ENC-300-DVI

TERACUE
an eyevis group company

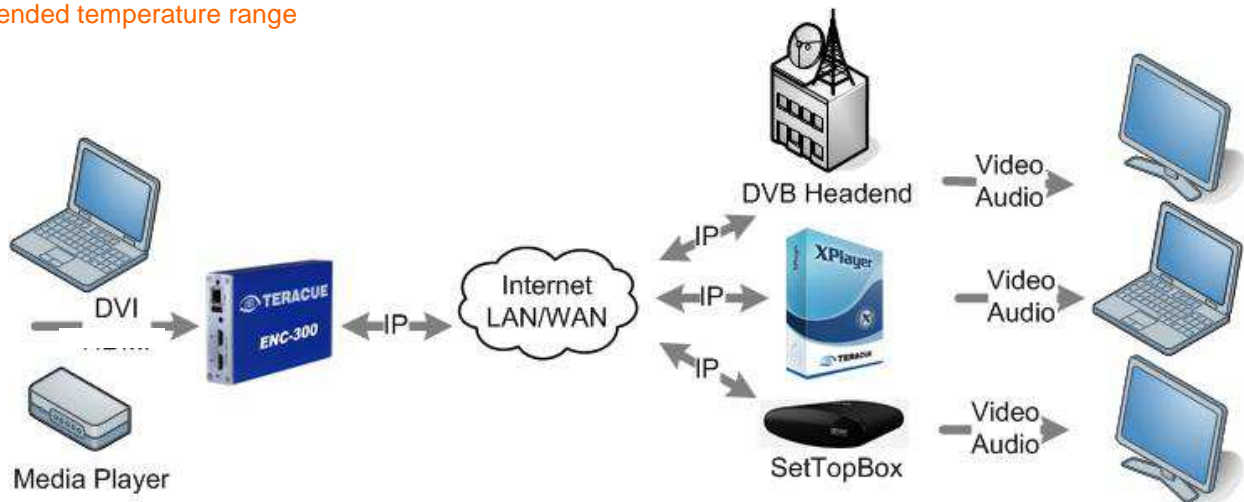## H.264 MPEG-4 AVC HD/SD ENCODER BLADE AND PORTABLE DEVICE

The ENC-300 encoder is designed for IPTV and live streaming. It is ideal where single computer based DVI signals are distributed or published on a network or the internet. The ENC-300-DVI mainly targets medical, military, control room and training applications where high resolution DVI signals from medical instruments and cameras, radar devices, digital signage player, or any kind of PC desktop views - need to be shared, published and distributed and recorded.

Unique features and benefits:

- Robust hardware solution for 24/7 operation
- Real-time encoding of DVI signals
- Embedded audio or analog audio
- Forward error correction Pro-MPEG FEC
- KLV metadata insertion (STANAG 4609)
- Supports DVI loop through
- DVI resolutions up to 1920x1200 60Hz
- Logo inserter
- Audio talkback conferencing
- Adjustable frame rate (e.g. 5 fps)
- Downscaling to 720p, SD and CIF supported
- Low-latency compression technology
- UDP & TCP (error correction) streaming
- RTMP & RTP/RTSP streaming
- Low power consumption
- Extended temperature range

Applications:

- Digital signage streaming
- Medical & campus TV
- Telemedicine
- Security monitoring
- Video monitoring
- Military IP transmission
- Training & research
- Broadcast & CDN IP contribution
- Wireless & mobile streaming
- IPTV/OTT streaming
- Control rooms & command centres
- Stadium & event TV

Professional quality & easy configuration

ENC-300-DVI encoders incorporate low latency signal compression, creating full resolution video streams in HD/SD and DVI resolution. To access the intuitive graphical user interface use your standard web browser from any PC on the network, no special or additional tools are required. Remote network configuration is also supported over SNMP, by Telnet and by control over the local COM port.

Portable and blade based operation

Multiple ENC-300 blades are operated inside the FR frame series. The encoder is also available as the compact PORTABLE device. High-density requirements are solved by operating the ENC blades in the FR-2000-24 (4 RU rack mount) or FR-610 (1 RU rack mount) multi-channel racks. Different types of DEC decoder blades, ENC encoder blades and DVB/IP videogateways can be "mixed and matched" inside the FR-frame series.
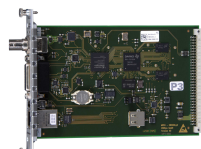
PORTABLE   **1 RU Rack mount FR-610**   **ENC/DEC-200/300**   **4 RU Rack mount FR-2000-24**

ENCODING SPECIFICATION:

DVI inputs:	RGB 4:4:4, YC_bC_r 4:4:4, YC_bC_r 4:2:2; 1x loop through (without HDCP)

Video encoding:	H.264 (MPEG-4 AVC Part 10; ISO/IEC 14496-10). Profiles: Baseline, Main, High
Video encoding bitrates:	250Kb/s – 14Mb/s, CBR/VBR, low latency support

DVI resolutions:	1920x1200 (with 2:1 frame converter), 1600x1200 (with 2:1 frame converter), 1280x1024, 1024x768, 800x600
Video resolutions:	1920x1080p 30/29.97/25Hz, 1920x1080p 60/59.94/50Hz (with 2:1 frame converter),1920x1080i 60/59.94/50Hz, 1280x720p 60/59.94/50/30/29.97/25Hz, 720x480/576i 60/59.94/50Hz

Audio inputs:	1x Stereo, unbalanced, AC-coupled, mini-jack 3.5
	Audio nominal level: -10 dBV (0,316Vrms), maximum level: 2 V_{P-P}
	Microphone nominal level: -60 dBV (1mVrms), gain control for microphone
Audio encoding:	MPEG-4 AAC LC (ISO/IEC 14496-3), 48 kHz, 16Bit sample rate, 16-576 kbit data rate
Audio outputs (TALKBACK):	1x Stereo, unbalanced, AC-coupled, via mini-jack on –PORTABLE, via multipoint socket connector on FR-610 frame
	Output gain adjustment from (off) -78 dB to +9 dB
	TALKBACK: 16 bit stereo, PCM, sample Rate 48kHz, 20,05kHz

Multiplex format:	ISO/IEC 13818-1 Transport
	ISO/IEC 14496-10 NAL (Network Abstraction Layer)
	Stream types: Transport stream and elementary audio/video stream
Scaling:	Downscaling from 720p and 1080i to 720, D1 or CIF, adjustable frame rate divider
Additional features:	Logo inserter for SD and HD. Presets can be saved, downloaded and uploaded

I/O SPECIFICATION:

Network:	10/100TX Ethernet, RJ45, half/full duplex, auto-sensing or manual control
Streaming traffic:	Unicast and multicast traffic supported, up to max. 5 output streams/destinations
	RTMP push and pull mode and RTP/RTSP up to 5 clients*
IP protocols:	HTTP, TCP/IP control protocol, UDP/RTP/TCP streaming, IGMP, SAP, unicast/multicast, SNMPv2, DHCP
Error correction:	Pro-MPEG FEC* (forward error correction) and TCP
KLV metadata:	NATO standard STANAG 4609, MISB standard 0603.1, 0604.2, 0605.3, SMPTE 12M-2*
RS-232	RS-232 connection via console (remote control for non IP devices via TCP/IP serial command tunnelling) (only available in FR-610)
GPIO:	1x In, isolated, 1x Out, isolated (FR-610)

MANAGEMENT:	Web browser, SNMP, Telnet and RS-232, software updates via web browser
	Fault measurement with log generation, authorization via user password, RTC (Real Time Clock) support

ENVIRONMENTAL:

Agency approvals:	CE, RoHS, EN 55103-1, EN 55103-2, EN 55022
Humidity:	Up to 90%, non-condensing
Temperature:	-35 to +50°C and +60°C up to 5 hours environment temperature
Blade weight:	Approx. 160 grams
Blade dimensions (H/W/D):	20mm x 130mm x 190mm, Europe Card (160mm x 100mm, 3HE), conform to IEC60297-3/-4
PORTABLE weight:	Approx. 690 grams
PORTABLE dimensions:	(H/W/D) 28mm x 105mm x 192mm
Power:	5Vdc ± 5% / 8W per blade
Limited Warranty:	1 year standard limited warranty. Warranty extensions for up to 5 years available

ORDER INFORMATION:

ENC-300-DVI	MPEG-4 AVC H.264 DVI encoder blade with DVI input (with embedded audio)
ENC-300-DVI-PORTABLE	MPEG-4 AVC H.264 DVI portable encoder device with DVI input (with embedded audio)
300-UPG-FEC	Upgrade option for ENC-/DEC-300-Series for forward error correction
300-UPG-KLV	Upgrade option for ENC-/DEC-300-Series for KLV metadata insertion
300-UPG-RTMP	Upgrade option for ENC-300-Series RTMP Flash streaming and RTP/RTSP
FR-610	1RU Rack mount chassis for max. 6 blades
FR-610-DPS	1RU Rack mount chassis for max. 6 blades with redundant power supply
FR-2000-24	4RU Rack mount chassis for up to 21 blades (depends on blade combination) with redundant power supply

COMPLEMENTARY PRODUCTS:

DEC-300-HDSDI	H.264 HD & MPEG-2 HD decoder blade with HD-SDI-, embedded audio, analog video/audio output.
XPLAYER	PC Live stream playback software. Licence packages are available
Aminet-140	Multi-format and multi-resolution SetTopBox for MPEG-2 SD/HD & H.264 SD/HD, Composite, S-Video or Component video and analog audio output
MC-ROUTE-1RU	1RU appliance for live UDP, TCP, FEC, RTSP and HLS streaming and unicast/multicast bridging

* available as software option

***PLEASE NOTE: Live Streaming/Multicast Streaming requires specially designed and configured networks. Minimum Requirements include: Layer-3 Switched Ethernet, Multicast Enabled, IGMPv2/3, Network and Multicast Routing Supported.