

H.264 ENCODER

ECD-3000

SDI, HDMI & CVBS Inputs
ASI & IP Outputs

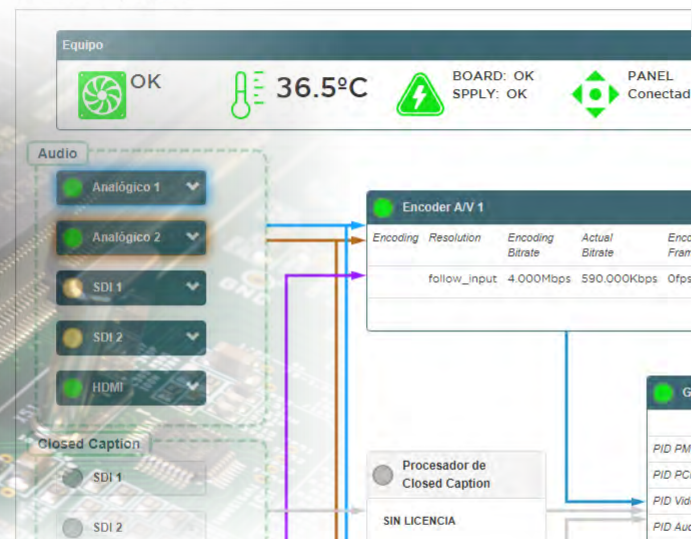
► **Simultaneous generation
of HD + One-Seg**

► **Optimized for ISDB-T
International**

Complies with all the requirements of MPEG-4/AVC
and ABNT NBR 15602 standards



Encoder HD/1SEG



MAIN FEATURES

- H.264/MPEG-4 AVC encoding both SD and HD
- Encoding of up to 4 stereo audio channels in MPEG-4 AAC
- Simultaneous HD + SD or HD + One-Seg encoding
- SDI (x2), HDMI, CVBS, Analog or embedded Audio Inputs
- Integrated Up/Down Converter
- Automatic input redundancy (Option)
- Duplicated IP and ASI outputs
- Independent Ethernet Video and Control interfaces with redundant option
- Dual hot-swap redundant power supply (Optional)
- Operation via simple and intuitive Web interface
- Non PC-Based, embedded FPGA/Microprocessor

VideoSwitch's ECD-3000 is a latest generation and high efficiency Encoder optimized to cover the needs of modern broadcast facilities. It has an exclusive hardware design that combines latest generation ARM + DSP devices and programmable FPGA, which gives an excellent image processing quality and provides extra processing capacity so as to incorporate additional functions.

It has dual SDI SD/HD/3G input in addition to HDMI, CVBS and analog audio inputs. Supports embedded audio both on HDMI and SDI.

This product is especially focused on the broadcast area and meets all the requirements of the ISDB-T International Digital Terrestrial Television standard. It allows to encode 1080i, 720p and 480i/576i signals in H.264, with the capability of Up/Down converting the input signal.

For audio you can select MPEG-4 AAC-LC ó HE-AAC v1/v2 encoding.

It has duplicate TS outputs, both by ASI and TSolP (it supports 2 UDP/IP destinations per interface), being able to direct the generated signal to a maximum of 6 different destinations: 2 by ASI and 4 by IP.

It has a simple and intuitive Web interface, entirely in Spanish with clear information of the status and configurations of the equipment. It also has dual control network interface (optional) with automatic BackUp mode.

The cabinet (1RU) has a redundant switching Hot-Swap power supply (optional) with dual independent power connectors.

This system is part of the product offer of VideoSwitch transmission in the ISDB-T International standard, such as the 'EPG Server' and the 'DMUX-3100/510' multiplexers.



ECD-3000

HD/SD H.264 ENCODER

INPUTS	<ul style="list-style-type: none"> 2 x SDI SD/HD/3G (2x BNC) 1 x HDMI 1 x CVBS (1x BNC) 2 x Stereo analog audio (2x terminal block)
OUTPUTS	<ul style="list-style-type: none"> 2 x DVB-ASI (2 x BNC) Standard: 1 x Gigabit Ethernet for TSolP (up to 2 UDP/IP Unicast/Multicast destinations) (1 x RJ-45) Optional: 2 x Gigabit Ethernet for TSolP (up to 4 UDP/IP Unicast/Multicast destinations) (2 x RJ-45)
CONTROL	<ul style="list-style-type: none"> Standard: 1 x 10/100 Ethernet for Web GUI (1 x RJ-45) Optional: 2 x 10/100 Ethernet for Web GUI (2 x RJ-45) Basic configuration, status and alarms by front panel
VIDEO FEATURES	<ul style="list-style-type: none"> HD + SD, HD + One-Seg or SD + One-Seg simultaneous coding from a single source signal Video encoding in Broadcast quality according to MPEG-4/AVC H.264 standard Supports MPEG-4 Baseline @ L1.3 (ISDB-Tb One-Seg), Main and High @ L4 (ISDB-Tb Full-Seg) profiles Supports I, P, B frames with configurable GOP length Supports Up / Down conversion between input and output Configurable bitrate: 160kbps up to 14Mbps Output resolutions: 1920x1080, 1280x1024, 1280 x 720, 720x576, 720x480, 704x576, 640x480, 640x360, 352x576, 352x288, 352x240, 320x240, 320x180, 160x120, 160x90 Input resolutions: 1920x1080p/i, 1280x720p, 720x576p/i, 720x480p/i Frame rates: 5, 10, 12, 15, 24, 25, 30, 50, 60 fps Supports frame rate down conversion between input and output, e.g. 50fps to 30fps Supports deinterlacing i-> p and interlacing p-> i between input and output
AUDIO FEATURES	<ul style="list-style-type: none"> Coding: MPEG-4 AAC-LC, MPEG-4 HE-AAC v1/v2, over ADTS or LATM / LOAS Encoding of up to 4 simultaneous stereo channels, selectable independently of available audio sources Audio Sources: SDI (Isochronous L-PCM audio on any of its channels), HDMI (1 stereo channel), 2 analog stereo audio (with adjustable volume) Language signaling in the audio descriptor (user-enabled), selectable between: Spanish, English, Portuguese and French Resolution: 16 bit Sampling rate: 48KHz Configurable bitrate for each stereo channel: 16kbps up to 448kbps
GENERAL	<ul style="list-style-type: none"> 1U 19" x 250mm (depth) Voltage: 90 ~ 264 VAC Power Consumption: Max. 29W Power Supply: <ul style="list-style-type: none"> Standard: Simple removable Optional: Dual Redundant Hot-Swap