# NDS3536S (V2)

# Encoder Modulator



# OSD (Logo/Caption/QR Code) Insertion
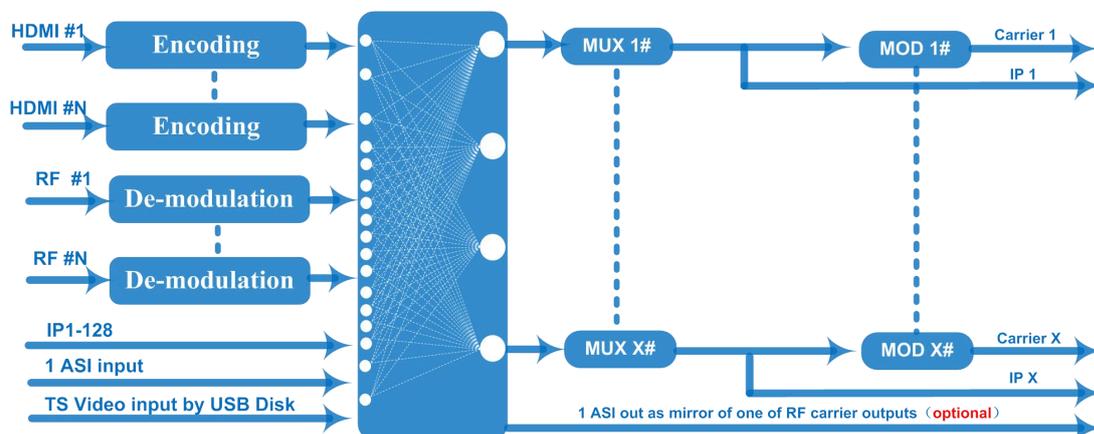


Welcome to ABC Hotel!

## Product Overview

NDS3536S (V2) is a professional and high integration device which includes encoding (and de-modulation), multiplexing, and modulation functions in one case. It supports 8/16/24 HDMI (or HDMI plus tuner mix input) inputs, 1 ASI input, 1 USB player input and 128 IP inputs via the GE port, and output by multiple DVB-C (or DVB-T/ATSC/ISDB-T optional) carrier channels. It also supports MPTS output as mirror of carriers through the GE port and 1 ASI out as mirror of one of the carriers. This full function device makes it ideal for a small CATV head end system, and it's a smart choice for hotel TV system, entertainment system in sports bar, hospital, apartment…

## Key features

- **8/16/24 HDMI (or HDMI plus DVB-S/S2/S2X/C/T/T2/ISDB-T tuner) inputs,**
- **HEVC/H.265, MPEG-4 AVC/H.264 Video encoding**
- **1 ASI input for re-mux**
- **1 USB Player (Insert the USB Flash drive with "xxx.ts" videos in NDS3536S and play back the content in an easy way; file system FAT 32)**
- **128 IP input over UDP and RTP via GE port**
- **Each carrier out channel process maximum 32 IP from the GE port(UDP&RTP protocol)**
- **MPEG1 Layer II, LC-AAC and HE-AAC Audio encoding, AC3 Pass Through and audio gain adjustment**
- **Support 32/36/40/44/48ch DVB-C RF out (8/16/20/24/28ch DVB-T RF out, 32/36/40/44/48ch ATSC RF out , or 8/16/20/24ch ISDB-T RF out for option, as per order)**
- **Support 1 ASI out as mirror of one of RF output carriers---Optional**
- **Support IP MPTS or SPTS output over UDP, RTP/RTSP**
- **Support LOGO, Caption and QR code insertion(Language Supported:**

    中文,**English,**العربية,**ไทย,**हिन्दी, русский,اردو, **for more languages please consult us…)**

- **Support PID remapping/ accurate PCR adjusting, /PSI/SI editing and inserting**
- **Control via web management, and easy updates via web**

## Principle Chart

## Technical Specifications

| | | | |
|---|---|---|---|
| **Input** | 8/16/24 HDMI inputs for option (or HDMI and different Tuner mix input, details pls check below order guide)<br>1 ASI in for re-mux<br>1 USB Player input for re-mux ("xxx.ts" video)<br>128 IP input over UDP and RTP, GE port, RJ45 | | |
| **Video<br>(HDMI Input)** | Resolution | Input | 1920×1080_60P, 1920×1080_60i, 1920×1080_50P, 1920×1080_50i, 1280×720_60P, 1280×720_50P, 720×576_50i, 720×480_60i, |
| | | Output | 1920×1080_30P, 1920×1080_25P, 1280×720_30P, 1280×720_25P, 720×576_25P, 720×480_30P, |
| | Encoding | HEVC/H.265, MPEG-4 AVC/H.264 | |
| | Bit-rate | 1Mbps~13Mbps each channel | |
| | Rate Control | CBR/VBR | |
| | GOP Structure | IP…P (P Frame adjustment, without B Frame ) | |
| **Audio<br>(HDMI Input)** | Encoding | MPEG-1 Layer 2, LC-AAC, HE-AAC and AC3 Pass through | |
| | Sampling rate | 48KHz | |
| | Resolution | 24-bit | |
| | Audio Gain | 0-255 Adjustable | |
| | MPEG-1 Layer 2 Bit-rate | 48/56/64/80/96/112/128/160/192/224/256/320/384 kbps | |
| | LC-AAC Bit-rate | 48/56/64/80/96/112/128/160/192/224/256/320/384 kbps | |
| | HE-AAC Bit-rate | 48/56/64/80/96/112/128 kbps | |
| **Tuner Section** | DVB-S | Input Frequency | 950-2150MHz |
| | | Symbol Rate | 0.5~45 Msps |
| | | Constellation | QPSK |
| | | FEC | 1/2, 2/3,3/4,5/6,7/8 |
| | DVB-S2 | Input Frequency | 950-2150MHz |
| | | Symbol Rate | QPSK/8PSK/16APSK:0.5~45 Msps<br>32APSK:0.5~40 Msps |
| | | Constellation | QPSK/8PSK/16APSK/32APSK |
| | | FEC | QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9,9/10<br>8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10<br>16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10<br>32APSK: 3/4, 4/5, 5/6, 8/9 |
| | | Max input bitrate per tuner | ≤170 Mbps |
| | DVB-S2X | Symbol Rate | QPSK/8PSK/16APSK: 0.5~45 Msps;<br>8APSK/32APSK: 0.5~40 Msps |
| | | Constellation | QPSK/8PSK/16APSK/8APSK/32APSK |
| | | FEC | QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, 13/45, 9/20, 11/20 |

| | | | | |
|---|---|---|---|---|
| | | | 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10, 23/36, 25/36, 13/18 | |
| | | | 8APSK: 5/9-L, 26/45-L | |
| | | | 16APSK: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10,1/2-L, 8/15-L, 5/9-L, 26/45, 3/5, 3/5-L, 28/45, 23/36, 2/3-L, 25/36, 13/18, 7/9, 77/90 | |
| | | | 32APSK: 3/4, 4/5, 5/6, 8/9, 2/3-L, 32/45, 11/15, 7/9 | |
| | | Max input bitrate per tuner | ≤170 Mbps | |
| | | Signal Strength | -65~-25dBm | |
| **Multiplexing** | | Maximum PID Remapping | 256 input per channel | |
| | | Function | PID remapping ( automatically or manually) | |
| | | | Accurate PCR adjusting | |
| | | | Generate PSI/ SI table automatically | |
| **Modulation** | | DVB-C | QAM Channel | 32/36/40/44/48 non-adjacent carriers output (maximum bandwidth 192MHz) | |
| | | | Standard | EN300 429/ITU-T J.83A/B | |
| | | | MER | ≥40db | |
| | | | RF frequency | 50~960MHz, 1KHz step | |
| | | | RF output level | -20~+3dbm, 0.1db step | |
| | | | Symbol Rate | 5.0Msps~7.0Msps, 1ksps stepping | |
| | | | | J.83A | J.83B |
| | | | Constellation | 16/32/64/128/256QAM | 64/256 QAM |
| | | | Bandwidth | 8M | 6M |
| | | DVB-T | Standard | EN300744 | |
| | | | FFT mode | 2K,4K, 8K | |
| | | | Bandwidth | 6M, 7M, 8M | |
| | | | Constellation | QPSK, 16QAM, 64QAM | |
| | | | Guard Interval | 1/4, 1/8, 1/16, 1/32 | |
| | | | FEC | 1/2, 2/3, 3/4, 5/6, 7/8 | |
| | | | MER | ≥42 dB | |
| | | | RF frequency | 50~960MHz, 1KHz step | |
| | | | RF out | 8/16/20/24/28 non-adjacent carriers output (maximum bandwidth 192MHz) | |
| | | | RF output level | -28~ -3dBm, 0.1db step | |
| | | ATSC | Standard | ATSC A/53 | |
| | | | Bandwidth | 6M | |
| | | | Constellation | 8VSB | |
| | | | FEC | RS(208 188)+Trellis | |
| | | | MER | ≥40dB | |
| | | | ACL | -55 dBc | |
| | | | RF frequency | 50~960MHz, 1KHz step | |

| | | RF out | 32/36/40/44/48 non-adjacent carriers output (maximum bandwidth 192MHz) |
|---|---|---|---|
| | | RF output level | -20~+3dbm(for all carriers), 0.5db stepping |
| | ISDB-T | Standard | ARIB STD-B31 |
| | | Bandwidth | 6M |
| | | Constellation | QPSK, 16QAM, 64QAM |
| | | Guard Interval | 1/32, 1/16, 1/8, 1/4 |
| | | Transmission Mode | 2K, 4K, 8K |
| | | Code rate | 1/2, 2/3, 3/4, 5/6, 7/8 |
| | | MER | ≥40dB |
| | | RF frequency | 50~960MHz, 1KHz step |
| | | RF out | 8/16/20/24 non-adjacent carriers output (maximum bandwidth 192MHz) |
| | | RF output level | -20dBm~+3dBm, 0.1dB stepping |
| Stream output | 1 ASI output as mirror of one of RF output carriers (Optional)<br>MPTS output over UDP and RTP/RTSP as mirror of modulation carriers<br>64 SPTS output (available for models of 48ch DVB-C, 28ch DVB-T, 48ch ATSC and 24ch ISDB-T) , 1*1000M Base-T Ethernet interface, GE port | | |
| System function | Management: web-based NMS, one NMS port manage all input modules, and LCD+Keyboard manage | | |
| | Chinese and English language | | |
| | Ethernet software upgrade | | |
| Miscellaneous | Dimension(W×L×H) | 482mm×328mm×44mm | |
| | Environment | 0~45℃(work)；-20~80℃（Storage） | |
| | Power requirements | AC 110V± 10%, 50/60Hz, AC 220 ± 10%, 50/60Hz | |

## Ordering Guide

Input Section:

| | HDMI | DVB-S2 /S2X | DVB-C/T/T2/ ISDB-T |
|---|---|---|---|
| Option 1 | 8 | / | / |
| Option 2 | 16 | / | / |
| Option 3 | 24 | / | / |
| Option 4 | 8 | 8 | / |
| Option 5 | 8 | 16 | / |
| Option 6 | 16 | 8 | / |
| Option 7 | 8 | / | 8 |
| Option 8 | 8 | / | 16 |
| Option 9 | 16 | / | 8 |
| Option 10 | 8 | 8 | 8 |
| Option 11 | 16 | 4 | 4 |

Output Section:

| RF output standard | | IP output | RF carrier channels |
|---|---|---|---|
| DVB-C out | V1 | 16x MPTS | 16 |
| | V2 | 32/36/40/44/48x MPTS | 32/36/40/44/48 |
| DVB-T out | V1 | 8x MPTS | 8 |
| | V2 | 8/16/20/24/28x MPTS | 8/16/20/24/28 |
| ATSC out | V1 | 16x MPTS | 16 |
| | V2 | 32/36/40/44/48x MPTS | 32/36/40/44/48 |
| ISDB-T out | | 8/16/20/24x MPTS | 8/16/20/24 |