

4K/HD/SD Decoder

# HC10000DS/HC11000DS

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



### Key Features

- 10bit 4:2:2/4:2:0 for HD/SD, 4K supported
- Multiple video formats supported;  
H.265/HEVC, H.264/MPEG-4 AVC, and MPEG-2 Video
- Super Low Delay with NTT Electronics' Encoders
- Embedded Audio up to 16ch/8 PES combinations
- Dolby Digital Pass-through
- Ancillary Data transmission
- BISS-1/E and BISS-2/CA supported
- 12G-SDI Output
- AES/EBU Audio Output (HC11000DS)
- GENLOCK supported
- Multicast / Unicast to support IPv4 and IPv6 with Error Correction
- Seamless Protection Switching supported
- Two each Ethernet ports for GUI control and for streaming data
- Dual power supply units for redundancy (HC11000DS)

### Front Panel



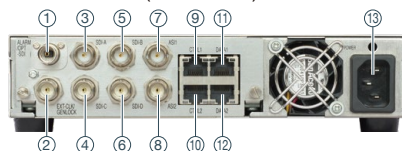
HC10000DS  
(1RU Half)



HC11000DS  
(1RU Full)

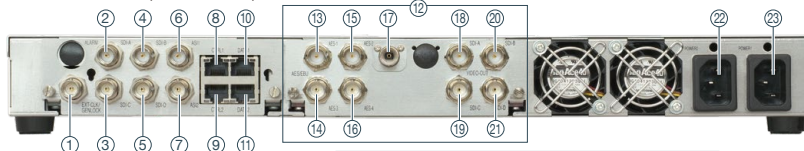
### Rear Panel

#### HC1000DS (1RU Half)



- ① 12G-SDI-OUT OP4    ④ SDI-C    ⑦ ASI1    ⑩ CTRL2    ⑬ AC inlet
- ② GENLOCK    ⑤ SDI-B    ⑧ ASI2    ⑪ DATA1
- ③ SDI-A    ⑥ SDI-D    ⑨ CTRL1    ⑫ DATA2

#### HC11000DS (1RU Full)



- ① GENLOCK    ⑤ SDI-D    ⑨ CTRL2
- ② SDI-A    ⑥ ASI1    ⑩ DATA1
- ③ SDI-C    ⑦ ASI2    ⑪ DATA2
- ④ SDI-B    ⑧ CTRL1    ⑫ Option Slot

Option Board

⑬⑭⑮⑯⑰⑱⑲⑳ : Digital Audio Output Board OP1

⑬⑭⑮⑯⑰⑱⑲⑳ : 12G-SDI/AES Output Board OP5

⑬ AES/EBU1    ⑯ AES/EBU4    ⑲ SDI-C

⑭ AES/EBU3    ⑰ 12G-SDI-OUT    ⑳ SDI-B

⑮ AES/EBU2    ⑱ SDI-A    ㉑ SDI-D

- ⑳ AC inlet2
- ㉑ AC inlet1

### Specifications

Video	Output Interface	BNC: 12G-SDI(SMPTE ST 2082-1)/3G-SDI(SMPTE ST 424)/HD-SDI(SMPTE ST 292)/SD-SDI(SMPTE ST 259)	
	Decode Method	H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2 Video	
	Profile; Level <small>(Please see below for supported formats.)</small>	H.265/HEVC	Profile: Main 4:2:2 10, Main 10, Main ; Level: 5.1, 4.1, 4
		H.264/MPEG-4 AVC	Profile: High4:2:2 (10bit), High10, High, Main ; Level: 4.2, 4.1, 4.0, 3.2, 3.0
MPEG-2 Video		Profile: 422P, Main ; Level: High, Main	
Video Format @Frame Rate	H.265/HEVC	2160P(3840x2160)@23.98Hz, 29.97Hz, 50Hz, 59.94Hz 1080P(1920/1440x1080)@23.98Hz, 29.97Hz, 50Hz, 59.94Hz 1080I(1920/1440x1080)@25Hz, 29.97Hz ; 720P(1280x720)@50Hz, 59.94Hz 576I(720x576)@25Hz ; 480I(720x480)@29.97Hz	
	H.264/MPEG-4 AVC	1080P(1920/1440x1080) * @23.98Hz, 29.97Hz 1080I(1920/1440x1080)@25Hz, 29.97Hz 720P(1280x720)@50Hz, 59.94Hz 576I(720x576)@25Hz ; 480I(720x480)@29.97Hz	
	MPEG-2 Video	1080I(1920/1440x1080)@25Hz *, 29.97Hz ; 720P(1280x720)@50Hz, 59.94Hz 576I(720x576)@25Hz ; 480I(720x480)@29.97Hz	
Audio	Output Interface	Embedded Audio 16ch(SMPTE ST 299, SMPTE ST 272), AES/EBU 8ch OP1	
	Decode Audio Type	MPEG-1 L2 : 1ch(Mono), 2ch(Dual Mono), 2ch(Stereo) ; max. 8PES MPEG-2 AAC-LC : 1ch(1/0), 2ch(1+1), 2ch(2/0), 4ch(3/1), 5.1ch(3/2/1), 6ch(2/2/2) ; max.4PES MPEG-4 AAC-LC : 2ch(2/0), 4ch(3/1), 5.1ch(3/2/1) ; max.4PES MPEG-4 HE-AACv1 : 2ch(2/0), 5.1ch(3/2/1) ; max.2PES MPEG-4 AAC-ELD : 2ch(2/0), 4ch(3/1), 5.1ch(3/2/1) ; max.2PES SMPTE ST 302 : 2, 4, 6, 8ch ; max.4PES Dolby Digital Pass Through ; max.6PES	
Ancillary	Data Type	TIMECODE, ARIB TR-B23/TR-B22, SMPTE ST 2038	
Transport Stream (TS)	Input Interface	DVB-ASI : BNC x 1 (0.8Vp-p 75Ω) ; IP : 100BASE-TX/1000BASE-T x 2 (RJ-45)	
	Input Type	MPEG-2 TS(188/204byte) ; For IP: Time-stamped TS (TTS)(192byte), Advanced TS(192byte)	
	Maximum TS Rate	200.000Mbps	
	TS Decryption	BISS-2 1/E/CA OP7 OP8, BISS-1/E OP2 OP7	
Network	Interface	DATA1: 100BASE-TX/1000BASE-T (RJ-45) ; DATA2: 100BASE-TX/1000BASE-T (RJ-45)	
	Transmission	RTP/UDP/IP(SMPTE ST 2022-2:2007, RFC2250, RFC3550, RFC1889), Unicast/Multicast	
	Network Features	IPv4: IGMPv2/v3, NTP, DHCP, Ping, Syslog, PPPoE IPv6: MLDv2, Ping, Syslog, IPoE	
	Error Correction	FEC(SMPTE ST 2022-1:2007/Pro-MPEG COP#3 R2), ARQ	
	Others	Seamless Protection OP3	
Control	Local Control	LCD (20digits x 4/brightness control available) + Front Switch(7 buttons)	
	Remote Control	WEB GUI, SNMP v1, Ping, Syslog	
Others	Dimensions	HC1000DS: W:209 x H:44 x D:430(mm) (w/o Connector, Foot, Rack mount bracket) HC11000DS: W:432 x H:44 x D:430(mm) (w/o Connector, Foot, Rack mount bracket)	
	Weight	HC1000DS: 5kg typ. ; HC11000DS: 8kg typ. (w/o option card)	
	Supply Voltage	AC100V to 240V, 50/60Hz HC1000DS: Single power supply ; HC11000DS: Dual power supply for redundancy	
	Power Consumption	HC1000DS: 100W max., HC11000DS: 150W max.	
	Operating Environment	0 to 45°C, 30 to 90% (non condensing)	
	Compliance	RoHS, VCCI, FCC, ICES, CE, UL, CSA	

	Suffix	Option Name	Description
Hardware	OP1	HC11000_OP_AES	Digital Audio Output Board (Factory Option)
	OP4	HC1000D_OP_12G	12G-SDI Output (Factory Option)
	OP5	HC11000D_OP_AES-12G	12G-SDI/AES Output Board (Factory Option)
Software	OP2	HC1x000D_OP_BISS	BISS Decryption
	OP3	HC1x000D_OP_SEAMLESS	Seamless Protection
	OP7	HC1x000D_OP_BISS2UG	BISS-2 Upgrade for the kit installed BISS-1
	OP8	HC1x000D_OP_BISS1+2	BISS-1 and BISS-2 Decryption

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- Exporting our products or technologies may be subject to the Foreign Exchange and Foreign Trade Law of Japan and export control acts and regulations of other related countries.

**⚠ Caution** Please use our products in accordance with the instructions provided in the manual, user's guide or specifications attached.



### NTT Electronics Corporation

Business Promotion Office, Digital Video Component Business Group  
 New Stage YOKOHAMA, 1-1-32 Shin-urashimacho, Kanagawa-ku,  
 Yokohama-shi, Kanagawa, 221-0031, Japan  
 TEL: +81-50-9000-6004 FAX: +81-45-453-9651 E-mail: sys-info-w@ntt-el.com  
 URL: <https://www.ntt-electronics.com/en/products/video/>