

Dual Channel Encoder Realize 4K/60p



XVE9310 provides advanced features of Ancillary Data transmission or High Efficiency Video Mode on each channel in addition to the features available on XVE9300. XVE9310 can transmit full 3D videos or full HD dual channel videos with built-in TS-MUX. 4K contribution is also possible by cascade connection of two XVE9310.

Key features

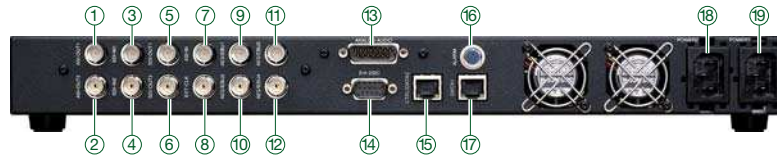
- AVC/H.264 2ch encoder
- Supports Full HD Stereoscopic 3D Contribution
- 4K contribution is possible by making cascade connection of the two sets of XVE9300
- Super Low Latency Mode (3 Frames, 1 Frame) (optional)
- Super Low Latency Mode with Audio Compression (optional)
- High Efficiency Mode (high picture quality at low bit rate) (optional)
- Multiple video format compatibility including 1080i, 1080/60p, 720p, 576i, 480i
- Embedded audio features up to 16 x ch/4 x PES
 - MPEG-1 LayerII: Stereo x 4
 - MPEG-2 AAC/MPEG-4 AAC/HE-AAC: 5.1+Stereo
 - Multiple audio format support up to 16 x ch/4 x PES combinations
- Closed Caption: EIA-608, EIA-708, ARIB STD-B37
- Ancillary Data Transmission Support: Time Code, SMPTE RDD11, SMPTE2038, ARIB STD-B40, OP-47
- Supports satellite Carrier ID
- Seamless bit rate change
- TS Over IP Support with FEC
- Supports DHCP
- Easy operation from front panel display with control buttons as well as SNMP and WEB GUI via IP Network
- Supports BISS-1/E (optional)
- Quick Boot-up (15sec)
- Redundant Power Supply
- RoHS Compliant

Front Panel



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

Rear Panel



- ① ASI-OUT1
- ② ASI-OUT2
- ③ SDI-IN1
- ④ SDI-IN2
- ⑤ SDI-OUT1
- ⑥ SDI-OUT2
- ⑦ ASI-IN
- ⑧ EXT-CLK
- ⑨ AES/EBU1
- ⑩ AES/EBU2
- ⑪ AES/EBU3
- ⑫ AES/EBU4
- ⑬ ANALOG AUDIO (optional)
- ⑭ EIA-232C
- ⑮ CTRL/DATA2
- ⑯ ALARM
- ⑰ DATA1
- ⑱ AC inlet 2
- ⑲ AC inlet 1

Specifications

Supported Standards	System	ISO/IEC13818-1(MPEG-2 SYSTEM TRANSPORT STREAM)		Ancillary Data	Data Type	TIMECODE, SMPTE334M, SMPTE2038*1, ATSC-A72 *1 ARIB STD-B40, ARIB STD-B37 *1
	Video	ISO/IEC14496-10(AVC/H.264)		Internal Test Signal	Video: Color Bar, Audio: 1kHz Sine wave	
	Audio	ISO/IEC11172-3(MPEG-1 AUDIO LayerII) ISO/IEC13818-7(MPEG-2 AAC) LC Profile ISO/IEC14496-3 subpart 4(MPEG-4 AAC) LC Profile *1 ISO/IEC14496-3 Amendment 1(MPEG-4 HE-AAC v1) *1 ISO/IEC14496-5:2001 Amendment 24:2009 (MPEG-4 AAC-ELD) *1 *2 Dolby Digital *1 SMPTE302M-2002		Output Interface	DVB-ASI: BNC x 2 lines (0.8Vp-p 75Ω) TS multiplexing: Assign the same TS to BNC x 2 TS non-multiplexing: Assign two TS to each BNC x 2 Only one stream: Assign the same TS to BNC x 2 IP *1 : 100Base-TX/1000Base-T (RJ-45) x 2 line (Category 5/5e/6) RTP/UDP/IP (RFC1889) FEC (Pro-MPEG COP#3 R2 method)	
	Video Format	1080i (1920/1440x1080) @25Hz, 29.97Hz, 30Hz: SMPTE274M 1080p (1920/1440x1080) @24Hz, 23.98Hz: SMPTE274M *1 1080p (1920x1080) @60Hz, 59.94Hz: SMPTE424M *1 *2 *4:2:0 Only 720p (1280x720) @50Hz, 59.94Hz, 60Hz: SMPTE296M 480i (720x480) @29.97Hz: SMPTE125M 576i (720x576) @25Hz: ITU-R BT.656-4		External Clock Input	Max. 160.000MHz (ARIB STD B-18 clock input compliant) BNC x 1 line (0.8Vp-p 75Ω)	
Video Specifications	Profile/Level	AVC/H.264	Profile: Main, High, High4:2:2(8bit) Level: 4.1/4.0/3.2/3.0 Entropy: CABAC/CAVLC	Stream Type	TS (188/204byte: No Reed-Solomon)	
	MPEG-2	—		Max. Multiplicity	TS multiplexing: Video 2, Audio max. 4, Ancillary Data max. 3 TS non-multiplexing (per 1TS) : Video 1 (Note, for total 2TS, Audio max. 4, Ancillary Data max. 3) Only one stream: Video 1, Audio + Ancillary Data max. 5 (total of 6)	
	Video Input	SMPTE292M/SMPTE259M BNC x 2 lines(0.8Vp-p 75Ω)		Maximum TS Rate	160.000Mbps (internal setting in 1 kbps units)	
	Video Through Output	SMPTE292M/SMPTE259M BNC x 2 lines(0.8Vp-p 75Ω)		Local Control	Fluorescent display (20 digits x 2) + operator switches (6 buttons)	
Audio Specifications	GOP Structure	AVC/H.264	M=1 to 3, N=1 to 30	Remote Control	LAN 100Base-TX/1000Base-T (RJ-45)	
	MPEG-2	—		Maintenance I/O	LAN 100Base-TX/1000Base-T (RJ-45) (joint use with remote control)	
	Audio Input	AES/EBU (8ch): BNC x 4 lines (1Vp-p 75Ω) Embedded Audio (SDI1 16ch): SMPTE299M, SMPTE272M Embedded Audio (SDI2 16ch): SMPTE299M, SMPTE272M Analog(4ch): D-SUB 15Pin(20KΩ, balanced) *3		Alarm Output	Buzzer (volume adjustable), relay contact outputs (2 NO/NC contacts)	
	Encoding Channels	AES max. 8ch, Embedded max. 16ch, Analog max. 4ch *3 (Selectable for each stereo)		External Reset	System reset by relay contact input (1 NO contact)	
	Encoding Method	MPEG-1 L2(1ch (Mono), 2ch (DualMono), 2ch (Stereo))max. 4PES MPEG-2 BC(1ch (Mono), 2ch (DualMono), 2ch (Stereo))max. 4PES MPEG-2 AAC-LC (1ch(1/0), 2ch(1+1), 2ch(2/0), 4ch(4/0), 5.1ch(3/2/1), 6ch(6/0)) max. 2PES MPEG-4 AAC-LC(2ch (2/0), 5.1ch(3/2/1)) max. 2PES *1 MPEG-4 HE-AACv1(2ch(2/0), 5.1ch(3/2/1))max. 2PES *1 Dolby Digital (1ch(Mono), 2ch (Stereo)) max. 4PES *1 SMPTE302M(2, 4, 6, 8 ch) max. 4PES		Device Monitor Control	SNMP, WEB Based GUI	
	Sampling Frequency	48kHz		TS encoding	BISS-1/E *1	
	Sampling Bit	16bit (MPEG-1, MPEG-2 BC, MPEG-2/4 AAC, MPEG-4 HE-AAC, Dolby Digital), 16/20bit (SMPTE302M)		Dimensions	44mm (H) x 432mm (W) x 460mm (D) (excluding protrusions)	
	Bitrate	128/192kbps (MPEG-1, MPEG-2 BC 1ch) 128/192/256/384 kbps (MPEG-1, MPEG-2 BC 2ch) 128/192 kbps (MPEG-2 AAC-LC 1ch) 128/192/256/320/384 kbps (MPEG-2/4 AAC-LC 2 ch) 320/384/480/512/640 kbps (MPEG-2/4 AAC-LC 4ch, 5.1ch, 6ch) 64/96/128 kbps (MPEG-4 HE-AAC 2ch) *1 128/192/256 kbps (MPEG-4 HE-AAC 5.1ch) *1 64/80/96/112/128/160/192/224/256/320/384/448/640 kbps (Dolby Digital 1ch) *1 96/112/128/160/192/224/256/320/384/448/640 kbps (Dolby Digital 2ch) *1		Weight (typical)	6kg or less	
	Pass Through	Dolby E external encoder delay absorption function (0 to 2 frames)		Power Source	100 to 240 VAC (50/60 Hz)	
				Power Consumption	70W or less	
			Operating Environment	0 to 45°C, 30 to 90% (condensation not allowed)		

*1 "MPEG-4 AAC-LC", "MPEG-4 HE-AAC", "Dolby Digital", "Dolby Digital 4PES",
"1080P@24Hz, 23.98Hz, 60Hz, 59.94Hz", "TS over IP", "BISS",
and "Ancillary Data" functions are optional.
*2 "MPEG-4 AAC-ELD" and "1080p@60Hz, 59.94Hz" are planned to be supported in the future.
*3 The Analog Audio Input is optional.
Conversion level: +4dBm to -18dBFS, Saturation level: +20dBm

Caution

- In order to ensure correct and safe use, be sure to read the User's manual before use.
- Do not install in locations exposed to water, humidity, steam, dust, or mist. Doing so could cause fire, electric shock, or equipment failure.

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NTT Electronics Corporation

Overseas System Business Department

New Stage YOKOHAMA, 1-1-32 Shin-urashimacho,
Kanagawa-ku, Yokohama-shi, Kanagawa 221-0031, Japan

TEL: +81-45-414-9180

FAX: +81-45-453-9710

E-mail: sys-info-w@ntt-el.com

URL: <http://www.ntt-electronics.com/en>