

# EN2SDI-2HD

2-Channel MPEG-2/H.264 HD Encoding Module



## OVERVIEW

EN2SDI-2HD is a 2-channel MPEG-2 / H.264 HD encoding module that compresses programs from SDI or CVBS inputs into MPEG-2 / H.264 HD / SD streams with embedded Closed Caption and AC3 audio. It is designed to support high-density video compression in SMP platform (6 channels) and DMP platform (10 channels) in 1RU chassis.

With EN2SDI-2HD modules, pay-TV service providers can offer HD programs to commercial customers in a STB-free setting in a cost-effective way.

## KEY FEATURES

- MPEG-2/4 HD compatible
- Closed Caption (608/708) support
- AC-3 and AAC audio support
- Platform-based Modular Design

## ORDERING INFORMATION

Model	Description
WAV-DMP SMP-EN2SDI-2HD	2CH MPEG-2 & H.264 HD SDI/CVBS encoding module
WAV-SMP100-CHASSIS	Chassis (1RU, embedded MUX and IP/ASI, 3 x slots to accommodate EN2SDI-2HD and other modules)
WAV-DMP900-CHASSIS	Chassis (1RU, embedded MUX, 6 x slots, Dual PSU, hot-swappable)
WAV-DMP SMP-IP-ASI	IP & ASI 2-in-1 interface module (for DMP platform)



# SPECIFICATIONS

## 2-Channel MPEG-2/H.264 HD Encoding Module

### CHANNELS

Video: 2 channels of HD/SD programs encoding  
Audio: 2 pairs of audio (1 pair per service)

### INPUT

Video: 2 x BNC for HD/SD-SDI or CVBS  
Audio: 2 x pin strips for bal/unbal, CVBS  
Embedded audio for SDI

### VIDEO ENCODING

H.264/AVC Profile (4:2:0): SD: MP/HP@L3.0/3.1/3.2  
HD: MP/HP@L4.0/4.1/4.2  
MPEG-2 Profile (4:2:0): SD: MP@ML  
HD: MP@HL  
Resolution: 1920 x 1080@25p, 30p, 50i, 60i  
1280 x 720@50p, 60p  
720 x 576@50i  
720 x 480@60i  
Rescaling: HD to SD down conversion  
Video Bit-rate: MPEG-2 SD: 1Mbps ~ 8 Mbps  
MPEG-2 HD: 3Mbps ~ 20 Mbps  
H.264 SD: 800Kbps ~ 5 Mbps  
H.264 HD: 2 Mbps ~ 15 Mbps  
Encoding Latency: ≤500ms  
Rate Control: CBR & VBR  
GOP Control: Support  
Aspect Ratio: Automatic  
Manual: 4:3 or 16:9  
Aspect Processing: Letterbox/Cropped

### AUDIO ENCODING

Audio Codecs: MPEG-1 Layer II  
AC-3  
AAC (LC/HE)  
Audio Bit-rate: MPEG-1 LayerII: 64 - 384 kbps  
AC-3: 32 - 504 kbps  
AAC: 32 - 504 kbps  
Audio Mode: Stereo (2.0, including down-mix)  
Audio Sampling Rate: 48kHz  
Audio Volume Leveling: 0-8dB

### DATA PROCESSING

Ancillary Data: Closed Caption (CEA 608/708)  
Teletext/DVB-Subtitle

### PLATFORM

Multiplexing: Supported in SMP or DMP chassis  
PID Processing: Supported  
Total Maximum Capacity: SMP: 6 channels  
DMP: 10 channels  
TS Interfacing: SMP: 1xIP and 2xASI (in-chassis)  
DMP: 2xIP and 2xASI (with 'IPASI' module)