



**NDS3211B**

**MPEG-2/H.264 HD Encoder**



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



### Outline

NDS3211B Mpeg-2/ H.264 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, BNC and XLR) to make it possible to compatible with different signal sources.

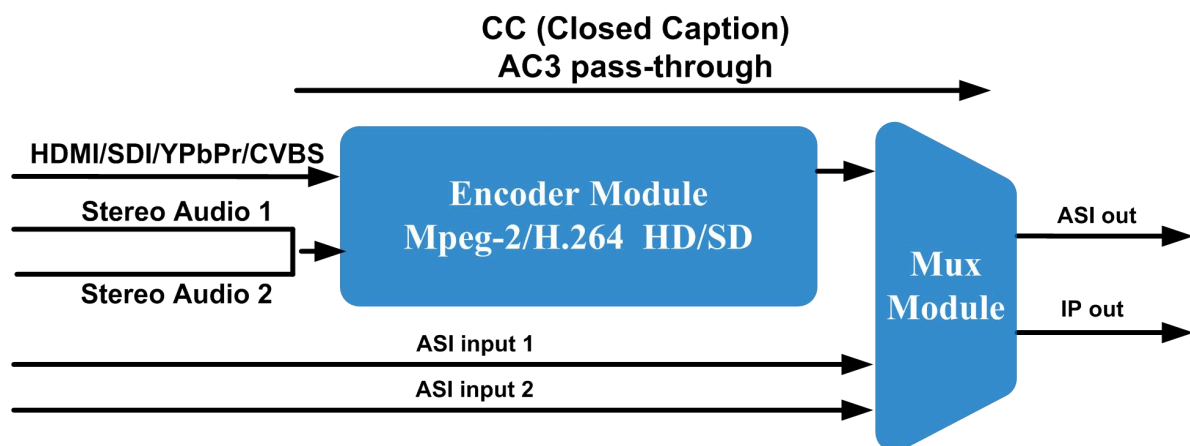
Multiple audio and video encoding formats are available to meet customers' various requirements. It supports 2 stereo to mix with the video to form a stream output. The encoded program will finally output in TS through ASI/IP port.

**NDS3211B 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 QR code, LOGO, OSD inserted(Language Supported: 中文, English, العربية, اردو , for more languages please consult us...)(Optional)**
- **MPEG-2 HD/SD and MPEG-4 AVC/H.264 HD/SD video encoding**
- **MPEG1 Layer II, HE-AAC (v1&v2), LC-AAC and DD AC3 audio encoding**
- **Support DD AC3 audio passthrough (for SDI in) (Optional)**
- **Support 2 stereo audio encoding**
- **Support ASI output and IP over UDP and RTP output**
- **Support 1080I,720P, 480I, 576I video resolution and downscale transform**
- **Support video buffer, free to switch video sources (all video interface available)**
- **Support CC (closed caption), EIA 608 and EIA 708 (for CVBS and SDI in)**
- **LCD / keyboard control and web management**
- **Support low latency**

## Inner Principle Chart



## Specifications

Video	Interface	1×HDMI, 1×HD-SDI, 1×YPbPr and 1×CVBS(only for CC)		
	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	1920×1080i @60	SDI, HDMI, YpbPr
		1920×1080i @50	1920×1080i @50	
		1280×720p@60/59.94	1280×720p@60	
		1280×720p@50	1280×720p@50	
		720×576i@50	720×576i @50	SDI, HDMI
	720×480i@60	720×480i @60		
Encoding	MPEG-4 AVC/H.264 HD/SD			
Bitrate Range	2.5 – 19.00 Mbps			
Rate Control	CBR/VBR			
GOP Structure	IP, IBBP, IBBBP			
Chroma	4:2:0			
Audio	Interface	2×XLR, 2×AES, 2×BNC, 1×SDI (support maximum 2 stereos synchronous processing), 1×HDMI,		
	Encoding	MPEG-1 Layer II, HE-AAC (v1&v2), LC-AAC, DD AC3 (2.0) <b>DD AC3 pass-through (for SDI and HDMI in)</b>		
	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 2 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	16W		

## Technical Comparison

	NDS3211B	NDS3211B (V2)	NDS3211HS
<b>Chipset</b>	Magnum	Vixs	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	2.5Mbps~19.0Mbps	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 pass-through (for SDI in)	MPEG-1 Layer II, HE-AAC (v1&v2), LC-AAC, DD AC3 (2.0), DD AC3 pass-through (for SDI and HDMI in)	MPEG-1 Layer II, HE-AAC (v1&v2), LC-AAC, DD AC3 pass-through (for SDI and HDMI in)
<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	
<b>Chroma</b>	4:2:0, 4:2:2	4:2:0	4:2:0
<b>Video Buffer</b>	Yes	Yes	N/A
<b>ASI In &amp; Mux</b>	N/A	2 ASI input for remux	2 ASI input for remux
<b>IP out</b>	1SPTS over UDP/RTP	1 MPTS over UDP / RTP /RTSP	1 MPTS over UDP / RTP /RTSP
<b>Low Delay</b>	150ms, 200ms, 350ms, 650ms	170ms, 220ms, 350ms, 670ms	N/A
<b>Closed Caption</b>	EIA 608 and EIA 708	EIA 608 and EIA 708	EIA 608