

Order Guide

DMB-9581E Multi-Channels HDMI Encoder&Modulator
DMB-24E FTA Tuners +HDMI to RF Transmodulator
DMB-8820E H.264 Multi-Channels HDMI to IP Encoder
DMB-24E IP to 16 DVBT/ISDB-T/ATSC or 32 QAM RF Modulator



OVERVIEW

DMB-9581E series multi-channel H.264 HD Encoding & Modulator (all-in-one) is a high-density and flexible device, integrating encoding 8/12/16/20 up to 24*HDMI in, multiplexing, encapsulation and modulation with its excellent performance of HD encoding and modulation. Not only HDMI input, It supports tuners and HDMI input at the same time, demodulation the Tuners signal and encoding the HDMI signal, output RF with DVB-T/DVB-C/ATSC/ISDB-T/ DTMB for option.

Meanwhile, it delivery unrivaled and reliable video quality with advanced video compression technology, to meet the ever-increasing need of high quality video experiences. Moreover, with its multiplexing module, local programs can be re-multiplexed with external transport stream. DMB-9581E series can be applied to IPTV system with TS over IP output/input. The device also supports program sources from HD STB, HD camera or playout server, PC and other diversified video source.

FEATURES

- Input: Version 1: **4 / 8 / 12 / 16 / 20 / 24 *HDMI input**+2 * independent

ASI+128*IP(SPTS/MPTS) , capable of multiplexing.

Version 2: support **HDMI+Tuner mixed input for option: 16 HDMI+8*Tuner, 8 HDMI+16 Tuners, The HDMI and Tuners input must be 4 times and max total 24 channels input**

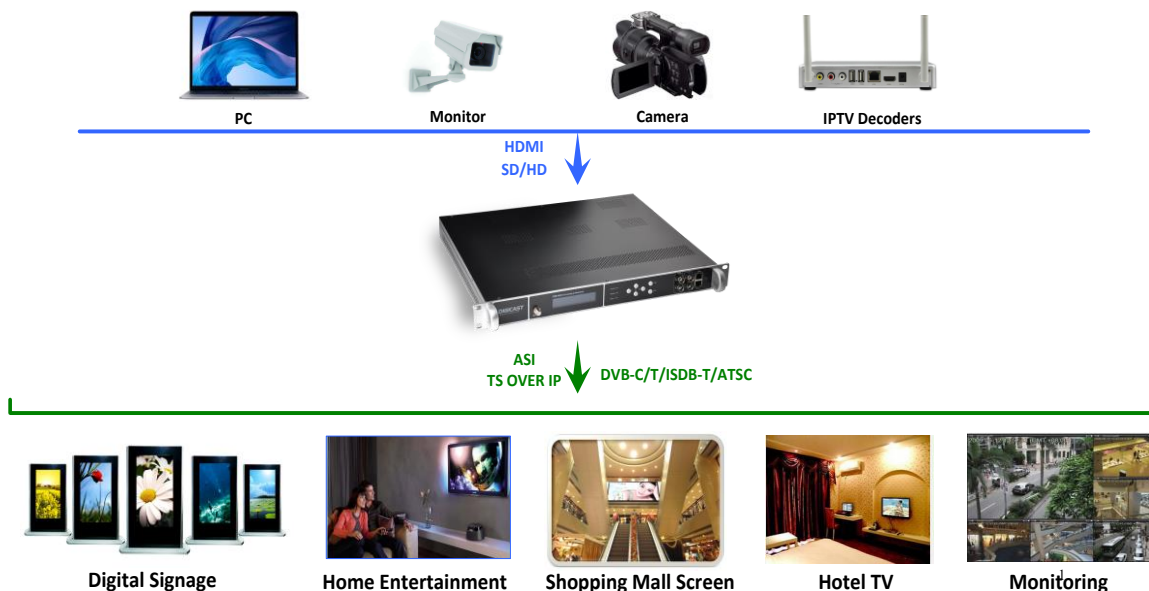
- Output: **DATA1**:IP output over RTMP/HTTP/RTSP/HLS/SRT protocol; **DATA2**: IP output over UDP/RTP protocol; 2*ASI(independent),
- RF out with 8/16/24*RF DVB-T/ATSC-T/ISDB-T/Tb/DTMB or 12*/24 RF DVB-C for option.

(when **ISDB-T RF output only 1*ASI input, ISDB-T output only 2K mode**,don't support 4K and 8K)

- With superior shoulders and modulation quality MER≥40dB
- Support lower power consumption and high reliability with MTBF(Mean Time Between Failure) ≥50000 Hours
- Equipped with multiplexing module, able to multiplex local programs with external TS, IP
- Cut-off memory capability
- Management of support web browser via Ethernet interface
- Support software upgrading by Ethernet interface

APPLICATIONS

- Various of DTV/IPTV/CATV Broadcasting Systems
- Distribute IP source,HDMI programs 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, restaurant, public place etc.
- Works with Digital TV transmitter in wireless TV broadcasting
- Low cost Digital TV distribution

Diversified Applications with Encoding & Modulator
(All-In-One)**DIGICAST**
Digital Future Life**SPECIFICATIONS****VIDEO SPECIFICATIONS**

- Video compression: MPEG-4 AVC/H.264
- Video inputs: Version 1: 4/8/12/16/20/24*HDMI for option
Version 2: HDMI+Tuner Mixed input
- The 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
- The Output Resolution(**Max 1080P@60 FPS**):
1920×1080@60P, 1920×1080@50P, 1920×1080@30P, 1920×1080@25P,
1280×720@30P, 1280×720@25P, 720×576@25P, 720×480@30P
- Bit-rate: 1 ~ 13Mbps, CBR/VBR
- GOP Structure: IPPPP (P Frame for adjustment, **without B Frame**)

AUDIO SPECIFICATIONS

- Encoding: MPEG-1 Layer 2
- Sampling rate: 48KHz
- Resolution: 24-bit
- Bit-rate : 64kbps, 128Kbps, 192kbps, 224kbps, 256kbps, 320kbps, 384kbps

- Audio Gain: 0-255

INPUTS AND OUTPUTS

ASI Input

- Channel: 2*ASI(Independent)
- Interface: BNC, 75 ohm
- Signal level 200-800mVp-p
- Packet length: 188 bytes
- Maximum bit-rate: per port $\leq 100\text{Mbps}$
- Packet mode: Byte mode

ASI Output

- 2 Separate ASI (select from modulation channels or MPTS channels)
- 75 Ω , BNC, 188Bytes
- TS over DVB-ASI (EN 50083-9)

IP Output

- RJ45 Port, 100/1000M GigE Port
- Simultaneous output **DATA1**: IP output over RTMP/HTTP/RTSP/HLS/SRT protocol;
DATA2: IP output over UDP/RTP protocol;
- TS over RTP, UDP unicast and multicast streaming
- Configurable packet size(2-7)x188Bytes
- Filter Null Packet
- Total Bitrate: 1-200Mbps (Should be More than Encoding bitrate)

MODULATION (8/16/24*RF DVB-T/ATSC/ISDB-T or 12/24 DVB-C out for option)

- Connector: 1 Port, F-Type, 75 Ω
- Output Return Loss: 14 dB
- MER $\geq 40\text{dB}$
- RF output level: -20 ~ 0dbm, 0.1db step
- Numbers of RF Channel: 4/8/16
- Modulation Mode: DVB-C, DVB-T, ATSC, ISDB-T, DTMB option

8/16/24*DVB-T Modulation

- Channel: DVB-T adjacent frequencies
- Modulation standard: EN300744
- Frequency range: 50-960Mhz, 1Khz one step
- Modulation standard: EN300744
- Bandwidth: 6M, 7M, 8M

- FFT mode: 2K, 8K
- 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
- TS bit rate < 31 Mbit/s

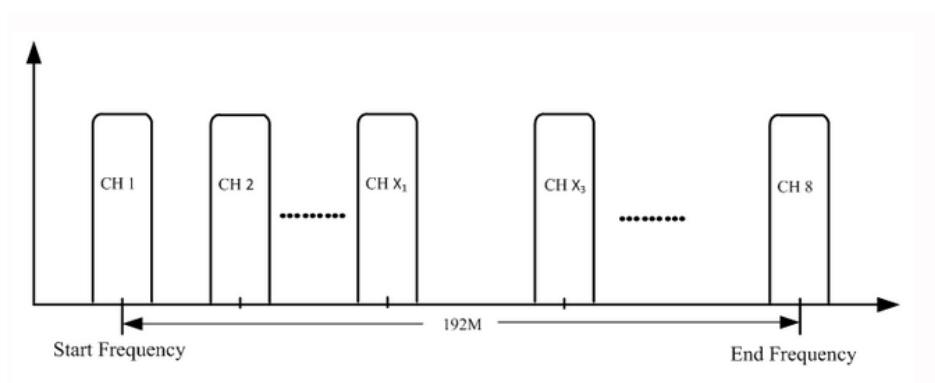
8/16/24*ATSC-T Modulation

- Channel: 8VSB adjacent frequencies
- Constellation: 8VSB
- Frequency range: 50-960MHz, 1Khz one step
- Constellation: 8VSB
- TS bit rate < 19 Mbit/s
- MER $\geq$ 40 dB

DVB-C Modulation(12 or 24 DVB-C out option)

12* DVB-C output MODULATION

- Channel: 12*DVB-C adjacent frequency RF out
- **Frequency range: 50~960MHz, 1Khz one step**
- Bandwidth range 192 Mhz between start frequency and end frequency, set 16 frequency within 192 Mhz bandwidth range



- MER $\geq$ 40 dB
- symbol rate: 5~7Mbaud
- total output level adjustment -35~-5dBm by 0.1 dB step
- DVB-C Standard J83.A (DVB-C, J83.B, J83.C)

- **Constellation (QAM):16,32,64,128, 256**

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

24* DVB-C output MODULATION

- Channel:24*DVB-C non-adjacent frequency RF out
- **Frequency range:96~864MHz,1Khz one step**
- **bandwidth range 768 Mhz**,frequency points can be used flexible within bandwidth range
- MER≥40 dB
- symbol rate:5~7Mbaud
- total output level adjustment -35~-5dBm by 0.1 dB step
- 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

8/16/24*ISDB-T Modulation

- Channel: ISDB-T frequency
- when ISDB-T RF output only 1*ASI input,
- Frequency range: 50-960Mhz,1Khz one step
- 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 (when 4*ISDB-T out, Mode only support 2*K, when 8/16*ISDB-T out, support 2K, 4K, 8K option)
- Code rate: 1/2, 3/4, 5/6, 7/8
- Bandwidth: 6MHz
- TS bit rate < 21 Mbit/s
- MER ≥ 40 dB

DTMB Standard GB20600-2006

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

GENERAL OPTIONS

SYSTEM MANAGEMENT

- Connector: 1*RJ-45, 10/100 Base-T interface.
- Front panel and web browser via Ethernet interface

PHYSICAL AND POWER

- Voltage: 100 to 120/200 to 240V AC ±10%; 50/60Hz
- Consumption: 60W
- Operating temperature: 0 ~ 45°C
- Storage temperature: -20 ~ 80°C
- Relative humidity: 10%~90%(non-condensing)
- Dimensions: 482mm(W) × 380(D)mm × 45mm(H)(19inch, 1RU)
- Weight: 4.6 KGS

DMB-90E Professional Receiver	Max 24 Tuners	DATA1:IP output over RTMP/HTTP/RTSP/HLS/SRT protocol; DATA2: IP output over UDP/RTP protocol
DMB-8820E Encoder	Max 24 HDMI	DATA1:IP output over RTMP/HTTP/RTSP/HLS/SRT protocol; DATA2: IP output over UDP/RTP protocol; 2*ASI input and output
DMB-9581E Encoder & Modulator	Max 24 HDMI	4/8/16 RF DATA1:IP output over RTMP/HTTP/RTSP/HLS/SRT protocol; DATA2: IP output over UDP/RTP protocol
DMB-24E Transmodulator	Max 24 Tuners	DATA1:IP output over RTMP/HTTP/RTSP/HLS/SRT protocol; DATA2: IP output over UDP/RTP protocol
DMB-24E Modulator	IP + ASI	16 RF (ATSC/DVB-T/ISDB-T) or 32 QAM out
Tuners standard: DVB-S/S2/DVB-T/T2/ATSC/DVB-C/ISDB-T/DTMB input for option		