



- ▶ Up to 24 HD or 4 UHD channels per server
- ▶ Integrated broadcast graphics and branding
- ▶ Live, file, and growing-file playback
- ▶ SCTE-35/104, GPI, and cue-driven automation

One platform. Many channels. Zero compromise.

Overview

SL NEO Multi-Channel Playout is a high-performance, software-defined platform for building and operating multiple broadcast or OTT channels on a single server. It combines automation-grade playlist control, live and file-based playback, dynamic graphics, subtitle processing, and real-time format conversion into one unified engine.

Built on the same robust core used in mission-critical broadcast environments, SL NEO can simultaneously play out up to 24 HD or 4 UHD channels per server, each with fully independent playlists, graphics layers, caption workflows, and failover logic.

From master control rooms to FAST and OTT operations, SL NEO delivers television-grade reliability with the flexibility modern playout demands.

As part of the SL NEO Media Platform, Multi-Channel Playout integrates seamlessly with ingest, media management, graphics, QC, and automation modules — enabling a unified workflow across one or many hardware platforms.

Optimized for 24/7 operation, SL NEO ensures predictable, synchronized, and visually flawless playout at any scale.

Highlights

Up to 24 HD or 4 UHD channels per server

Run dozens of fully independent linear services on a single machine, dramatically reducing hardware footprint, power consumption, and operational cost.

Independent playlists and graphics per channel

Each channel behaves as a standalone service with its own rundown, branding, subtitles, and automation logic — no compromises, no shared-state limitations.

Integrated broadcast graphics and branding

Apply logos, tickers, crawls, lower-thirds, bugs, countdowns, and animated elements directly in the playout engine, without external CG hardware.

Live, file, and growing-file playback

Mix prerecorded media, near-live growing files, and real-time feeds in one playlist, enabling true hybrid workflows for news, sports, and FAST channels.

SCTE-35/104, GPI, and cue-driven automation

Trigger ad breaks, regional overrides, or emergency content using industry-standard signals and embedded markers—frame-accurate and fully deterministic.

Multi-format I/O: SDI, IP, OTT

Output simultaneously to SDI, ASI, SMPTE-2110, NDI, SRT/RIST/Zixi, RTMP, and HLS, feeding both broadcast and streaming ecosystems from the same channel.

N+1 / N+N synchronized failover

Maintain mirrored channels with live playlist, media, and graphics synchronization, ensuring seamless on-air continuity during hardware or network failures.

Key Features

- ▶ Multi-channel playout from a single server
- ▶ Simultaneous SDI and IP outputs per channel
- ▶ Unified control of playout, graphics, and ingest channels, with flexible role-based access for different operators.
- ▶ Supports YouTube and other video platforms for live input and output. IP streams can be used as playlist items without consuming server inputs.
- ▶ Clean and dirty feed generation
- ▶ Built-in dynamic graphics: logos, tickers, crawls, banners, DVE
- ▶ External graphics integration (Chyron, VizRT)
- ▶ File-based, live, and growing-file playback
- ▶ On-the-fly trimming, scrubbing, and cueing
- ▶ Manual, scheduled, and event-driven playlist execution
- ▶ Export AsRun logs and BXF Connector for integration with traffic systems
- ▶ SCTE-35/104, DTMF, GPI trigger support
- ▶ Multilingual subtitles and captions: DVB-TTML, DVB bitmap subtitles, DVB Teletext, CEA-608/708, SRT, STL, and EBU-TT XML conversion; live and AI-powered captioning
- ▶ DVB-SUB bitmap subtitle OCR with conversion to SRT, supporting all languages
- ▶ Real-time up/down/cross conversion
- ▶ HDR/SDR handling and audio normalization
- ▶ Up to 64 audio channels per service
- ▶ Loudness control (EBU-R128)
- ▶ Accepts audio from multiple sources (WDM, mics, Dante/AES67, IP streams) and mixes it into playout outputs, with up to 60 s A/V offset for precise synchronization
- ▶ LOAS/LATM audio support for DVB workflows
- ▶ Integrated media database and metadata with support for external storage systems
- ▶ N+1 / N+N failover with playlist and graphics sync
- ▶ Real-time visual control of Playout and Ingest channels in the Multiscreen module
- ▶ Desktop client, Web UI, hardware panels and remote control
- ▶ REST API and automation interfaces
- ▶ Router control for all major vendors
- ▶ On-prem, hybrid, and cloud deployment
- ▶ System status monitoring in Air Manager with SNMP support for external monitoring systems

Workflow

► Unified Channel Engine

Each SL NEO server hosts multiple fully independent channels.

Every channel has its own:

- Playlist
- Live inputs
- Graphic layers
- Subtitle streams
- Output format and routing

Operators can manage all channels from a single interface while maintaining complete isolation between services.

► Hybrid Playback

Channels may combine:

- File-based content
- Growing files (near-live)
- Live SDI/IP feeds

Switching between sources is seamless and frame-accurate. Content can be trimmed, re-ordered, or replaced while on-air.

► Event-Driven Automation

Playlists may be executed by:

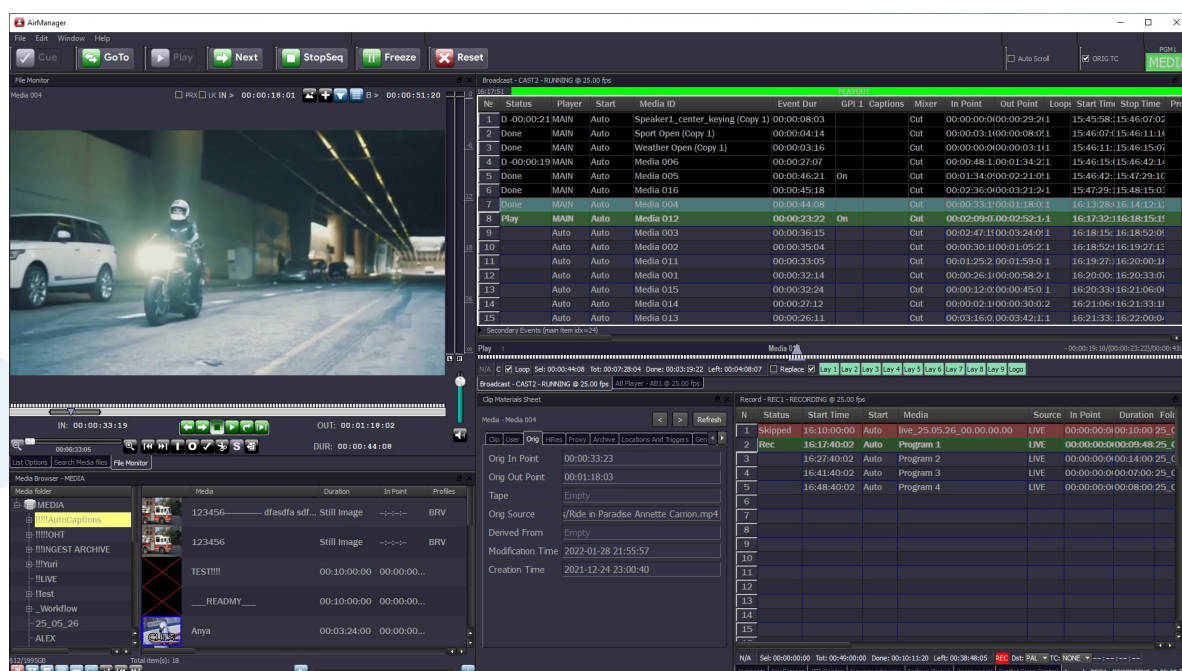
- Time schedules
- Operator actions
- SCTE-35/104 markers
- DTMF tones
- GPI events
- Media-embedded cues

This enables regional ad insertion, live program overrides, and dynamic channel behavior without external automation systems.

Air Manager

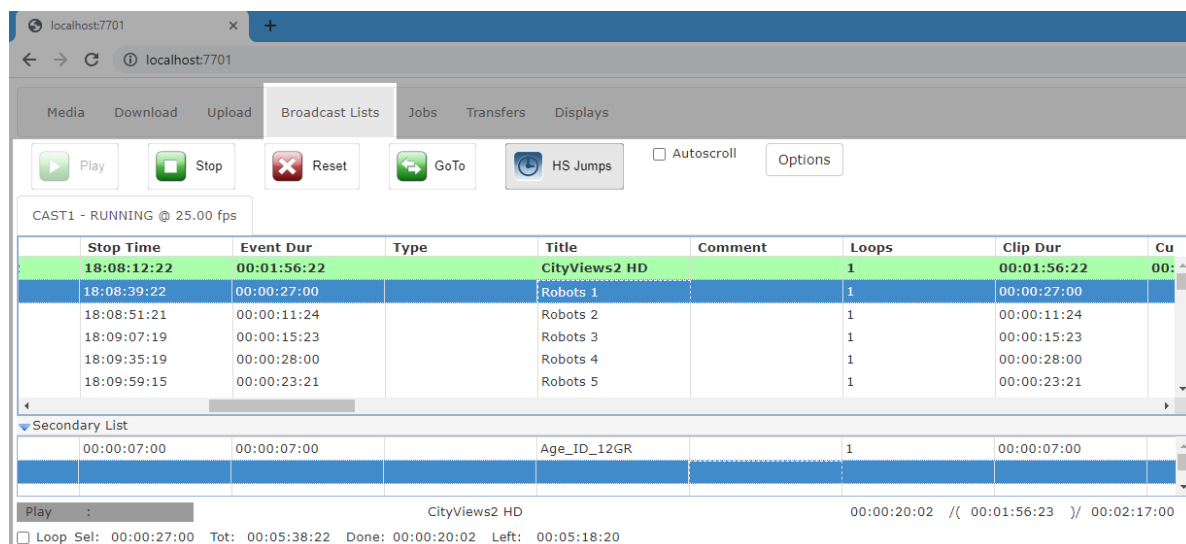
Air Manager is a multifunctional client application designed for centralized control of SkyLark recording and playout servers, graphics stations, and media storage. It provides a unified workspace for creating, editing, and executing recording and playout schedules — both for standalone servers and for fully automated broadcast, production, ingest, and archive facilities.

Air Manager is the primary operational tool for ingest and on-air operators in broadcast environments, enabling fast, accurate program preparation and real-time control of complex multi-channel workflows.

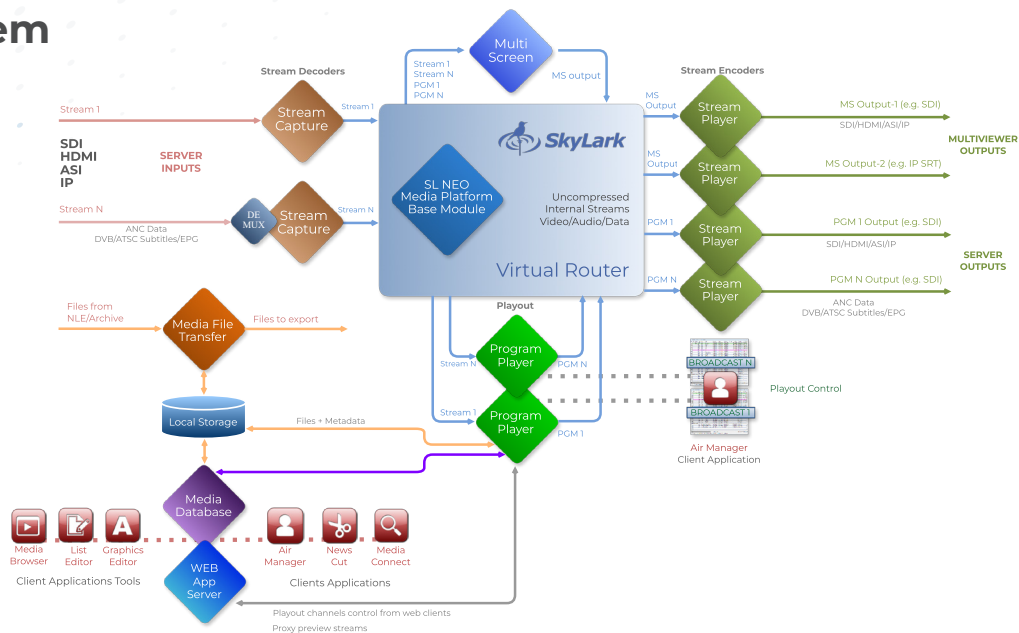


Broadcast List Web

Broadcast List Web is part of the Web Access client interface and is used to display the playlist loaded in the Program module directly in a web browser, providing remote, read-only monitoring of on-air and upcoming events.



Ecosystem



SL NEO Multi-Channel Playout is fully integrated into the SL NEO Media Platform — a modular, software-defined environment where specialized modules operate together in real time.

Additional modules — including Graphics, Ingest & Encoding, and Base Module — can be combined to create a fully tailored solution:

- ▶ **Ingest & Encoding**
For live and file acquisition
- ▶ **Media Database**
For content storage and playback management
- ▶ **Broadcast Graphics**
For overlays and branding and animated elements
- ▶ **SL NEO Base Module**
For coordination, management and control for all the system

Use Cases

- ▶ **24/7 Broadcast Channels**
Operate multiple linear channels from a single server, with real-time playlist edits, last-minute content changes, and uninterrupted on-air operation.
- ▶ **OTT & FAST Channels**
Run ad-supported streaming channels with growing-file playback, SCTE signaling, and simultaneous SDI and IP distribution.
- ▶ **News & Studio Playout**
Combine live feeds, file content, graphics, and captions for agile newsroom and studio workflows.
- ▶ **Sports & Event Channels**
Play live streams with branding overlays, generate clean and dirty feeds, and distribute simultaneously to broadcast and IP platforms.
- ▶ **Multilingual Services**
Embed and convert multiple subtitle formats per channel for regulatory compliance and international distribution.
- ▶ **Disaster Recovery Sites**
Mirror entire channel groups with synchronized playlists, media, and graphics for seamless failover.

Specifications

SYSTEM

Chassis	2U - 4U, dual hot-swap power supplies
CPU	1 or 2 × Intel Xeon or AMD Epyc Series
Memory	48 / 96 GB DDR4
System Drive	SSD for OS
Network	2 × onboard 1GbE
Storage	4 to 12 × 3.5" Enterprise HDD 4 to 24 × 2.5" Datacenter SSD
OS	Windows Server

Channels

Mode	HD/SD	Ultra HD
Channels	1 - 24	1 - 4

Video Formats & Color Spaces

Formats	625i/525i, 720p, 1080i/1080p, 2K 2048×1080p, 2160p
Frame Rates	25 / 29.97 / 50 / 59.94 / 60 fps
Color Spaces	BT.601 / BT.709 / BT.2020, HDR: SMPTE ST 2084, ARIB STD-B67

I/O Streams: Interfaces, Protocols, Codecs

SDI	SDI 1.5G to 12G, embedded audio
IP (Broadcast)	SMPTE ST 2110, SMPTE ST 2022-7
IP (Streaming)	NDI, HLS, RTMP, UDP, RTP, SRT, Zixi, RIST, MPEG-DASH
DVB / ATSC IP	UDP / RTP, Unicast / Multicast, SPTS / MPTS
DVB / ATSC ASI	SPTS / MPTS
Video Codecs	MPEG-2, H.264, HEVC
Audio	48 kHz / 16-24 bit PCM (SMPTE-302M), MPEG-1 L-II/III, AAC, AC3, AC3 and E-AC3 Pass-Through

Input Ancillary & MPEG-TS Data

Teletext / CC	OP-42 / OP-47 WST Teletext; CEA-608 / CEA-708 Closed Captions
Subtitles / EPG	DVB-TTML, DVB / ATSC subtitles, EPG; DVB-SUB bitmap OCR & SRT conver- sion (all languages)
MPEG-TS Audio	LOAS/LATM audio support for DVB workflows
Markers	SCTE-104 / SCTE-35 with metadata
VBI / VANC	VITC, AFD, WSS

Protocols & Device Support

Monitoring	SNMP (SL NEO Software)
Hardware Panels	X-KEYS XK-24 / 60 / 80
Automation	REST API, Router & GPI control, Schedule, SCTE-35/104, DTMF, BXF

File Containers

Category	Supported
MXF	OP-1A, OP-1B, D10, Avid OP-Atom
Sony	XDCAM HD/422, XAVC (50...480, Long GOP)
Panasonic	P2 AVC-Ultra (50...480, Long GOP)
General	AVI, MPEG PS/TS, MOV, DV DIFF, MP4, MPG, GXF
Still Graphics	JPG, BMP, With Alpha: PNG, TGA, TIFF, PSD

Video with Alpha

Codecs	Uncompressed, TGA, PNG, ProRes, QTRLE, SpeedHQ, Lagarith
Methods	Key from separate file, JPGA (AVI)
Containers	AVI, MOV, Still image sequences

Video/Audio Codecs (Files Playout)

SD / HD	DV25 DVCPRO25/50/HD100 HDV IMX 30/40/50 XDCAM EX SP/HQ XDCAM HD LP/SP/HQ/422 DNxHD 120/145/180/220 AVCHD XAVC 50/100/200 XAVC Long GOP AVC-Ultra 50/100/200 AVC-Ultra Long GOP ProRes HQ/SD/LT MPEG-2 I-Frame/Long GOP H.264 I-Frame/Long GOP
Ultra HD	H.264 8/10-bit XAVC 300/480 XAVC Long GOP AVC-Ultra 300/480 AVC-Ultra Long GOP ProRes SQ/HQ DNxHR SQ/HQ HEVC 8/10-bit
Audio	ADPCM, MPEG-1 L-II/III, AAC; AC3, E-AC3, WMA, FLAC, ALAC

Playout Environments

Graphics	Multiple real-time layers per channel
OS File System	File-based recording; normal or fragment- ed file mode (array of files with configu- rable fixed duration)
Failover	N+1 / N+N with live sync
Control Interfaces	Desktop client, Web UI, API
Audio Processing	EBU-R128 loudness Loudness normalization Audio level control
Synchronization	LTC, NTP, Black-Burst, Tri-Level

Hardware & Software Options

Hardware Options	LTC Input (incl. supported LTC reader and software license: Adrienne AEC-41, Plura PLC, Miranda Little Red, Horita TCI-50)
	GPIO (incl. supported USB GPIO and software license, up to 8 I/O ports: Ontrak ADU200, ADU2X8)
	GPU Board
	Increase Internal RAID Array Capacity
	2× SSD in RAID-1 for System
I/O Interfaces & Boards	SDI / ASI — DekTec DTA-2172 / 2174B / 2175 / 2178 / 2179 / 2195
	ASI / IP — DekTec DTA-2160 / 2162 with FEC
	Network — Mellanox ConnectX
	Video I/O — Matrox DSX LE3 / LE4, DataPath Vision RGB
	Capture — Blackmagic DeckLink
	Playout — Blackmagic DeckLink
	Other — Standard Ethernet, IEEE-1394, DirectShow
Additional Hardware Ports	SD / HD / 3 / 6 / 12G SDI, HDMI, ASI I/O ports
	NVIDIA ConnectX 10 / 25 / 40 / 50 / 100 / 200G ports for SMPTE ST 2110 / 2022-7
	1G Ethernet ports for UDP / RTP IP with SMPTE 2022-1 FEC
	Standard 1 / 10G Ethernet ports for IP streams, control, file transfer
	RS-232 / 422 / 485, i-Link / IEEE-1394 hardware ports
	AES I/O for Matrox DSX boards
Software Options	Transfer Manager PRO
	Profanity Delay
	Time Shift
	SCTE-104 / SCTE-35 Generation (for Single PGM Channel)
	EBU R128 Loudness Normalization (for Single Output Port)
	CEA-608 / 708, OP-42 / 47 Live Closed Captions (generation from Live Data Source or from Files, for Single PGM Channel)
	DVB / ATSC Subtitles (generation from Live Data Source or from Files, for Single PGM Channel)
	Main-Backup PGM Channel Sync (for Single PGM Channel)
	NVENC Assistance (for File Encoding or Output Stream Encoding)
	Avid Unity / Interplay Support (for REC Channels)
	Web Application Server
	TS Mux (up to 16× SPTS in 2× Groups)
	Air Manager
	Rec Manager
	NewsCut
Additional I/O Ports & Channels (SD/HD or UHD Software Licenses)	Capture Port (SDI / HDMI, ASI / IP with DeMux and Stream Decoding, all supported protocols including SDI / NDI Fill + Key)
	Output Port (SDI / HDMI, ASI / IP with Stream Encoding, all supported protocols including SDI / NDI Fill + Key)
	MultiScreen Processor (4, 8, 16 or 24 Inputs Software License)
	REC Channel (Full Resolution + Proxy)
	PGM Channel with Full Graphics (8 GR Layers + Logo Layer)
	PGM Channel with Lite Graphics (1 GR Layer + Logo Layer)
	Graphics for PGM Channel (Additional GR Layers)

Hardware & Software Options

Device Server Software Licenses	VDCP for REC Automation (Slave Mode for Single REC Channel)
	VDCP for Playout Automation (Slave Mode for Single PGM Channel)
	VizRT (Master Mode for Single PGM Channel)
	Chyron CII (Master or Slave Mode for Single PGM Channel)
	SDI Router for Playout Automation (for Single Device)
	SDI Router for REC Automation (for Single Device)
	VTR for REC Automation (for Single Device)
	TSL 5 UMD (Master Mode for Single Device)
	Ember+ (for Junger Audio Devices, Master Mode for Single Device)
SDI Routers Control Protocols	Grass Valley Triton BDS
	Grass Valley NVision / Native Protocol / Vega / M-2100
	Nevion Vikinx v128 / Thor
	Leitch
	Imagine LRC
	Kramer
	BMD Videohub Ethernet / RS-232
	Snell Switcher / Remote Protocol
	Evertz Quartz / QMC-2
	Sierra XXvse
	Utah SC-4 / RCP-1
	ProBel SW-P-02 / SW-P-08
	Venux VM / SI / 3000 ASCII
	Ross Video Presmaster / NK-SCP/A
	ELPRO SDZ HD Series
	AJA KUMO

All product names, logos, and brands are property of their respective owners.

Contacts



www.skylark.tv



info@skylark.tv