.5 kg

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Typical Order Information

Model	AV	Modulation	IP out
Q304	4	Null	512*SPTS and 4*MPTS
Q308	8	Null	
Q312	12	Null	
Q316	16	Null	
Q324	24	Null	
Q304M	4	QAM; ATSC; DVB-T; ISDB; DTMB	128*SPTS and 1*MPTS
Q308M	8	QAM; ATSC; DVB-T; ISDB; DTMB	
Q312M	12	QAM; ATSC; DVB-T; ISDB; DTMB	
Q316M	16	QAM; DVB-T; DTMB	
Q324M	24	QAM; DVB-T; DTMB	