

Q3

8/16/24* HDMI H.264 Encoder (Modulator)



Q3 H.264 encoder modulator up to **24 HDMI** sources from Satellite Receiver, PC, Blue ray, Local Playback, the latest new device which integrate encoding (**MPEG-4 AVC/H.264**) and option modulation (**DVB-C/ DVB-T/ISDB-T/ATSC/DTMB**) to convert Video/Audio signals into RF over exist Coax Cable distribution.

Q3 is designed especially for high density Distribution Video Engineering project, which can support rapid deployment, It distribute any HD and SD of HDMI Clear Video to unlimited TVs over the existing TV coax cables with real time perfect quality at any distance.

Overall Dibsys 's encoder modulators perfectly suit any professional AV company, including TV Channels, Live broadcasters, AV Installers and Integrators, Government applications, Hotel, Campus, Entertainment facilities, education broadcasting systems at schools and government buildings and many others.

Benefits for 8-channel ISDB-T or ATSC Distribution

Why Dibsys's only strongly recommend 8 HDMI input encoder modulator for ISDB-T and ATSC distribution:

Firstly, this 8*HDMI ISDB-T modulator is low cost encoding video solution, which helps DTV Distributor to distribute HD Digital TV into Coax Cable solution in limited budget. It is the best choice to deployment faster so far.

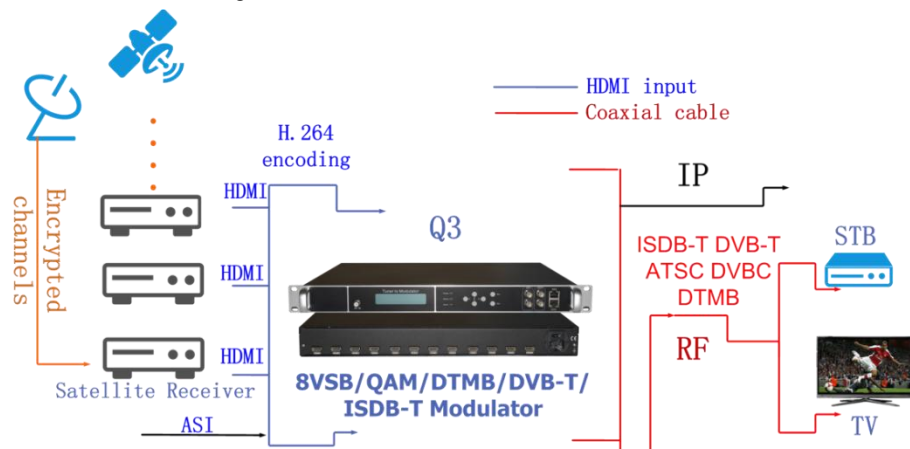
Secondly, we suggest that configure 8Mbps per HDMI encoding at 1080p video encoding at better video quality. Two video encoding work in One ISDB-T RF conversion, which 8 HDMI encoding channels need to capacity of Quad ISDB-T coding modulation.

Main Features

- Distribute Up to 8/12/16/20/24 channels of HD 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**
- Two separate ASI input for External TS Multiplexing
- Simultaneously MPTS and SPTS over UDP/RTP IP out
- Audio gain adjustment supported
- 4 separate multiplexing and Up-converter modulating adjacent carrier out
- Selectable the Value of PCR PID same as Video PID
- VBR and CBR mode
- LCN (Logical Channel Number) support
- PSI/SI editing & inserting
- PID Remapping & Filtering
- Support PCR correct and PCR interval adjusting
- Superior Shoulders and Excellent modulation quality MER
- Low power consumption and high reliability with MTBF(Mean Time Between Failure) \cong 87600 Hours
- Easy-to-Use System Management via Web
- Low Cost per channel - Breakthrough Price !

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

HDMI inputs

Numbers of Boards	4 HDMI ports per module Up to 6 Modules in Back panel
Numbers of Ports	8; 12; 16; 20; 24 Channels

DVB-ASI inputs

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

Video Processing

Input Resolution	1920×1080@60P, 1920×1080@60i, 1920×1080@50P, 1920×1080@50i, 1280×720@60P, 1280×720@50P 720×576@50i,720×480@60i
Output Resolution	1920×1080@30P, 1920×1080@25P, 1280×720@30P, 1280×720@25P, 720×576@25P,720×480@30P
Encoding	MPEG-4 AVC/H.264
Bit-rate	1Mbps~13Mbps
Rate Control	CBR,VBR
GOP Structure	IPPPP (P Frame adjustment, without B Frame)

Audio Processing

Encoding	MPEG-1 Layer 2
Sampling rate	48KHz
Resolution	24-bit
Bit-rate	64kbps, 128kbps, 192kbps, 224kbps, 256kbps, 320kbps, 384kbps
Audio Gain	0-255

Multiplexing

Maximum 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 4 RF output (4 RF can Separate mux) in modulation mode 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-2 TS over DVB-ASI (EN 50083-9)
RJ45 Port	100/1000M GbE Port Simultaneous output with N*SPTS (from HDMI channels) and 1*MPTS (modulation or MPTS channels) MPEG-2 TS over UDP, unicast, and multicast streaming MPEG-2 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,0.1db 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
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 120/200 to 240V AC ±10%; 50/60Hz
Power consumption	60W
Operation Temperature	0 ~ 45°C
Storage Temperature	-20 ~ 80°C
Dimensions	482mm (L) * 380mm (W) * 44mm (H)
Weight	4.5 kg

Typical Order Information

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

Product Information

Product category	Product Model	Detail Description	Application
Similar HD Modulator	Carrier 8Ch HDMI H.264 Modulator-1080P@60fps EMI3381	1*ASI Mux and 8/4 Ch HDMI H.264 1080p/1080i/720p/480i/ (576i/1080i->576,480i Downscale convert)@50/60/59.94 fps; MPEG1 L2 Audio; 4*DVB-C/4*ATSC/2*DVB-T/2*ISDB-T/8* SPTS UDP and 2*ASI out	--Distribute HD to Coax & IP TV; --Hotel, Campus
Similar HD Modulator	PREMIUM 4Ch HDMI/AV/YPbPr MPEG-2/AVC HD Encoder Modulator EMI3440	1*ASI Mux and 4 Ch HDMI/YPbPr/AV MPEG2/H.264 1080p/1080i/720p/480i@50/60/59.94 fps; MPEG1 L2/AAC/AC3; 4*DVB-C/4*ATSC/2*DVB-T/2*ISDB-T/4* SPTS udp and 2*ASI out	--Distribute MPEG-2 HD to Coax&IP TV; --DVB/ATSC off air --Hotel,Campus
Related products	4Channel Digital TV Transmodulator QAM6248Plus	12*FTA DVB-S2 or 12*FTA DVB-T2 or 8*FTA DVB-S2+4 *FTA T2 or 4*FTA DVB-S2+8*FTA DVB-T2 and 128*IP in; 4*DVB-T or 4*DVB-C (Scrambling,Annex A/B)/ 4*MPTS over UDP/RTP out	--Small Digital Cable TV System; --DVB-S2 To DVB-C/T Converter;
Related products	16 FTA dvbs2/IP QAM Transmodulator IPQ6250S	16*DVB-S2 FTA/512*IP Input, 16*DVB-C (Scrambling, Annex A/B/C) /MPTS over UDP/RTP out	--Upgrade Analog to Digital TV
Related products	8/12/24Ch AV MPEG2 Digital TV Modulator MSM620	128*IP and 8/12/24 Ch AV MPEG2 SD@50/60 fps; 4*DVB-C/4*DVB-T/4*MPTS over UDP/RTP out	--Hotel, Campus