

Order Guide

1. DMB-9030 HD Professional IRD(with 4:2:0/4:2:2 8-bit/10-bit decoding)
2. DMB-9030 HD Professional IRD(only with 4:2:0 8-bit decoding)



OVERVIEW

DMB-9030 4:2:2 HD Professional IRD is the key device of contribution system that provides 4:2:0 8-bit and 4:2:2 10-bit decoding, fully compliant with MPEG-2(MP.@.ML&MP.@.HL), MPEG-4 AVC/H.264 standard. CI decryption supports varieties of Condition Access System. The Professional 4:2:2 IRD enables abundant inputs, receives and decrypts multiplex DTV signals from Satellite, Cable and Terrestrial system. The DMB-9030 offers redundancy among Tuner,

ASI and TSoIP input for ensuring stability of contribution system. DMB-9030 embedded BISS1/E decryption to protect the programs content from satellite. The DMB-9030 is equipped with dual power supply for backup to ensure the stability and reliability of operating. DMB-9030 offers advanced TS processing and latest IP processing technology, applied to DVB, ATSC and IPTV head-end system, Distribution and Contribution applications.

FEATURES

- Compliant with HD/SD MPEG-2(MP.@.ML&MP.@.HL), MPEG-4 AVC/H.264 standard
- Decoding mode: 4:2:0 8bit and 4:2:2 10bit
- Variety of Tuner input options including DVB-S/S2,DVB-C,DVB-T/T2,ATSC and DTMB
- Abundant inputs: DS3/E3 in(optional), DVB-ASI in and TSoIP in
- Abundant outputs: ASI, HD/SD-SDI, TS/IP, AES/EBU, HDMI and CVBS out
- Supporting monitoring mode: Video display by front 1.5" TFT LCD
- External signal BB/Tri-sync input for SDI synchronization
- Up to 8*PID embedded audio in HD/SD-SDI output or pass-through
- MPEG over IP in/output by dual full-duplex GigE interface, supports MPTS and SPTS, UDP/RTP protocol, unicast/multicast
- Up to 8*AES/EBU of digital audio output
- DVB Common Interface(2 Slots), embedded BISS-1 and BISS-E
- Re-multiplexing and PID filtering capability
- Enables monitoring the quality of Tuner input signal
- PMT Auto-MDIX and Auto upgrade
- RSSI(received Eb/No & BER monitoring)
- VBI, EBU/DVB and Closed Caption pass-through and insertion
- Easily remote upgrade by Ethernet interface and USB interface
- SNMP and WEB-based management
- Sensitive Alarm interface
- Dual power supply for smooth hot-plug backup, improves stability

APPLICATIONS

Ensuring decoding capability of premiere quality, DMB-9030 Professional 4:2:2 IRD is designed to every type of satellite and telecom network with 4:2:2 10-bit. And it is an integrated receiver decoder, positioning in contribution application.

Sync. monitoring for high-quality audio and video

Receiving and decoding content of DVB-C, DMB-9030 outputs audio and video signals to HDTV via HDMI connector after descrambling and decoding, which can be applied to program monitoring.

Distribution for head-end of Cable TV

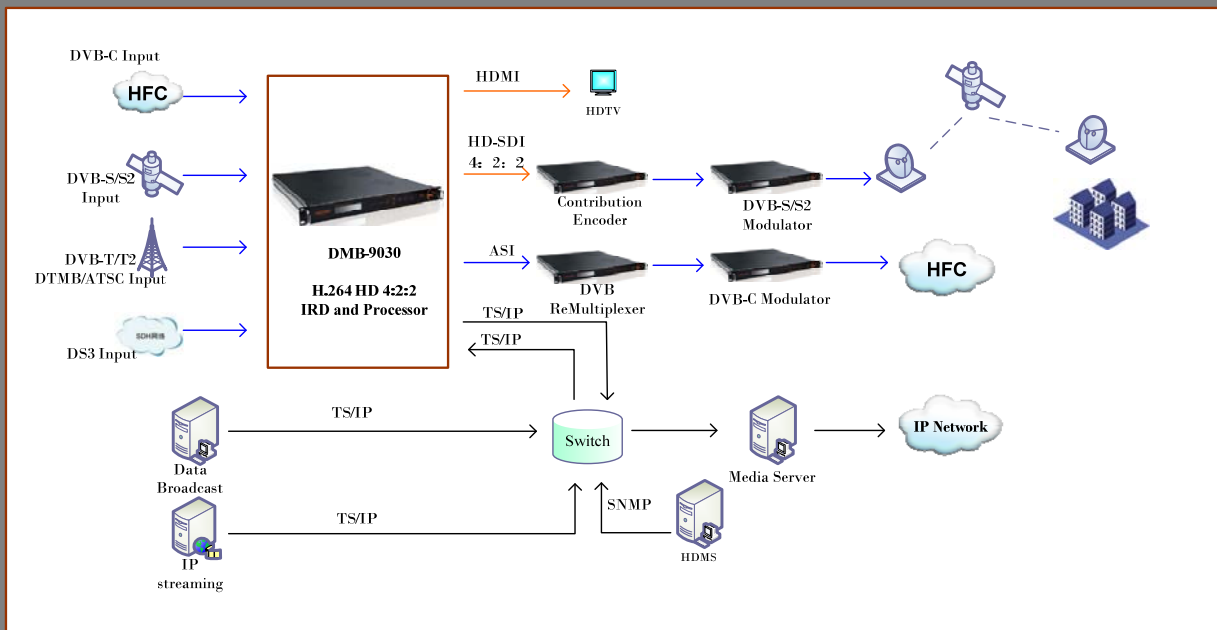
Receiving and decoding top-quality audio and video content of DVB-S or DVB-S2, DMB-9030 outputs ASI signal to re-multiplexer of DVB signal, transport stream multiplexed and edited flows into HFC network through DVB-C modulator. In this way, it can realize the contribution of highly qualified audio and video programs.

Distribution for satellite live TV

Receiving and decoding content of DVB-S or DVB-S2, DMB-9030 enables output of HD-SDI signal in 4:2:2 format. It outputs ASI signal to DVB-S/S2 modulator by DIGICAST high-end encoder which supports 4:2:2 10-bit video encoding of high quality and low latency. Afterwards, DMB-9030 brings out live broadcasting of qualified audio and video programs by digital satellite forwarding.

Contribution for IPTV

Receiving and decoding content of DVB-S or DVB-S2, DMB-9030 outputs capsulated TSoIP for processing. It can be configured to filter and transfer partial programs of transport stream while processing the content, and output TSoIP. The DMB-9030 can de-capsulate IP over MPEG(MPE) and output it over an IP network.



SPECIFICATIONS

Transport Stream Input Interfaces

DVB-C Input

Frequency range: 48~862MHz

Symbol rate: 1~7MBaud

Constellation: 16, 32, 64, 128, 256QAM

Bandwidth: 6MHz/7MHz/8MHz

RF input level: 45~75dBuV

Reflection loss: 7dB

Connector: 1*F-type input and 1*F-type loop out, 75ohm

DVB-S/S2 Input

Frequency range: 950~2150MHz

Symbol rate: 2~45MBaud

Roll off: DVB-S QPSK: 0.35

DVB-S2 8PSK: 0.2, 0.3, 0.35

FEC: DVB-S QPSK: 1/2, 2/3, 3/4, 5/6, 7/8

DVB-S2 QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10

RF input level: -25~-65dBm

LNB power: 13VDC, 18VDC or off, 22KHz or off

DiSEqC: DiSEqC1.0

Connector: 1*F-type input and 1*F-type loop out, 75ohm impedance

DVB-T/T2 Input

Frequency range: 104~862MHz(VHF/UHF)

Bandwidth: 6MHz/7MHz/8MHz

FFT: DVB-T: 2K, 8K

DVB-T2: 1K, 2K, 4K, 8K, 16K, 32K

Guard intervals: DVB-T: 1/4, 1/8, 1/16, 1/32

DVB-T2: 1/4, 5/32, 1/8, 5/64, 1/16, 1/32, 1/64, 1/128

FEC: DVB-T: 1/2, 2/3, 3/4, 5/6, 7/8

DVB-T2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6

Constellation: DVB-T: QPSK, 16QAM, 64QAM

DVB-T2: QPSK, 16QAM, 64QAM, 256QAM

RF input level: -70 ~ -20dBm

Reflection Loss: 7dB

Connector: 1*F-type input and 1*F-type loop out, 75ohm impedance

DTMB Input

Frequency range: 46.5 ~ 866MHz

Symbol rate: 7.56MHz

Constellation: 4QAM-NR, 4QAM, 16QAM, 32QAM, 64QAM

Guard intervals: PN420, PN595, PN945

Bandwidth: 6MHz, 7MHz, 8MHz

Roll off: 0.05

Signal interleave: 240, 720

FEC: 0.4, 0.6, 0.8

RF input level: -87 ~ -29dBm

Connector: 1*F-type input and 1*F-type loop out, 75ohm impedance

ATSC Input

Frequency range: 54 ~ 864MHz

Symbol rate: 10.762MHz

Constellation: 8VSB

Bandwidth: 6MHz

Roll off: 0.115

RF input level: -75 ~ 7dBm

Connector: 1*F-type input and 1*F-type loop out, 75ohm impedance

ASI Input

Compliant with DVB-ASI EN50083.9 standard

Packet Length: Auto-detect 188/204 byte packets

TS bit-rate: up to 200Mbps

Connector: 2*BNC, 75ohm impedance

DS3/E3 Input (optional)

Standard: compatible with ITU-T G.703

Frame: compatible with ITU-T G.752 and ITU-T G.804

Bit-rate: DS3:44.736Mb/S, E3:34.368Mb/S

Connector: 1*F-type input and 1*F-type loop out, 75ohm impedance

TS over IP Input/Output

Protocol: UDP/RTP, Unicast or Multicast optional, supports IGMP v2, ARP

Bit-rate: up to 800Mbps

Connector: RJ45*2, GigE(1000M) interface.

TS Processing

TS input management: de-multiplexing and re-multiplexing

TS output: 2 groups of independent ASI outputs

Service and PID management: programs, PID filtering and re-mapping

PSI/SI processing: PSI/SI creation and edition

LCN edition and insertion

De-scrambler: DVB common decrypt algorithm

Common Interface: dual PCMCIA (2 slots)

BISS mode: BISS 1 and BISS E

Transport Stream Output Interfaces**ASI Output**

Connector: ASI out, BNC interface.

Output: 2+2 Channels independent ASI outputs

TS format: DVB-ASI, compliant with EN50083-9

TS bit-rate: up to 200Mb/S

Video Decoding

Video decoding: MPEG-2(MP.@.ML for SD, MP.@.HL for HD)

MP: 4:2:0 8-bit

HP: 4:2:2 10-bit

MPEG-4/H.264 AVC (MP.@.L3 for SD, HP.@.L4.1 for HD)

High-422(Hi442P) 4:2:2 8/10-bit

High-10(Hi10P) 4:2:0 10-bit

High (HP) 4:2:0 8-bit

Main (MP) 4:2:0 8-bit

Constrained Baseline (CBP) 4:2:0 8-bit

High 10 Intra Profile (AVC-I 50) 4:2:0 10-bit

High 4:2:2 Intra Profile (AVC-I 100) 4:2:2 8/10-bit

Audio Decoding

Audio decoding: MPEG-1 Layer II (2 pairs of stereo)

AC3 (5.1 down-mix to 2.0, AC3 pass-through)

AC3+(5.1 down-mix to 2.0, AC3+ pass-through)

Dolby-E(5.1 down-mix to 2.0, Dolby-E pass-through)

MPEG-2 AAC(5.1 down-mixing to 2.0)

MPEG-4 HE-AAC V1/V2(5.1 down-mixing to 2.0)

Video and Audio Outputs

HDMI output

Connector: HDMI V1.3, Max. Resolution 1080i

Video resolution: 1080i*30, 1080i*29.97, 1080i*25

720P*60, 720P*59.94, 720P*50, 720P*29.97, 720P*25

480P*60, 576P*50, 576i*25, 480i*29.97

Audio embedded in HDMI: 1 Channel stereo

SDI output

Connector: 1+1*BNC interface, 75ohm (SDI interface enables programmed to ASI out)

Video resolution: 1080P*59.94, 1080P*50, 1080i*30, 1080i*29.97, 1080i*25, 720P*60,

720P*59.94, 720P*50, 720P*29.97, 720P*25, 576i*25, 480i*29.97

Bit-rate: ≤60Mb/S

Standard Definition: SMPTE 259M 270Mb/S(10bit)

High Definition: SMPTE 259M 1.485Gb/S(10bit)

Audio Embedded in SDI: 8*PID of audio embedded or pass-through

Level: 800mVp-p

Genlock

Connector: 1*BNC interface, 75 ohm independence

Input signal: BB/Tri-sync

Digital audio processing

Connector: 2*DB9 type, (2 groups of independent "XLR+AES/EBU")

6*AES/EBU, BNC interface

Audio output: up to 8*PID of audio decoding or pass-through

Nominal Output Level: 1Vp-p

Output format: SDI(audio embedded in SDI), AES/EBU

Output impedance: AES1-AES2: AES/EBU(Canon type) 110ohm impedance

AES3-AES8: AES/EBU(BNC interface), 75ohm impedance

Composite video output

CVBS connector: 1*BNC interface, 75ohm impedance.

CVBS standard: NTSC,PAL and SECAM

CVBS resolution: 576i*25, 480i*29.97

Nominal Output Level: 1.0Vp-p

Frequency Response: <±1 dB, at 5.5 MHz for PAL/SECAM, 4.2MHz for NTSC

Chroma-Luma Delay: <±30ns

Field Time Distortion: <2%

Line Time Distortion: <1%

Short Time Distortion: <2%

Differential Gain: <3%

Differential Phase: <2°

Signal to Noise Ratio: >55dB (luminance weighted)

Analog audio output

Connector: 2*DB9 type (2*XLR)
2*RCA interface (2*L/R)
Output Impedance: 600 ohm
Output mode: Left, Right, Dual Mono, Stereo
Output: 2 pairs of stereo audio outputs (2 Audio PIDs or 4 channels decoded).
Cross Talk Among Channels: >70dB
Total harmonic distortion: <0.3%.@.1KHz
Frequency Response: $\pm 0.5\text{dB}$ (20Hz ~ 18KHz)
Level: 0dBm in 600 Ω (0dBu), adjustable range $\pm 10\text{dB}$

Ancillary Data Processing

Subtitle: DVB, EBU
VBI: Teletext WSS
Closed Caption: EIA 608, EIA708, EIA608-to-708

GENERAL OPTIONS

Redundancy

Redundancy connector: between Tuner, ASI and TS/IP input
Switching Condition: TS Sync Loss
Switching Mode: Main, Spare

Alarm

Connector: DB9 type
Switching Condition: configured by user

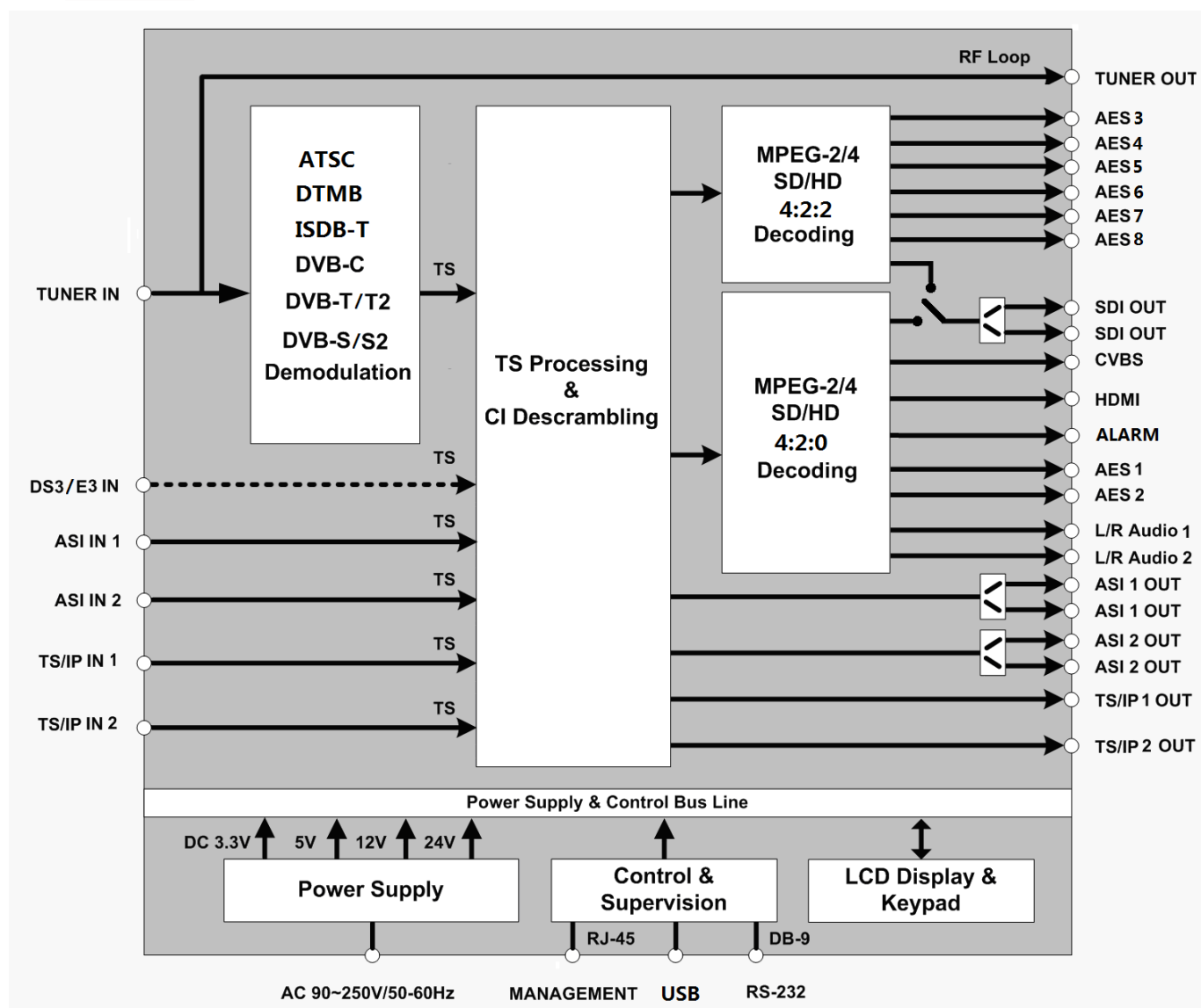
Control and Monitoring

Connector: 1*RJ-45, 10/100 Base-T for NMS
Remote control: SNMP 2.0 , HTTP (Web GUI) , Proprietary HDMS
Local control: management via Front panel and LCD
Serial Port: 1 $\times$ RS-232 D-sub female, for debug use only
Video monitoring: 1.5" TFT LCD monitor
Equipment Upgrade: Embedded FTP loader, Telnet and USB

Physical and Power

Voltage: 90~260VAC, 50/60Hz
Consumption: 25W
Operating temperature: 0~50 $^{\circ}\text{C}$
Dimensions: 430(W)mm*400(L)mm*45mm(H)
Weight: 4Kg

DIAGRAM



Should you have any questions, please don't hesitate to contact with us.

Order Guide

SPEC.		Model	DMB-9030 without 4:2:2 option	DMB-9030 with 4:2:2 option
Decoding mode			only 4:2:0 8-bit decoding	MP/HP 4:2:0/4:2:2 8-bit/10-bit decoding
Analog Video/Audio	1*CVBS OUT		√	√
	2*R/L OUT		√	√
	1*HDMI OUT		√	√
Digital Video/Audio	2*SDI OUT			√
	AES1~AES2 OUT (2*DB9)		√	√
	AES3~AES8 OUT (6*BNC)			√
TS Input	ASI1 IN (1*BNC)			√
	ASI2 IN (1*BNC)			√
TS Output	ASI1 OUT (2*BNC)			√
	ASI2 OUT (2*BNC)			√
IP	GigE(2*RJ45)		√	√
Power Supply	2*Power		√	√