

HVD 9130

High Performance and Reliable 10bit 4:2:2 AVC/H.264 & MPEG-2 Decoder



HVD9130 performs low latency and compressed video transmission with NTT Electronics' High End Encoder family.

In addition, it supports 4k transmission with multiple units (4 units) and can decode completely synchronized 4k contents without an external synchronizer.

Key features

- Supports 10bit 4:2:2 H.264/AVC and MPEG-2 Decoding
- Low Latency Mode (Minimum Latency 1 Frame) with HVE9110, HVE9200, HVE9210, HVE9230, XVE9310 combination (with HVE9100: 3 Frames) *H.264/AVC only *Encoder optional
- Compressed Audio for Super Low Latency (optional *9)
- Multiple video format compatibility including 1080i, 1080p, 720p, 576i, 480i, 1080p50 (optional *4), 1080p59.94 (optional *4), 1080p60 (optional *4)
- Phase Aligned Audio
- Embedded audio features up to 16ch/8PES (optional *1)
 - Multiple audio format support up to 16ch/8PES combinations (optional *1)
 - MPEG-1 LayerII: Stereo x 8
 - MPEG-2 AAC/MPEG-4 AAC/HE-AAC (5.1 + Stereo) x 2
- Analog Audio output (optional *15)
- Closed Caption: CEA-608, CEA-708
- Cascade Connection with Multiple Units for 3D and 4K decoding
- Auto signal Synchronization for 3D and 4K decoding (optional *8)
- Ancillary Data Transmission Support : Time Code, SMPTE RDD11, SMPTE2038, ARIB TR-B22, TR-B23
- Redundant IP input x 2
- Seamless Protection Switching for IP input (optional *10)
- Redundant power supply

* Please refer to the option table on the reverse side of this brochure.

Front Panel

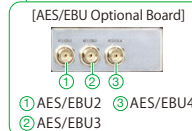


- ① Power switch 1
- ② Power switch 2
- ③ Status LEDs
- ④ Display panel
- ⑤ Operation buttons

Rear Panel



- ① SYNC-IN
- ② SDI-SYNC
- ③ SDI-OUT1
- ④ SDI-OUT2
- ⑤ ASI-IN
- ⑥ ASI-OUT
- ⑦ AES/EBU1
- ⑧ DATA1
- ⑨ CTRL/DATA2
- ⑩ ALARM
- ⑪ EIA-232C
- ⑫ AC inlet 2
- ⑬ AC inlet 1



Specifications

Supported Standards	System	ISO/IEC13818-1 (MPEG-2 SYSTEM TRANSPORT STREAM)		TS Specifications	Input Interface	DVB-ASI: BNC x 1 lines (0.8Vp-p 75Ω) IP ※7 : 100Base-TX/1000Base-T (RJ-45) x 2 line (Category 5/5e/6) RTP/UDP/IP (SMPTE2022-2-2007/RFC2250, RFC3550), FEC (SMPTE2022-1-2007/Pro-MPEG COP#3 R2 method)
	Video	ITU-T H.264 ISO/IEC 14496-10 AVC ITU-T H.262 ISO/IEC 13818-2 MPEG-2 Video			Stream Type	TS (188/204byte: No Reed-Solomon)
Video Specifications	Audio	ISO/IEC11172-3 (MPEG-1 AUDIO LayerI) ISO/IEC13818-7 (MPEG-2 AAC) LC Profile ISO/IEC14496-3 subpart 4 (MPEG-4 AAC) LC Profile ※3 ISO/IEC14496-3 Amendment 1 (MPEG-4 HE-AAC v1) ※3 ISO/IEC14496-5 : 2001 Amendment 24 : 2009 (MPEG-4 AAC-ELD) ※9 SMPTE302M-2002		Control Specifications	Max. Multiplicity	Video: 1, Audio max.4 + Ancillary Data max. 3 (Audio + Ancillary Total max.5) Video: 1, Audio max.8 + Ancillary Data max. 3 (Audio + Ancillary Total max.11) ※8
	Video Format	1080I (1920/1440/1280/960x1080) @25Hz, 29.97Hz, 30Hz: SMPTE274M 1080P (1920/1440/1280/960x1080) @23.98Hz, 24Hz: SMPTE274M 1080P (1920/1440/1280/960x1080) @29.97Hz, 30Hz: SMPTE274M 1080P (1920/1440/1280/960x1080) @50Hz, 59.94Hz, 60Hz: SMPTE274M ※4 *H.264 Only 720P (1280x720) @50Hz, 59.94Hz, 60Hz: SMPTE296M 480I (720/352x480) @29.97Hz: SMPTE125M 576I (720/352x576) @25Hz: ITU-R BT.656-4			Maximum TS Rate	160.0000Mbps
Audio Specifications	Profile / Level	H.264/AVC	Profile: Main, High, High4:2:2 (10bit) Level: 4.2 / 4.1 / 4.0 / 3.2 / 3.1 / 3.0 Entropy: CABAC/CAVLC	Other	Local Control	FL display (20 digits x 2) + operator switches (6 buttons)
	MPEG-2	MP@HL, 422P@HL, MP@ML, 422P@ML			Remote Control	LAN 100Base-TX/1000Base-T (RJ-45)
Audio Specifications	Video Output	SMPTE424M/SMPTE292M/SMPTE259M BNC x 2 lines (0.8Vp-p 75Ω)		Maintenance I/O	LAN 100Base-TX/1000Base-T (RJ-45) (joint use with remote control)	
	Audio Output	AES/EBU (2ch + 6ch ※2) : BNC x 1 + 3 ※2 lines (1Vp-p 75Ω) Embedded Audio: SMPTE424M, SMPTE299M, SMPTE272M ANALOG (4ch) : D-SUB 15Pin (50Ω, balanced) ※12		Alarm Output	Buzzer (volume adjustable) , relay contact outputs (2 NO/NC contacts)	
Audio Specifications	Decoding Channels	AES max. 8ch; Embedded max. 16ch ※1		External Reset	System reset by relay contact input (1 NO contact)	
	Decoding Method	MPEG-1 L2 (1ch (Mono), 2ch (DualMono), 2ch (Stereo)) max. 4PES (8PES ※1) MPEG-2 BC (1ch (Mono), 2ch (DualMono), 2ch (Stereo)) max. 4PES (8PES ※1) MPEG-2 AAC-LC (1ch (1/0), 2ch (1+1), 2ch (2/0), 4ch (3/1), 4ch (2/2), 4ch (4/0), 5.1ch (3/2/1), 6ch (6/0), 6ch (6x1)) max. 2PES (4PES ※1) MPEG-4 AAC-LC (2ch (2/0), 5.1ch (3/2/1)) max. 2PES (4PES ※1) MPEG-4 HE-AACv1 (2ch (2/0), 5.1ch (3/2/1)) max. 2PES (4PES ※1) SMPTE302M (2, 4, 6, 8 ch) max. 4PES (8PES ※1) MPEG-4 AAC-ELD (2ch (2/0), 4ch (3/1), 5.1ch (3/2/1)) max. 4PES ※9		Device Monitor Control	SNMPv1, WEB Based GUI	
Audio Specifications	Sampling Frequency	48kHz		TS Descramble	BISS-1/E ※6	
	Sampling Bit	16bit (MPEG-1, MPEG-2 BC, MPEG-2/4 AAC, MPEG-4 HE-AAC), 16/20bit (SMPTE302M)		Dimensions (mm)	44 (H)×432 (W)×460 (D) (w/o Connector, Foot, Rack mount bracket)	
Audio Specifications	Bitrate	128/192kbps (MPEG-1, MPEG-2 BC 1ch) 128/192/256/384 kbps (MPEG-1, MPEG-2 BC 2ch) 128/192/256/320/384 kbps (MPEG-2/4 AAC-LC 1ch, 2ch) 320/384/480/512/640 kbps (MPEG-2/4 AAC-LC 4ch, 5.1ch, 6ch) 64/96/128 kbps (MPEG-4 HE-AAC 2ch) ※3 128/192/256 kbps (MPEG-4 HE-AAC 5.1ch) ※3		Weight (typical)	6kg (w/o option card)	
	Pass Through	Dolby E external decoder delay absorption function (0 to 1 frame)		Power Source	AC100V to 240V, 50/60Hz	
Ancillary Data	Data Type	TIMECODE, SMPTE334M, SMPTE2038, ATSC A/53, ATSC A/72, OP-47, ARIB TR-B22, TR-B23		Power Consumption	50W max.	
				Operating Environment	0 to 45°C, 30 to 90% (condensation not allowed)	
				RoHS Compliant	This product is RoHS compliant	

Option Table

	Suffix	Option Name	Description
Hardware	※1	HD9_OP_AudioModule	Additional audio module for 8PES Audio
	※2	HD9_OP_AESEBU	AES/EBU 6ch
	※12	HD9_OP_ANALOG	Analog Audio 4ch
Software	※3	HD9_OP_HEAAC	HE-AAC, MPEG-4 AAC
	※4	HD9_OP_60P	1080P60, 1080P59.94, 1080P50, 1080P30, 1080P29.97
	※6	HD9_OP_BISS	BISS
	※7	HD9_OP_GIP	TS over IP(1000BASE-T)
	※8	HD9_OP_4k	4K Cascade Connection
	※9	HD9_OP_AAACELD	Compressed Audio for Super Low Latency
	※10	HD9_OP_SEAMLESS	Seamless Protection
	※11	HD9_OP_IPOUT	TS over IP Output(1000BASE-T)

Please ask our sales about hardware options ※2

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