# NDS3211A

# MPEG-2 & H.264 HD Encoder

## Product Overview

NDS3211A MPEG-2/H.264 HD Encoder is the new broadcasting audio & video encoding and multiplexing device with powerful functionality. It is equipped with multiple video input interfaces (SDI, CVBS, YPbPr and HDMI) and audio input interfaces (AES, RCA and XLR). It supports both MPEG-2 and MPEG-4 AVC/H.264 video encoding and MPEG1 Layer II, HE-AAC and LC-AAC audio encoding. Multiplexing function is also embedded to select the input programs and output stream through ASI/IP port in the same time.

## Key Features

- **MPEG-2 HD/SD and MPEG-4 AVC/H.264 HD/SD video encoding**
- **Support 1080I,720P, 480I, 576I and PIP encoding video resolution**
- **MPEG1 Layer II, HE-AAC (v1&v2) and LC-AAC audio encoding**
- **Support 2 stereo or 4 Mono audio encoding**
- **Support AC3 pass through (for SDI in only)**
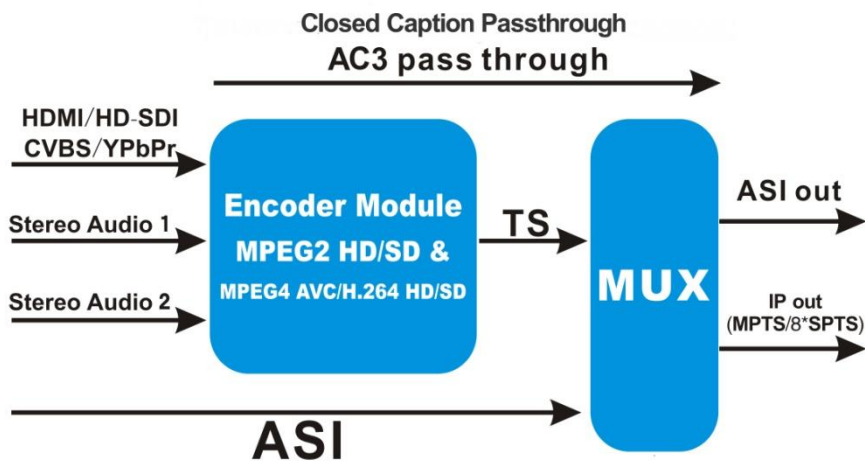- **Support digital video + analog audio input and encode**

- **Support CC (Closed Caption), EIA 608 and EIA 708 (for SDI&CVBS in)**

- **Applicable for one Seg/ISDB-T utilization (2 streams output simultaneously: 1 for one-seg and 1 for main stream)**

- **IP (MPTS/8*SPTS) Output; ASI Output**

- **GOP structure setting**

- **Support CBR control**

- **Support UDP/RTP media transmission protocols & multicast/unicast output**

- **LCD / keyboard control and web management**

## Inner Principle Chart



## Specifications

| Input | 1×SDI, 1×CVBS, 1×YPbPr and 1×HDMI input | |
|---|---|---|
| | 2×XLR, 2×RCA and 1×AES inputs | |
| | 1×ASI input, BNC interface | |

| Video | Resolution | **Input** | **Output** |
|---|---|---|---|
| | | 1080i@60 | 1920×1080i, 1440×1080i, 1280×1080i |
| | | 1080i @59.94 | |
| | | 1080i @50 | |
| | | 720p@59.94 | 1280×720p, 960×720p |
| | | 720p@50 | |
| | | 576i | 720×576i, 704×576i, 640×576i, 544×576i, 528×576i, 352×576i |
| | | 480i | 720×480i, 704×480i, 640×480i, 544×480i, 528×480i, 352×480i |
| | Encoding | MPEG-2 HD/SD; MPEG-4 AVC/H.264 HD/SD | |
| | Bit-rate | 0.25Mbps~60Mbps | |

| | | | |
|---|---|---|---|
| | Rate Control | CBR | |
| | GOP Structure | Auto, IP, IPB, IPBB, IPBBB, IPBBBB, IPBBBBB | |
| | Aspect Ratio | 4:3; 16:9; 1:1; 2.35:1 | |
| | Chroma | 4:2:0;  4:2:2 (Applied to all resolution under MPEG2 compression) | |
| | Pretreatment | De-interlacing, noise reduction, sharpening | |
| **Video (one-seg)** | Resolution | 96×96, 128×96, 128×128, 192×192, 352×240, 352×288, 416×240 | |
| | Encoding | Auto (follow the main stream format: MPEG-2; H.264) | |
| | Bit-rate | 0.1-1.0 Mbps | |
| | Aspect Ratio | Auto, 4:3; 16:9; 1:1; 2.35:1 | |
| **Audio** | Encoding | MPEG-1 Layer II, HE-AAC (v1&v2), LC-AAC; AC3 Passthrough (for SDI in only) | |
| | Sampling rate | 48KHz | |
| | Resolution | 24-bit | |
| | Bit-rate | 32~384Kbps | |
| **Multiplexing** | | 1 ASI input multiplexed with local 1 channels TS | |
| **Delay** | | SD ≥1400ms ; HD≥1500ms | |
| **Stream output** | | 2×ASI output ports, BNC interface | |
| | | MPTS/8*SPTS over UDP/RTP, 10/100 Base-T Ethernet interface (UDP/RTP multicast/unicast) | |
| **System function** | | LCD/keyboard and web management | |
| | | Language: English | |
| | | Ethernet software upgrade | |
| **General** | Dimensions | 482mm×405mm×44.5mm (W × D × H) | |
| | Approx weight | 4.5Kg | |
| | Temperature | 0~45℃(Operation), -20~80℃(Storage) | |
| | Power requirement | AC110V±10%, 50/60Hz ; AC 220V±10%,50/60Hz | |
| | Power consumption | 21W | |