



# MPEG-4 HD ENCODER DUO

## Digital TV



The **MPEG-4 HD ENCODER DUO** is the latest-generation, compact, versatile Digital HD Video Platform offered by Neetra for the new demanding applications of Digital TV, joining the unsurpassed video performance of the full HD resolution with the excellent compression capability of the MPEG-4 encoding engine.

In a single 1RU case, the **MPEG-4 HD ENCODER DUO** combines two Full-HD H.264 AVC High Profile encoders, a TS remultiplexer, two logo inserters, a multi-standard SI tables generation, two colour bar generators and a powerful high-speed multimedia processor for monitoring and user's interface. The product is based upon a powerful encoding chipset capable of real-time encoding of two Full-HD sources with a supreme detail definition obtained with a user-definable output bit-rate.

An ASI input allows the reception of externally generated TV and/or Radio Services and a complete PID filtering and SI Tables management engine allows a detailed analysis of the incoming stream and a totally flexible management of the remultiplexing with the locally encoded services.

The remultiplexing kernel of the **MPEG-4 HD ENCODER DUO** allows the generation of DVB or ATSC tables (user configurable) and the management of the Logical Channel Number (LCN) descriptor, fundamental for many Countries adopting this standard sorting technique.

The powerful on-board processor allows direct cascading of more encoder units, complete firmware upgrade by simple serial connection, static and animated logos generation and

extremely accurate PCR restamping for perfect timing reconstruction. Neetra equipment is severely tested with highly accurate and professional laboratory testing instrumentation and is guaranteed by the ISO-9001 Quality Certification which ensures a perfectly managed production phase. Neetra equipment for Digital TV broadcasting is currently used by valuable worldwide customers, which is the best certification for in-field performance over different operating environments.

### Main characteristics

- 2 Full-HD Encoders in 1RU Case / Embedded Remultiplexer
- DVB and ATSC SI Tables Generator / Unique Price/Performance Ratio
- Static and Animated Logo Insertion
- 2 SD/HD-SDI Inputs with Embedded Audio
- 1 ASI Input for Cascading or Remultiplexing / 2 ASI Outputs
- 1 SD CVBS Video Input / 1 Analogue Stereo Audio Input
- 1 Analogue Video Output for local monitoring
- Up to 1920x1080i Video Resolution / Up to 20Mbit/s Encoder Bit-rate
- Complete Remote Control / Lifetime upgradable through flexible UI
- Total Reliability with Top Performance

### Applications

- HDTV for any Digital TV Platform / Video-on-Demand
- Video-over-IP (with external network adapter)
- Cable TV Headband
- Direct Broadcast Satellite
- DVB-S/C/T Encoding for Local Insertion
- HD Digital News Gathering
- HD Remote Education

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## Technical characteristics

### INPUT SECTION

HD Video Inputs	2 Multi-rate SD/HS SDI with embedded audio
SD Video Input	1 CVBS SD PAL/NTSC/SECAM
Analogue Audio Input	1 Stereo Audio
TS Input	1 ASI Input (bit-rate up to 216Mbit/s)

### SIGNAL PROCESSING SECTION

Video Encoding Format	Compliant with ISO/IEC 14496-10 (H.264 AVC)
Video Resolution	High Profile Level 4.0
Video Bit-rate	720x576_50i, 720x480_59.94i, 1920x1080_50i, 1920x1080_59.94i, 1920x1080_60i, 1920x1080_24p, 1920x1080_23.98p, 1440x1080_50i, 1440x1080_59.94i, 1440x1080_60i, 1280x720_50p, 1280x720_59.94p, 1280x720_60p
Audio Encoding Format	Up to 20Mbit/s
Audio Modes	Compliant with ISO/IEC 11172-3 layer 1 and 2
Audio Bit-rate	Stereo, Joint Stereo, Dual Channel, Single Channel
Output Bit-rate	Up to 448kbit/s
Logical Channel Number (LCN)	User selectable
SI Tables	User configurable
Remultiplexing	DVB and ATSC standards (user selectable) Complete PID Filtering/Remapping and Tables Insertion Identification and Removal of unwanted input services
TS Monitoring	Real-time measurement of input and output TS rate
Colour Bar Generators	2 generators (automated backup in case of input video absence)

### OUTPUT SECTION

TS Output	2 ASI Outputs (BNC 75 Ohm)
TS System Interface	Compliant to ISO/IEC 13818-1
Monitoring	1 Video Analogue Output (Standard Definition)

### GENERAL

Physical	Case 19"-1U, 4kg
Local Control Port	USB
Remote Control Port	Rs485
Remote Control Options	PSTN-GSM-Ethernet (with external RCU equipment)
Additional Control Option	Web Server + SNMP (with optional board)
User Interface on Front Panel	LCD Display + Keyboard + Status LEDs
Power Supply Voltage	90 - 250VAC
Power Consumption	< 15W
Operating Temperature	0 - 45°C

Specifications and characteristics are subject to change without notice