

SL NEO 4000

Time Shift & Program Delay Servers



Multi-Channel Time Shift, Profanity Delay, Transport Stream Delay

Time Shift

Series 4000 offers you multi-functional solutions for Time Delay from one second to several days for re-transmission after a specified time period.

Time-zone differences can easily be compensated for at transmission or reception; and short delays of only a few seconds allow profanity screening in live broadcasts.

Delay time is quickly set with single frame precision through a Graphic User Interface or external Control Panel. Server line SL NEO 4000 contains a wide spectrum of models with various numbers of input/output pair channels, Analog, SD-HD SDI signal types, and MPEG2 transport streams, depending on the model.

SL NEO 4000 series servers can be controlled locally or remotely via LAN/WAN from PC-based work stations. The embedded Web-Based Interface provides access to the system administrative functions associated with configuring and customizing the system.

Profanity Delay

Profanity delay refers to the practice of intentionally delaying broadcast of live material. A short delay is often used to prevent profanity, bloopers or other undesirable material from making it to air, including more mundane problems such as technical malfunctions or coughing. In this instance, it is often referred to as a seven-second delay or profanity delay.

With the simple push of a button, content censors have the ability to eliminate unseemly video and offensive sounds before that unwanted content reaches the airwaves and enrages your viewing or listening audience. SL NEO 4000 provides a variety of features to seamlessly eliminate the possibility of costly content violations.

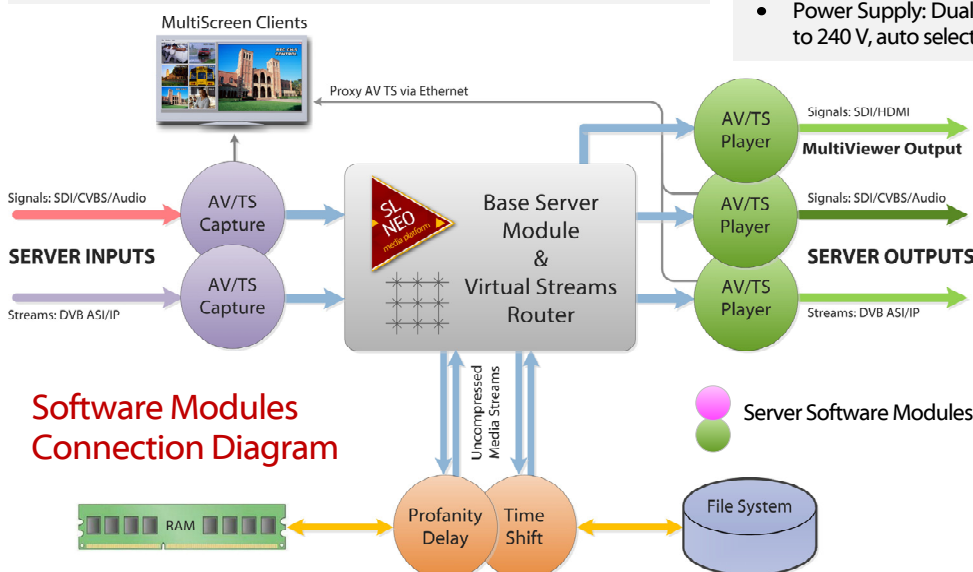
Key Features and Benefits

The following major functions are implemented in SL NEO 4000 series; they may change depending on the server's specific hardware/software configuration:

- Broadcast quality across 24/7 operation;
- Programmable playback time shift in seconds / minutes / hours / days;
- Multiple time zones;
- Modify Playback Channel Delay On-the-Fly;
- Transport Stream Delay with Re-compression or without it;
- Dynamic Logo insertion (in re-compression mode);
- Streaming Proxies show what Line is recording and playing out;
- Protection of content on a redundant array of inexpensive disks (RAID).

Technical Specifications

- Video Formats (depends on model): SD: 625i, 25 f/s, or 525i, 29.97 f/s, HD: 1080i, 25 or 29.97 f/s, 720p, 50 or 59.94 f/s;
- Inputs/Outputs (depends on model): SD/HD SDI/CVBS/YUV, Analog/AES/SDI Embedded Audio, MPTS/SPTS 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;
- SD/HD File Encoding/Decoding: AVID DNxHD (120, 145, 185, 220 Mbit/s), Panasonic (DVCPRO25, DVCPRO50, DVCPROHD), Sony XDCAM IMX (30, 40, 50), XDCAM HD 422, HDV, AVCHD, DV25, MPEG-2 IBP GOP, H.264;
- File Containers: AVI, MOV, MP4, MXF D-10/OP1A, RAW DV/DIF, MPEG PS/TS, MPG;
- Genlock Reference (depends on model): SD: Bi-level sync input, HD: Tri-level sync input;
- Timecode/NTP Support: NTP client over Ethernet, LTC in (option);
- GPI I/O: Inputs 4...16 (option), Outputs 4...16 (option);
- Dimensions (depends on model): 1...3RU, Weight (5...35 kg);
- Power Supply: Dual hot-swappable; Voltage: AC 115 to 120 V, 200 to 240 V, auto select.



Additional HD-SDI/HDMI MultiViewer Output

The SL NEO server may be equipped with additional HD-SDI or HDMI outputs which can be used for 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 reducing costs on the server environment: signal distribution and conversion, monitors etc.

The MultiViewer output support HD and SD output in both 16:9 and 4:3 formats and is capable of simultaneous display of inputs of different formats and standards.

SL NEO 4000 Models

Ordering Information



What's included: fully configured and ready for work server platform with pre-installed video IO boards, pre-installed SL NEO Server and Client software bundle, software codecs, 1 client software license for an additional client workstation.

1-year standard warranty, 1-year telephone/e-mail technical support.

4100/4300 Models. Media-Servers for Time-Shifted broadcasting.

Organization of multi-timezone broadcasting, Time delays from 3 minutes to a few days in SD/HD or SD-only formats. Transport Streams can be Time-Shifted with or without recompression.

HD/SD models with SDI (optional additional IP/ASI) inputs-outputs

Base Model	Inputs	Outputs	Video IO Platform	Signal Types
Matrox DSX LE3 based models				
SL NEO 4311 M4	1	1	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4312 M4	1	2	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4313 M4	1	3	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4314 M4	1	4	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4315 M4	1	5	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4316 M4	1	6	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4322 M4	2	2	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4324 M4	2	4	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4326 M4	2	6	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4333 M4	3	3	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4344 M4	4	4	Matrox DSX LE3	HD/SD SDI+AE/AES

HD/SD models with MPEG-2/H.264 ASI TS or SD SDI inputs-outputs

Dektec DTA based models

SL NEO 4311 D4	1	1	Dektec DTA	ASI SPTS/SD SDI
SL NEO 4312 D4	1	2	Dektec DTA	ASI SPTS/SD SDI
SL NEO 4313 D4	1	3	Dektec DTA	ASI SPTS/SD SDI
SL NEO 4314 D4	1	4	Dektec DTA	ASI SPTS/SD SDI
SL NEO 4315 D4	1	5	Dektec DTA	ASI SPTS/SD SDI
SL NEO 4316 D4	1	6	Dektec DTA	ASI SPTS/SD SDI
SL NEO 4322 D4	2	2	Dektec DTA	ASI SPTS/SD SDI
SL NEO 4333 D4	3	3	Dektec DTA	ASI SPTS/SD SDI
SL NEO 4344 D4	4	4	Dektec DTA	ASI SPTS/SD SDI

HD/SD models with MPEG-2/H.264 IP UDP/RTP TS inputs-outputs

SL NEO 4311 E4	1	1	Onboard Ethernet	IP SPTS
SL NEO 4312 E4	1	2	Onboard Ethernet	IP SPTS
SL NEO 4313 E4	1	3	Onboard Ethernet	IP SPTS
SL NEO 4314 E4	1	4	Onboard Ethernet	IP SPTS
SL NEO 4315 E4	1	5	Onboard Ethernet	IP SPTS
SL NEO 4316 E4	1	6	Onboard Ethernet	IP SPTS
SL NEO 4322 E4	2	2	Onboard Ethernet	IP SPTS
SL NEO 4333 E4	3	3	Onboard Ethernet	IP SPTS
SL NEO 4344 E4	4	4	Onboard Ethernet	IP SPTS

SD-only models with SDI (optional additional IP/ASI) inputs-outputs

Base Model	Inputs	Outputs	Video IO Platform	Signal Types
Matrox DSX.SD and DSX.LE3 based models				
SL NEO 4111 M4	1	1	Matrox DSX.SD	CVBS/YUV/SDI+AE/AA
SL NEO 4112 M4	1	2	Matrox DSX.SD	CVBS/YUV/SDI+AE/AA
SL NEO 4113 M4	1	3	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4114 M4	1	4	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4115 M4	1	5	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4116 M4	1	6	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4122 M4	2	2	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4124 M4	2	4	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4126 M4	2	6	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4133 M4	3	3	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4144 M4	4	4	Matrox DSX LE3	HD/SD SDI+AE/AES

SD-only models with MPEG-2/H.264 ASI TS or SD SDI inputs-outputs

Dektec DTA based models

SL NEO 4111 D4	1	1	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4112 D4	1	2	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4113 D4	1	3	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4114 D4	1	4	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4115 D4	1	5	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4116 D4	1	6	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4122 D4	2	2	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4133 D4	3	3	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4144 D4	4	4	Dektec DTA	ASI SPTS/SD SDI+AE

SD-only models with MPEG-2/H.264 IP UDP/RTP TS inputs-outputs

SL NEO 4111 E4	1	1	Onboard Ethernet	IP SPTS
SL NEO 4112 E4	1	2	Onboard Ethernet	IP SPTS
SL NEO 4113 E4	1	3	Onboard Ethernet	IP SPTS
SL NEO 4114 E4	1	4	Onboard Ethernet	IP SPTS
SL NEO 4115 E4	1	5	Onboard Ethernet	IP SPTS
SL NEO 4116 E4	1	6	Onboard Ethernet	IP SPTS
SL NEO 4122 E4	2	2	Onboard Ethernet	IP SPTS
SL NEO 4133 E4	3	3	Onboard Ethernet	IP SPTS
SL NEO 4144 E4	4	4	Onboard Ethernet	IP SPTS

4200/4400 Models. Profanity Delay Media-Servers for live shows

Easy removal of unwanted video or audio from live translations. Time-Delay from 1 to 30 seconds, "blur" or video graphics overlays, beep or prerecorded jingle audio overlays, SD/HD or SD-only formats.

HD/SD models with SDI (optional additional IP/ASI) inputs-outputs

Base Model	Inputs	Outputs	Video IO Platform	Signal Types
Matrox DSX LE3 based models				
SL NEO 4411 M0	1	1	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4422 M0	2	2	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4433 M0	3	3	Matrox DSX LE3	HD/SD SDI+AE/AES
SL NEO 4444 M0	4	4	Matrox DSX LE3	HD/SD SDI+AE/AES

HD/SD models with MPEG-2/H.264 ASI TS or SD SDI inputs-outputs

Dektec DTA based models

SL NEO 4411 D0	1	1	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4422 D0	2	2	Dektec DTA	ASI SPTS/SD SDI+AE

SL NEO 4433 D0	3	3	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4444 D0	4	4	Dektec DTA	ASI SPTS/SD SDI+AE

HD/SD models with MPEG-2/H.264 IP UDP/RTP TS inputs-outputs

SL NEO 4411 E0	1	1	Onboard Ethernet	IP SPTS
SL NEO 4422 E0	2	2	Onboard Ethernet	IP SPTS
SL NEO 4433 E0	3	3	Onboard Ethernet	IP SPTS
SL NEO 4444 E0	4	4	Onboard Ethernet	IP SPTS

SD-only models with SDI (optional additional IP/ASI) inputs-outputs

Base Model	Inputs	Outputs	Video IO Platform	Signal Types
Matrox DSX.SD or DSX.LE3 based models				
SL NEO 4211 M0	1	1	Matrox DSX.SD	CVBS/YUV/SDI+AE/AA
SL NEO 4222 M0	2	2	Matrox DSX LE3	HD/SD SDI+AE
SL NEO 4233 M0	3	3	Matrox DSX LE3	HD/SD SDI+AE
SL NEO 4244 M0	4	4	Matrox DSX LE3	HD/SD SDI+AE

SD-only models with MPEG-2/H.264 ASI TS or SD SDI inputs-outputs

Dektec DTA based models

SL NEO 4211 D0	1	1	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4222 D0	2	2	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4233 D0	3	3	Dektec DTA	ASI SPTS/SD SDI+AE
SL NEO 4244 D0	4	4	Dektec DTA	ASI SPTS/SD SDI+AE

SD-only models with MPEG-2/H.264 IP UDP/RTP TS inputs-outputs

SL NEO 4211 E0	1	1	Onboard Ethernet	IP SPTS
SL NEO 4222 E0	2	2	Onboard Ethernet	IP SPTS
SL NEO 4233 E0	3	3	Onboard Ethernet	IP SPTS
SL NEO 4244 E0	4	4	Onboard Ethernet	IP SPTS

Software and hardware options for SL NEO 4000 series

Name	Description
HP/Dell Chassis	HP/Dell Hardware Platform
AES IN/OUT	AES I/O Hardware Option
Additional ASI SPTS inputs-outputs	
ASI HD SPTS IN/OUT	1x Additional HD ASI SPTS IN or OUT Ch. via Dektec DTA
ASI SD SPTS IN/OUT	1x Additional SD ASI SPTS IN or OUT Ch. via Dektec DTA
Additional IP SPTS inputs-outputs	
IP HD SPTS IN CH	1x Additional HD IP SPTS Input/Rec. Ch. via Onboard Ethernet Port
IP SD SPTS IN CH	1x Additional SD IP SPTS Input/Rec. Ch. via Onboard Ethernet Port
IP HD SPTS Encoding OUT CH	1x Additional HD IP SPTS Encoding Ch. via Onboard Ethernet Port
IP SD SPTS Encoding OUT CH	1x Additional SD IP SPTS Encoding Ch. via Onboard Ethernet Port
Transport Stream Multiplexer/Demultiplexer/Cherry-picker	
SL NEO TS MUX/REMUX	Mux/Remux Software Option for IP/ASI TS
IPTV/WEB-streaming	
Hardware IP FEC	Hardware IP FEC Forward error correction
Wowza Engine	Software Platform for web streaming
Additional MultiScreen (HD SDI/HDMI) outputs	
4 CH MultiScreen OUT	1x Additional HD SDI/HDMI Ch. Output
8 CH MultiScreen OUT	1x Additional HD SDI/HDMI Ch. Output
12 CH MultiScreen OUT	1x Additional HD SDI/HDMI Ch. Output
Internal RAID-array expansion	
Up to 8/12/16/24/36/48TB Storage	
Device control, Device server	
GPI I/O Device Server	GPI Device Control (1...8 ports, ext. USB GPI module included)
External CP	External USB Control Panel (10...80 keys)

Automated file transfer, backup and redundancy for payout automation

Media File Transfer Software	Automatic File/SL NEO Clips Transfer use Transfer Rules
Main-Backup Playout Sync Software	Main and Backup Playlist Sync Option (for 1 Program Output)
Multilanguage support, closed-captioning	
DVB Audio Multitrack	Multilanguage support option for IP/ASI I/O TS (for 1 Program Output)
DVB Subtitle	Subtitles generation option for IP/ASI Output TS (for 1 Program Output)
Closed Captioning Subtitle	Closed captions generation for live-shows for SDI Output (for 1 Program Output)

Client workstation software for SL NEO Media-Servers

Name	Description
Multiscreen Client Software	Networked Client for Live I/O ch. Monitoring on Client PC
Routing Client Software	AV Router Multiuser Control Software from Client PC

Model Designation: SL NEO ABCDEF

A	Server Series 1...7
B	1...2 - SD models, 3...4 - HD/SD models
C	Number of Inputs (Live & Rec Channels)
D	Number of Outputs (Program/Playout Channels)
E	I/O Board Type/Brand Name or TS Interface Type: <ul style="list-style-type: none"> M Matrox DSX Series D DekTec DTA Series B BlackMagic DeckLink Series E Ethernet, Onboard Ethernet Port
F	Internal Storage Capacity (Tb): <ul style="list-style-type: none"> 4 4 Tb, Hardware RAID-10, 4xHDD RE 2Tb 8 8 Tb, Hardware RAID-10, 8xHDD RE 2Tb

I/O Signals & Streams Designations:

CVBS	Composite Video	ASI
AA	Audio Analogue	IP
SDI	Digital Video SDI	
AE	Embedded Audio in SDI	
AES	AES I/O available in some models with Matrox DSX Boards	

This document is the property of SkyLark Technology Inc.
Any reproduction of this document in part or in whole is strictly prohibited.
For informational purposes only. Subject to change without notice.