

# SL NEO 9000



## MPEG2/H.264/HEVC DVB ASI/IP TS Broadcast Encoders & Decoders



### Multi-function Encoders and Decoders

Multi-function DVB Encoders/Decoders that operate in SD/HD/UHD modes and provide high-quality operations. Encoders support the processing of incoming analogue, digital (SDI) signals and MPEG Transport Stream over DVB-ASI/IP, support ASI or IP (UDP/RTP/RTSP/RTMP) Transport Stream outputs, depending on the SL NEO processor's configuration.

The embedded Web-Based Interface provide access to the system administrative functions associated with configuring and customizing the system.

The SL NEO 9000 series based on high-performance PC server platforms with professional input/output boards (DekTec DTA, Matrox DSX, BlackMagic DeckLink).

Processing power of modern computer systems together with high performance SL NEO Software allows to combine in one system up to 12x independent H.264 coders for SD video or up to 5x H.264 encoders for HD or 1 for HEVC UHD.

In MPEG-2 mode the SL NEO 9000 support up to 16x independent SD channels or up to 8x HD channels. Using of a single unit for multi-channel encoding allows to substantially reduce cost per channel. The SL NEO Software allows to add many useful features to a encoding device:

### UP/DOWN/CROSS Conversion

The SL NEO 9000 provide HD/SD UP/DOWN/CROSS conversion with interlace and frame rate recalculation. For each input channel there may be multiple output profiles with different resolution, frame rate and compression settings.

### Transport Stream Re-Encoding

The SL NEO 9000 encoders allow to demux input MPTS, decompress the selected programs to uncompressed streams and re-compress them using different codecs and compression settings. UP/DOWN/CROSS conversion together with frame-rate transformation can be applied to the re-encoded signals as well.

### WEB-Streaming

Besides the SL NEO Software, the SL NEO 9000 may have other software installed such as Wowza Media Server or Adobe Flash Media Live Encoder. Integration with third party media encoding and streaming solution allows to broadcast to any kind of internet-enabled devices.

### Built-in MultiViewer

Built-in MultiViewer support two modes of signal monitoring: the encoder may be equipped with additional HD-SDI or HDMI outputs which can be used for "multi-image" side-by-side monitoring of all server inputs on a HD-SDI monitor or flat panel with HDMI inputs. This technology can be used as an alternative to a set of control monitors when working with the server and allows to reduce costs on the server environment: signal distribution and conversion, monitors and so on. MultiViewer output supports up to 16 of input channels. The output resolution is user defined and can be both SD and HD.

The MultiScreen Client software from the SL NEO Client Software bundle allows a number of users to simultaneously monitor over network all the signal at the inputs and outputs of the encoder. The signals are displayed in small preview windows that are updated once per second taking virtually zero network traffic. When the user is interested in a particular channel he may select this channel for view in preview quality.

### Technical Specifications

- Video Formats (depends on model): SD: 625i, or 525i, HD: 1080i, 25 or 29.97 fps, 720p, 50 or 59.94 fps, UHD: 2160p, 25, 29.97, 50 or 59.94 fps;
- MPEG2/MPEG4 Part 10 (H.264 AVC) (HD). Profile and level: MP@ML, MP@HL, 422P@ML, 422P@HL;
- HEVC Encoder up to 4K/Ultra HD: 25, 29.97, 50, 59.94fps;
- HEVC Main / Main10 Profiles @ Level 5.1, 4:2:0 chroma sampling;
- Bit rates from 2Mbps up to 40Mbps, CBR, VBR modes;
- Inputs (depends on model): 1 Channel 4x 3G SDI or 6/12 G SDI, 1...12 Channels SD/HD SDI/CVBS/YUV, Analog/AES/SDI Embedded Audio;
- Outputs: TS over DVB ASI/IP, UDP/RTP Unicast/Multicast, FEC (option),
- Audio: 4 AES/EBU pairs per video I/O channel, 8 pairs embedded per video I/O channel 16-, 20- or 24-bit PCM, 48 kHz;
- AAC, MPEG-1 Layer 2 audio, AC3 audio encoding;
- VBI/VANC Support, Closed Caption compliant to CEA-608/708, DVB subtitles and Teletext support;
- Main and back-up Gb Ethernet IP outputs;
- Frame mode: Progressive (SD/HD/UHD), Interlaced (SD/HD);
- UDP/RTP Unicast and Multicast IP streaming;
- RTMP streaming (use SL NEO DirectShow Virtual Device for Adobe FMLE);
- Separate IP ports for streaming and control.
- Timecode/NTP Support: NTP client over Ethernet, LTC in (option);
- Dimensions (depends on model): 1...4RU, Weight (5...40 kg);
- Power Supply: Dual hot-swappable.

### Base Software Modules

