



**NDS3211HS**

**H.264/HEVC HD Encoder**



## OSD (Logo/PPT/Caption/QR Code) Insertion



### Outline

NDS3211HS H.264/HEVC HD Encoder is the new broadcasting audio & video encoding device with powerful functionality. It is equipped with multiple video input interfaces (HDMI, SDI, YPbPr and CVBS) and audio input interfaces (AES, RCA and XLR) to make it possible to compatible with different signal sources.

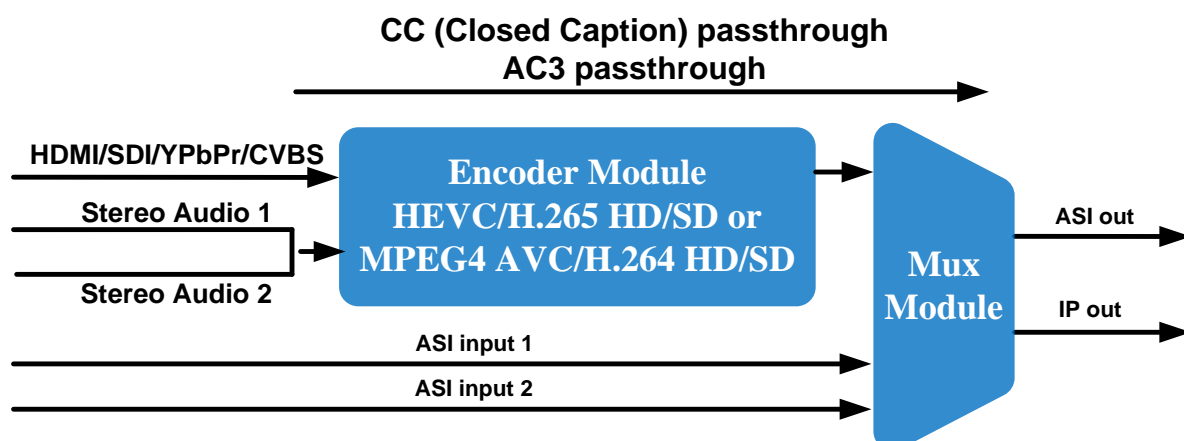
Multiple audio and video encoding formats are available to meet customers' various requirements. It supports 2 stereo (4 mono) to mix with the video to form a stream output. The encoded program will finally output in TS through ASI/IP port.

NDS3221HS is also featured with OSD (QR code, LOGO and Caption) insertion function and can display multiple elements at same time. Operator can insert advertisement picture, own LOGO, special QR code, Text content in encoding process independent of STB. It will bring more profit for product user.

## Key Features

- Support OSD (QR code, LOGO and Caption) insertion
- HEVC/H.265 HD/SD (with B frame to ensure high video compression ratio and bitrate stability) and MPEG-4 AVC/H.264 HD/SD video encoding, YPbPr port for HD only
- Support resolution down convert
- MPEG1 Layer II, HE-AAC (v1&v2), LC-AAC Audio encoding
- Support 2 stereos or 4 mono audio encoding
- Support DD AC3 audio passthrough (for SDI or HDMI in)
- Support 2 ASI input for re-mux
- Support ASI output and IP over UDP /RTP/RTSP output
- Support CC (closed caption), EIA 608 (for CVBS in)
- LCD / keyboard control and web management

## Inner Principle Chart



## Specifications

<b>Video</b>	Interface	1×HDMI, 1×HD-SDI, 1×YPbPr and 1×CVBS		
	Resolution	<b>Input</b>	<b>Output</b>	<b>Interface Applicable</b>
		1920×1080p@60/59.94	1920×1080p@60,	SDI, HDMI
		1920×1080p@50	1920×1080p@50	
		1920×1080i@60/59.94	1920×1080p@30	SDI, HDMI, YpbPr
		1920×1080i @50	1920×1080p@25	
		1280×720p@60/59.94	1280×720p@60	
		1280×720p@50	1280×720p@50	
		720×576i@50	720×576p@25	SDI, HDMI, CVBS
	720×480i@60	720×480p@30		
Encoding	HEVC/H.265 HD/SD; MPEG-4 AVC/H.264 HD/SD			
Bitrate Range	1 – 15.00 Mbps			
Rate Control	CBR/VBR			
GOP Structure	IP, IBBP, IBBBP			
Chroma	4:2:0			
<b>Audio</b>	Interface	2×XLR, 2×AES, 2×RCA, 1×SDI (support maximum 2 stereos synchronous processing), 1×HDMI,		
	Encoding	MPEG-1 Layer II, HE-AAC (v1&v2), LC-AAC, DD AC3 passthrough (for SDI and HDMI in)		
	Sampling rate	48KHz		
	Bit-rate	32Kbps~384Kbps		
<b>Stream Input</b>	2 ASI Input for remux			
<b>Stream output</b>	2×ASI output ports, BNC interface 1 IP (MPTS) over UDP / RTP /RTSP, 1000 Base-T Ethernet interface*2 with independent IP addresses (multicast/unicast)			
<b>System function</b>	LCD/keyboard and web management			
	Language: English			
	Ethernet software upgrade			
<b>General</b>	Dimensions	482mm×405mm×44.5mm (W × D × H)		
	Temperature	0~45℃ (Operation), -20~80℃ (Storage)		
	Power	AC110V±10%, 50/60Hz; AC 220V±10%,50/60Hz		
	Consumption	15W		

## Technical Comparison

	NDS3211B	NDS3211A	NDS3211HS
<b>Chipset</b>	Magnum	Magnum	Hisilicon
<b>Video Encoding</b>	MPEG-2 HD/SD; MPEG-4 AVC/H.264 HD/SD	MPEG-2 HD/SD; MPEG-4 AVC/H.264 HD/SD	HEVC/H.265 HD/SD MPEG-4 AVC/H.264 HD/SD
<b>Bit Rate</b>	0.20 – 60.00 Mbps	0.25Mbps~60.5Mbps	1Mbps~15Mbps
<b>HDMI Resolution</b>	HD	HD/SD	HD/SD
<b>Audio Encode</b>	MPEG-1 Layer II, HE-AAC (v1&v2), LC-AAC, DD AC3 (2.0), DD AC3 passthrough (for SDI in)	MPEG-1 Layer II, HE-AAC (v1&v2), LC-AAC; DD AC3 passthrough	MPEG-1 Layer II, HE-AAC (v1&v2), LC-AAC, DD AC3 passthrough (for SDI and HDMI)
<b>Audio Channel</b>	Up to 4 stereos	Up to 2 stereos	Up to 2 stereos
<b>Rate Control</b>	CBR	CBR/VBR	CBR/VBR
<b>Aspect Ratio</b>	16:9, 4:3, 14:9	16:9, 4:3, 1:1, 2.35:1	
<b>Chroma</b>	4:2:0, 4:2:2	4:2:0, 4:2:2	4:2:0
<b>One-seg</b>	N/A	Yes	N/A
<b>Video Buffer</b>	Yes	N/A	N/A
<b>ASI In &amp; Mux</b>	N/A	1 ASI input for remux	2 ASI input for remux
<b>IP out</b>	1SPTS over UDP/RTP	MPTS/8*SPTS over UDP/RTP,	1 MPTS over UDP / RTP /RTSP
<b>Low Delay</b>	150ms, 200ms, 350ms, 650ms	1400ms - 5000ms, 1ms stepping	N/A
<b>Closed Caption</b>	EIA 608 and EIA 708	EIA 608 and EIA 708	EIA 608
<b>OSD Function</b>	Yes	N/A	Yes
<b>Management</b>	Web-server	Web-server, SNMP	Web-server