

- Single or Dual Channel HD/SD H.264 / MPEG-4 AVC Encoder
- 3G/HD/SD-SDI and Analog (Composite) inputs, IP and ASI outputs
- Embedded and Analog Audio inputs
- Closed Captions SD and HD support
- Direct HTTP streaming, HTTP Live Streaming (HLS)
- UDP/RTP Unicast and Multicast streaming, ASI streaming
- RTMP streaming (compatible with Adobe Flash players)



Made in the USA

Business Benefits

The NOVUS - H.264 (MPEG-4 AVC) Encoder is the market leading real time compression solution that delivers unrivalled HD and SD video quality. The solution provides operators with the most powerful, cost effective architecture in the industry for delivering broadcast and streaming video services.

Flexible Networking

The encoder supports a rich set of video networking protocols including UDP, RTP, RTMP, Direct HTTP, HTTP Live Streaming (HLS), permitting reliable video delivery over any IP network. Robust network transport is achieved using SMPTE 2022 forward error correction (FEC). Direct processing technology delivers precise IP network packet timing.

High Density

The encoder can support up to 2 Standard Definition or High Definition video services to be encoded and streamed simultaneously. Encoder can be used standalone, or combined in a 1RU rack mount tray (3 encoders per tray).

Control & Monitoring

The DashBoard™ Network Control and Monitoring software is used for remote control, monitoring and software updates

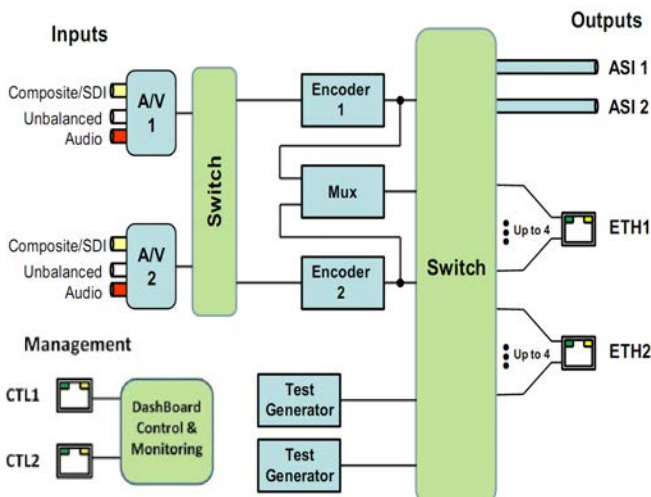
The NOVUS is a feature-rich high performance broadcast single-channel or dual-channel H.264 MPEG-4 AVC HD/SD video encoder that delivers up to 2 individual or simulcast HD/SD channels in a standalone desktop chassis. The dual model of NOVUS has built-in multiplexer and can output 2 individual or one multiplexed ASI and IP streams. If desired, up to 3 units can be installed in a 1RU rack mount tray, providing 6-channel H.264 HD/SD encoding.

The NOVUS has been designed to meet the demanding requirements of the IPTV, Telco, professional broadcast, enterprise video delivery, and streaming video markets. NOVUS encoder is equipped with the latest advances in video compression technology to deliver unsurpassed video quality at ultra low bitrates.

Simultaneous support of DVB-ASI, broadcast video over IP, RTMP and HTTP Live Streaming allows content to be freely distributed over virtually any video network.

Key Features

- Single or Dual-Channel model.
- Video Inputs: Analog (Composite), SD-SDI, HD-SDI, and 3G-SDI, software selectable. Input video auto-detection.
- Audio Inputs: unbalanced analog stereo L/R, SDI embedded digital stereo, balanced XLR (on request). Optional support for up to 4 stereo pairs.
- Outputs: 2 ASI ports and 2 Ethernet ports, supporting 100 Mb/s and 1 Gb/s operation.
- Replication: each encoded stream can be replicated on both ASI ports and 4 times on Ethernet port.
- Support for UDP/RTP on Ethernet, Unicast and Multicast.
- Support for RTMP streaming (compatible with Adobe Flash Players)
- Support for Direct HTTP streaming and HTTP Live Streaming (HLS).
- Support for SMPTE 2022 FEC on Ethernet (optional).
- Closed-Captioning support (both EIA-608 and EIA-708 captions).
- Audio Encoding support: MPEG-1 Layer II and AAC-LC (optional)
- Support for pre-compressed Dolby AC-3 pass-through embedded in SDI inputs.
- Built-in multiplexer for Dual-Channel model: each output can be configured to carry either encoder as a Single Program Transport Stream (SPTS), or both encoders as a Multi Program Transport Stream (MPTS).
- Two internal test packet generators (which can be used to generate ASI or IP test streams).
- Separate Ethernet ports for streaming and control.



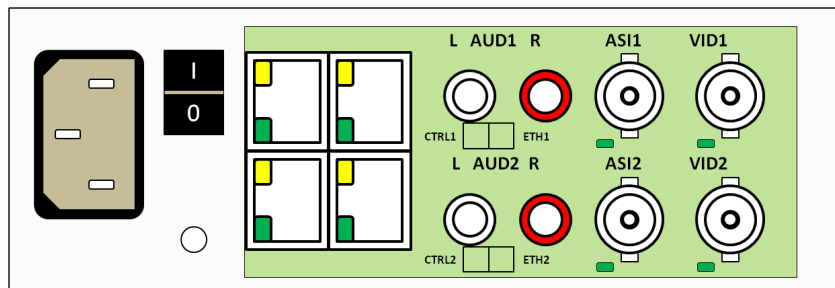
ORDERING INFORMATION

- NOVUS-1E - Single-Channel H.264 SD encoder
- NOVUS-2E - Dual-Channel H.264 SD encoder

Available options:

- OPT-1080i - support for 720p and 1080i encoding
- OPT-1080p - support for 720p, 1080i and 1080p encoding
- OPT-FEC - support for SMPTE 2022 FEC on Ethernet
- OPT-AAC - MPEG-4 AAC-LC audio encoding, one stereo pair per video
- OPT-2AUD - support for 2 audio stereo pairs per video
- OPT-3AUD - support for 3 audio stereo pairs per video (only for NOVUS-1E)
- OPT-4AUD - support for 4 audio stereo pairs per video (only for NOVUS-1E)
- OPT-RACK - 1RU rack mount tray (holds up to 3 NOVUS encoders)

Rear panel configuration: NOVUS-1E, NOVUS-2E



Rack mount 1RU Tray:



**Holds up to 3 NOVUS units
(up to 6 encoding channels)**

SPECIFICATIONS

Inputs

HD Video

3G-SDI (SMPTE 424M)
HD-SDI (SMPTE 292M)

SD Video

SD-SDI (SMPTE 259M) with EDH
Analog (Composite) video (PAL/NTSC)
SD-SDI 625 & 525 line standards

Connectors

BNC 75 Ohm, RCA (with BNC-to-RCA adapter)

Audio

Embedded SDI (one stereo pair per video)
Optional - up to 4 stereo pairs for NOVUS-1E
Optional - up to 2 stereo pairs per video for NOVUS-2E

Unbalanced Analog L/R, RCA

Balanced 600 Ohm XLR (on request)

Dolby Digital AC3 pass through

Streaming Network Interface

2x 100/1000Base-T RJ-45 ports, auto-negotiate or fixed speed

2x DVB-ASI ports

213Mbit/s maximum ASI TS bit-rate per port

Network Protocols

UDP/IP (Unicast and Multicast)

RTP/IP (Unicast and Multicast)

SMPTE-2022 FEC (Pro-MPEG Cop3), row and column support (optional)

RTMP (compatible with Adobe Flash players)

HTTP Live Streaming (HLS): populates an external web server through FTP or SFTP

Built-in HTTP web server for small scale direct HTTP Live Streaming (HLS)

Direct HTTP Streaming: encodes directly to an HTTP connection

Automatically generates web pages with a video window for all supported modes (VLC plug in required)

Video Encoding

Settable bit rate

500kbps to 30Mbps

Single/Dual Channel HD Video

MPEG-4 AVC High profile at level 4.2 (HP@L4.2)

MPEG-4 AVC High profile at level 4.0 (HP@L4.0)

CBR & VBR

Single/Dual channel SD Video

MPEG-4 AVC Main profile at level 3.0 (MP@L3.0)

CBR & VBR

Video Resolutions

High Definition

1080 x 1920p - 60/50/23.98

1080 x 1920/1440i - 25/29.97/30/59.94/60/50

720 x 1280p/960 - 25/29.97/30/50/59.94/60

960 x 540 - 25/29.97

Standard Definition

480 x 720/704/640/528 - 29.97

720 x 480p - 25/29.97/30

640 x 360p - 25/29.97/50/59.94

576 x 720/704/640/528 - 25

720 x 576p - 25

640 x 480p - 29.97

528 x 480p - 29.97

640 x 576p - 25

528 x 576p - 25

Lower Resolutions

480x270, 320x240, 320x180

Audio Encoding

MPEG-1 layer II, one stereo pair per video
Optional - up to 4 stereo pairs for NOVUS-1E
Optional - up to 2 stereo pairs per video for NOVUS-2E

MPEG-4 AAC-LC, one stereo pair per video - optional

Dolby® Digital AC-3 pass-through

Audio A/V sync adjustment, manual - up to 100 msec

Video Pre-processing

Advanced adaptive spatial filtering

Closed Captions CEA 608B & CEA-708C

WSS/AFD

Management and Control

2x 10/100/1000Base-T Ethernet (RJ-45)

Configuration import/export

Visual fault warning

In-band and out-of-band control

SNMP v1,v2

Accurate bit rate control

Startup to streaming under 45 Sec

Physical & Power

Dimensions:

(W x D x H) 163 x 400 x 44mm

Weight: 2.75 lbs (1.25 kg)

Desktop or 1RU rack mountable tray available - 3 modules per tray

Fanless design

Power Consumption

11 W maximum

Power Supply:

Built-in, self cooled, fanless

Input 100-250 VAC 47-63Hz

Environmental Conditions

Operating Temperature:

0°C to 50°C (32°F to 122°F)

Operating Humidity:

5% to 95% (non-condensing)

Compliance

CE: CE marked in accordance with 93/68/EEC (22/07/03) Directive

UL: UL approval

US FCC: Part 15

EMC: EN55022, EN55024, EN6100-3-2