

VC-7710/VD-7710

H.264 Ultra Low Delay Codec



Encoder: VC-7710



Decoder: VD-7710

VC-7710/VD-7710 H.264 Ultra Low Delay Codec

VC-7710/VD-7710 are encoder/decoder of half rack size, employing ultra low delay technology of NEC original. These devices support H.264 | MPEG-4/AVC High422 profile@Level4.1 and are equipped with DVB-ASI and IP. These can be used in a variety of contribution system like FPU, SNG and IP network. Also these are applied advanced error correction. The encoder can transmit high quality video and audio signal even under the low quality IP network.

Features

Ultra Low Delay

- Adoption of original low delay technology
- 10msec to 120msec of ultra low delay mode
- 160msec of middle delay mode
- 300msec to 700msec of normal delay mode (not included the transmission delay)

Video Codec

- Adoption of H.264 | MPEG-4/AVC
- Adoption of High422profile@Level4.1(8bit)
- High Quality Video Coding by original algorithm at not only ultra low delay mode but also low bit rate

Audio Codec

- Adoption of MPEG-2 AAC-LC and MPEG-1Layer2
 - Adoption of LPCM (Non-compression)
 - Dolby AC-3/ Dolby E pass through
- * Dolby AC-3® and Dolby-E® are registered trademark of Dolby Laboratories,Inc.

Ancillary Data

- Transmission of Station control data
- Transmission of Digital subtitle data (Closed caption data) in ancillary area of video signal

IP Interface

- Ethernet interface of 10, 100 and 1000Base-T
- Error correction of ProMPEG CoP#3
- Support of SNMP, Telnet and HTTP

Compact size

- Compact size of 1U half rack size
- Lightness of approx. 3kg
- Portable operation



Specification

	VC-7710	VD-7710
Input signal Output signal	(1) Encoder Input Signal/Decoder Output Signal <ul style="list-style-type: none"> • 1080i serial digital component video Standard: SMPTE-274M, I/F: SMPTE-292M, Frame freq.: 29.97/25Hz, Interlace ratio: 2:1 • 720p serial digital component video Standard: SMPTE-296M, I/F: SMPTE-292M, Frame freq.: 59.94/50Hz, Interlace ratio: 1:1 • 480i/512i serial digital component video Standard: ITU-R BT.601, I/F: SMPTE-259M, Frame freq.:29.97Hz, Interlace ratio: 2:1 • 576i/608i serial digital component video Standard: ITU-R BT.601, I/F: SMPTE-259M, Frame freq.:25Hz, Interlace ratio: 2:1 • Audio format Embedded Audio (8ch) / AES/EBU (8ch) (2) Encoder Output Signal/Decoder Input Signal <ul style="list-style-type: none"> • MPEG-2 TS (Transport Stream) I/F : DVB-ASI, Ethernet 10/100/1000Base-T Format : (204,188) or (188), Mode : byte or packet mode (3) Encoder External TS Clock input <ul style="list-style-type: none"> • Maximum: 160MHz 	
Video codec	H.264 High422@L4.1(8bit), High@L4.1 Max. rate 120Mbps Chroma 4:2:2/4:2:0 Entropy coding CABAC/CAVLC ALL-I, M=1,3 , Intra Refresh Mode	H.264 High422@L4.1(8bit), High422@L4.0(8bit) High@L4.1, High@L4.0, Main@L4.1, Main@L4.0 MPEG-2 422P@HL, MP@HL, MP@H14L, SP@HL, SP@H14L, 422P@ML, MP@ML, SP@ML
Audio codec	MPEG-2 AAC-LC profile, MPEG-1 Layer2, LPCM (SMPTE302M-2002) Dolby AC-3/ Dolby E pass through	
Ancillary	ARIB TR-B23	
Reference	N/A	SMPTE170M ,ITU-R BT.709-4
Codec Delay	Ultra Low Delay mode: 1080i/29.97Hz, 720p/59.94Hz : 10msec~120msec 1080i/25Hz, 720p/50Hz : 12msec~120msec 480i/29.97Hz, 512i/29.97Hz, 576i/25Hz, 608i/25Hz : 28msec~120msec Middle Delay mode : 160ms Normal Delay mode : 300msec~700msec	
Network	Protocol : Unicast, Multicast Transport : MPEG-2 TS over RTP/UDP/IP FEC: ProMPEG CoP#3	Protocol : Unicast, Multicast Transport : MPEG-2 TS over RTP/UDP/IP FEC: ProMPEG CoP#3
Control	I/F : Ethernet 10/100Base-TX, RS-232C Protocol : SNMP, HTTP	I/F : Ethernet 10/100Base-TX, RS-232C Protocol : SNMP, HTTP
Operation Temperature	0 °C to 50°C	
Power Supply	100 to 240V AC, 50/60Hz	
Power Consumption	45VA or less	
Dimensions	44 (H) × 210 (W) × 450 (D) mm	
Weight	3kg	

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Optional Model

DS-3 Interface Model

- Encoder : VC-7710DS-AC
- Decoder : VD-7710DS-AC

Additional function	VC-7710DS-AC	VD-7710DS-AC
Input signal	Encoder Output Signal	Decoder input Signal
Output signal	<ul style="list-style-type: none"> • MPEG-2 TS (Transport Stream) I/F : DVB-ASI, Ethernet 10/100/1000Base-T and DS-3 Format : (204,188) or (188), Mode : byte or packet mode	<ul style="list-style-type: none"> • MPEG-2 TS (Transport Stream) I/F : DVB-ASI, Ethernet 10/100/1000Base-T and DS-3 Format : (204,188) or (188), Mode : byte or packet mode

Dual AC Power Supply Units model

- Encoder : VC-7710-AC-P
- Decoder : VD-7710-AC-P

Additional function	VC-7710-AC-P	VD-7710-AC-P
Power Supply	Dual AC power supply unit for redundancy 100 to 240V AC, 50/60Hz	Dual AC power supply unit for redundancy 100 to 240V AC, 50/60Hz
Dimensions	44 (H) × 430 (W) × 450 (D) mm	44 (H) × 430 (W) × 450 (D) mm
Weight	Approx. 4.0kg	Approx. 4.0kg

Analog Interface and Dual DC Power Supply Units model

- Encoder : VC-7710AD-DC-P
- Decoder : VD-7710DA-DC-P

Additional function	VC-7710AD-DC-P	VD-7710DA-DC-P
Input signal	Analog composite video signal input, BNC connector (700 mV ±18mV , 75 Ω termination, Only SD format is available.)	Analog composite video signal output, BNC connector (700 mV ±18mV , 75 Ω termination, Only SD format is available.)
Output signal	Analog audio input, channel 'L' and 'R', XLR connector (0dBm = -20dBFS 600 Ω termination)	Analog audio output, channel 'L' and 'R', XLR connector (0dBm = -20dBFS 600 Ω termination)
Power Supply	Dual DC power supply unit for redundancy -38 to -58V DC (-48VDC typical)	Dual DC power supply unit for redundancy -38 to -58V DC (-48VDC typical)
Power Consumption	50VA or less	50VA or less
Dimensions	44 (H) × 430 (W) × 450 (D) mm	44 (H) × 430 (W) × 450 (D) mm
Weight	Approx. 4kg	Approx. 4kg

ISO 9000 Series



ISO 9001 JMI-0119
NEC Broadcast and Video

ISO 14001



JQA-E-90066
NEC



Warning about Safety

★Before installing, connecting and operating this product, please read carefully and attentively items regarding warning, caution, mandatory and prohibitive actions and always comply with them.

- The actual color of the product may differ from the color of the product in this catalog. The shape and specifications of the product is subject to change without notice for improvement.

For additional information:

Please contact your nearest NEC sales offices or visit www.nec.com.

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