

mLIVE Grand io

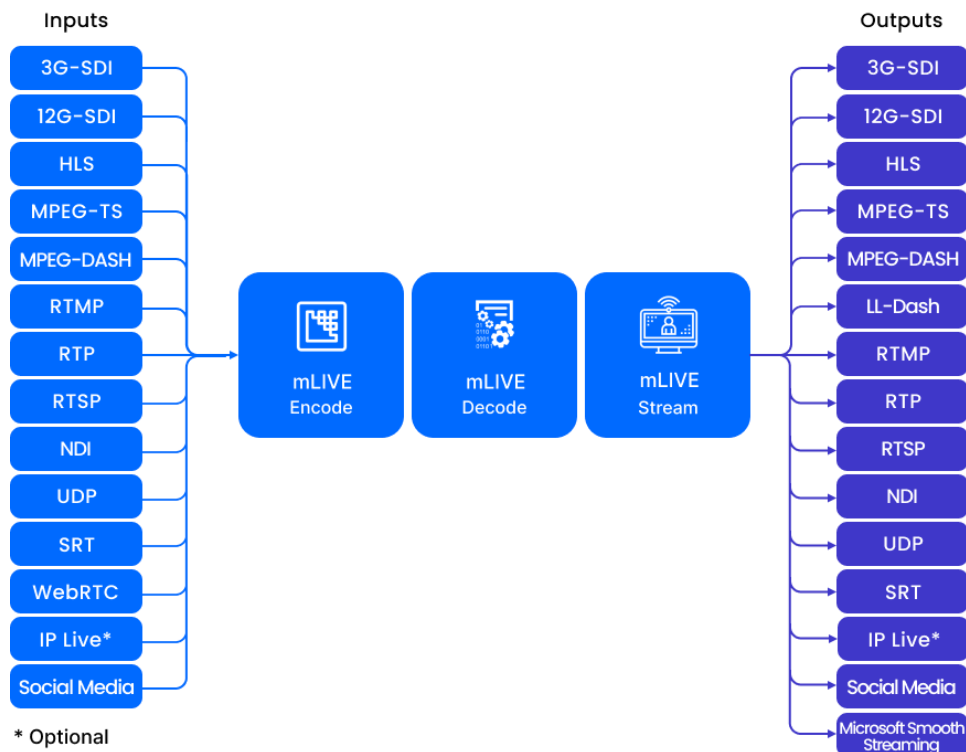


Overview

mLIVE Grand io is a powerful and flexible encode and decode appliance to manage all your live video streams in an integrated media production ecosystem.

It brings you unparalleled power and proven reliability, no matter the scenario. Broadcast live events, automate 24/7 channels playout, or distribute to OTT and social media effortlessly, no matter the source.

mLIVE Grand io supports simultaneous media operations that can be a combination of live video streams, file previews, live switching, and even intercom between different users.



Highlights

- **mSWITCH** - Remote live switching and compositing
- **mTALK** - Audio communication between users
- Encodes and/or decodes contents according to the destination format
- Full featured local and remote user interface (includes quick control through touch screen)
- Operation modes: manual and scheduled
- Multiple output resolutions for OTT
- Ideal for multiple feeds of video contribution
- Social media sharing

Specially Designed For

- Educational/Government
- Live Entertainment/Worship
- Corporate
- Sports
- Film/TV Studio/Scripted
- Post-Production
- Broadcast/Digital News
- OTT & Streaming
- System Integrators/Rentals

Features

| Features |
|--|
| Timecode support |
| LTC (SMPTE 12M) |
| VITC (SMPTE RP188) |
| Time of Day |
| Multiple LIVE and simultaneous records |
| Gang Capture operations |
| Independent workflow selection in Gang Captures |
| Flexible Gang Capture channel configurations / Choose which channels are present in the gang |
| Automatic Stream Control - Detect input streams and start recording automatically |
| Continuous live stream capture |
| Generate MP4 files as Fragmented MP4 via DCP Packager |
| Perform "Run after completion" scripts |
| Remove source assets after Job completion for all plain sources |
| Live Probing option |
| Stream with Closed Captions |
| Edit a Workflow directly from the Player |
| Input selection made directly from a dropdown list on the player |
| Option to start timecode recording from 00:00:00:00 |
| Contribution Web Video Player - Aspect marker, Safe Area Marker, and Center marker |
| Player Overlay - Center Dot and Cross |
| Support for Active Format Description (AFD) |
| Medialoopster Integration in Capture operations |
| Medialoopster Integration in Batch Capture operations |
| Operation modes |
| Manual |
| Scheduled |
| Clipnaming |
| Drag and Drop support |
| "CreationDate" field can refer to a desired Time Zone |
| Audio support |
| PCM input and output support |
| Dolby E-AC-3, Dolby TrueHD, and DTS input support |
| Dolby-E Input and output support |
| DTS Coherent Acoustics (DCA) |
| Integration with Dante Audio Capture *Negotiated separately |
| PCM 96KHz support |
| Independent audio encoder for hires and proxy |
| Individually map your audio by output target |
| Audio downmixing & upmixing |
| Ability to mute proxy on the output |
| Close captions |
| CEA/EIA - 608 |
| Support DVB-S captions in streams |
| Stream with Closed Captions |
| Scheduler (Calendar View) |
| Schedule a Record operation |
| Edit individual events |
| Allow editing of settings for each occurrence/repetition |
| Set the number of an event's repetitions |
| Check for collisions between events and repetitions |
| Placeholder when editing an occurrence name |
| Use pre-set naming templates |
| Send the assets to independent targets and multiple outputs |
| Establish a maximum capture duration |
| Configurable number of iterations when using maximum capture duration |
| Define events to be triggered on any day, on working days only or only on weekends |
| Set the Calendar Notion option to automatically adjust to daylight time |
| Edit the Start Time field after the first recording |
| Visualize scheduled events in a List View |
| Export activity events |

Features

Signal error detection and related recovery actions

- Detect possible signal errors
- Detect possible drop frames
- Configurable capture resume methodology
- Automatic streaming (headless) - Restart capture after stopping/crashing or rebooting

Live to Live

- Delete artifacts on abort
- Vizzi OTT Live Output
- Multiple resolutions check-in
- Support Time of Day in input streams (RTMP, MPEG-TS, RTP, SRT, RTSP, HLS, LLDASH, MSS, MPEG-DASH, CMAF)
- Variable Frame Rate Input
- Support IGMPv3 multicast
- Add possibility to change the transport stream segments duration

MPEG-TS Support

- Capture of MPEG-Transport Streams
- Support of MPEG-TS program IDs

NDI

- Native NDI output
- NDI audio and video synchronized mechanism
- NDI discovery mechanism
- Capture multiple NDI sources
- Time of day and embedded timecode options in NDI input

RTMP

- RTMP recording with absolute timecode
- RTMP Push Mode in input and output
- RTMP Pull Mode in input and output
- Native RTMP listener capability
- Multiple audio channels in RTMP Output
- HEVC, VP9 and AV1 codec in enhanced RTMP/FLV

SRT

- Input modes: Caller, Listener, and Rendezvous
- SRT listener mode as stream output
- Output modes: Caller and Rendezvous
- Stream ID support
- Configurable latency settings
- Configurable overhead bandwidth
- Configurable passphrase
- Monitoring input metrics

WebRTC

- h.264 Support
- VP8 Support
- VP9 Support

Burn-In Video options

- Graphic burn-in while recording

mTALK

- Communicate via audio between two or more users
- QR code implementation
- WebApp (requires Android smartphone)
- Toggle Mode

Analytics

- Integrate with Google Analytics and Tag Manager
- Enable or disable Analytics
- Keep track of menu events
- Receive video metrics
- Keep track of Job Control widget's events
- Keep track of Asset Explorer widget's events

Improved security

- Support for Windows UAC
- Support for HTTP/HTTPS Ingress
- HTTPS (Hypertext Transfer Protocol Secure) for REST API
- Secure login
- User Impersonation

Features

| |
|---|
| Token based authentication |
| Two-factor authentication |
| Remote services, system restart, and settings recovery features |
| Opt to "Keep me signed in" |
| Send a User Verification through email |
| Configurable password visibility in logs |
| Hardware acceleration *If Hardware is installed or available |
| Intel QSV |
| General Purpose IN/OUT |
| GPI triggers supported |
| GPO triggers supported |
| Additional Highlights |
| REST API - allows interaction with RESTful web services |
| Notify user upon connection lost with the Server |
| Manage via web interface or REST APIs for integration with automation system |
| Configurable quality and target latency of the preview stream |
| Logging - Add user information on flow actions |
| Logging - Structured Logging |
| Receive SMTP notifications via e-mail |
| Support an external Database |
| Microsoft Edge / Firefox / Safari and Chrome Support |
| Unified Interface User Experience |
| Configurable web interface access port |
| Embeddable Dashboards/Widgets |
| Web-Based Interface with video preview |
| Dashboards based experience where users can create their own personalized view |
| Dashboards presets for ease-of-use deployment |
| Create your own custom dashboard templates |
| Import and Export Users' Dashboards |
| Associate a single dashboard to multiple users |
| LDAP user authentication |
| User profile management |
| Users permissions control |
| Widget based modular interface |
| Lock/Unlock widgets permission |
| Choose between multiple interface themes (Midnight, Carbon, Dark or High contrast theme) |
| Touch screen mode |
| Monitoring - Advanced metrics |
| Multi Language Support |
| User tour |
| Show/Hide player overlays |
| Notifications of required actions needed to resume a workflow |
| Monitor Grouped Servers' activity in a Group Activity Widget |
| Remove the "quick edit" button from the Job Control Widget |
| Multiviewer |
| Define the quality and target latency of the preview stream |
| Ability to control to up to 4 players in a single dashboard |
| Maintenance |
| Scheduler |
| Reboot host or group |
| Export database (backup) as a scheduled task |
| Export logs as a scheduled task |
| Activity |
| Export last activity |
| Export all activity |
| Export activity from a date range |
| Clear all activity |
| Logs |
| Export logs |
| Backup |
| Export full backup - A full backup will create an archive of all the files and configurations |
| Import full backup |

Features

| |
|--|
| Dashboards |
| Export dashboards from one user or all users |
| Import dashboards |
| Data |
| Clean data usage |
| Clean assets, flows and notifications |
| Perform a Factory Data Reset |
| Erase all data and reset the system |
| Force clear cache |

Technical Specifications

Supported Live Inputs

| | Inputs |
|---|--|
| Live | SD/HD/FHD-SDI |
| | SD-SDI (SMPTE 259M) |
| | 3G-SDI (SMPTE 292M, SMPTE296M, SMPTE372M, SMPTE425M) |
| | 12G-SDI (SMPTE ST-2081/SMPTE ST-2082, SMPTE/2108-1) |
| | 12G-SDI (Quad-Link 3G-SDI) |
| | Streams |
| | Video Content Hyperlinks |
| | HLS |
| | MPEG-TS |
| | MPEG-DASH |
| | RTMP (with support for HEVC / VP9 / AV1) |
| | RTP |
| | RTSP |
| | NewTek NDI |
| | UDP |
| | Haivision SRT |
| | WebRTC |
| | Zixi |
| | Audio |
| | Dante Audio *Negotiated separately |
| | Social Media |
| | Facebook |
| | Twitch |
| | X (Twitter) |
| | YouTube |
| | IP Live *Optional |
| | ST2022-6 |
| | ST2022-7 |
| ST2110-10, ST2110-20, ST2110-21, ST2110-30, ST2110-31 | |
| ST2110-40 | |

Supported Live Outputs

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|---|--|
| Live | SD/HD/FHD-SDI |
| | SD-SDI (SMPTE 259M) |
| | 3G-SDI (SMPTE 292M, SMPTE296M, SMPTE372M, SMPTE425M) |
| | 12G-SDI UHD-SDI (SMPTE ST-2081/SMPTE ST-2082) |
| | Streams |
| | HLS |
| | Microsoft Smooth Streaming |
| | MPEG-DASH |
| | Low Latency Dash - LL-Dash |
| | NewTek NDI |
| | MPEG-TS |
| | RTMP (with support for HEVC / VP9 / AV1) |
| | RTP |
| | RTSP |
| | UDP |
| | Haivision SRT |
| | WebRTC |
| | Vizzi |
| | Live Output |
| | Social Media |
| | Facebook |
| | Twitch |
| | X (Twitter) |
| | YouTube |
| | Vimeo |
| Multiple and Adaptive bitrates for the OTT | |
| IP Live *Optional | |
| ST2022-7 | |
| ST2110-10, ST2110-20, ST2110-21, ST2110-30, ST2110-31 | |
| ST2110-40 | |

Formats

Output Formats

| Output Video Formats |
|---|
| H.264 2160p 35 - 68 Mbps High Profile |
| H.264 1440p 16 - 24 Mbps High Profile |
| H.264 1080p 8 - 12 Mbps High Profile |
| H.264 720p CBR - 6.5 Mbps High Profile |
| H.264 720p 5 - 7.5 Mbps High Profile |
| H.264 480p 2.5 - 4 Mbps High Profile |
| H.264 360p 1 - 1.5 Mbps High Profile |
| H.264 2160p 13 - 51 Mbps High Profile (Live) |
| H.264 1440p 6 - 18 Mbps High Profile (Live) |
| H.264 1080p 3 - 9 Mbps High Profile (Live) |
| H.264 720p 1.5 - 6 Mbps High Profile (Live) |
| H.264 480p 0.5 - 2.0 Mbps High Profile (Live) |
| H.264 360p 0.4 - 1.0 Mbps High Profile (Live) |
| H.264 240p 0.3 - 0.7 Mbps High Profile (Live) |
| H.264 1080p CBR 15 Mbps MAIN Profile |
| H.264 480p CBR 2.3 Mbps MAIN Profile |
| H.264 360p CBR MAIN Profile |
| H.264 432p CBR MAIN Profile |
| H.264 576p CBR MAIN Profile |
| H.264 720p CBR MAIN Profile |
| H.264 1080p CBR MAIN Profile |
| H.264 576p CBR - 3 Mbps MAIN Profile |
| H.264 720p CBR - 4 Mbps MAIN Profile |
| H.264 1080p CBR - 5Mbps MAIN Profile |
| H.264 15-30 Mbps MAIN Profile |

Output Video Formats

| |
|-----------------------------|
| H.264 L10 10 Mbps |
| H.264 WebRTC Baseline |
| H.265/HEVC 10 Mbps LGOP |
| H.265/HEVC 25 Mbps LGOP |
| H.265/HEVC 50 Mbps LGOP |
| H.265/HEVC 100 Mbps LGOP |
| H.265/HEVC 4K 25 Mbps LGOP |
| H.265/HEVC 4K 50 Mbps LGOP |
| NDI HX H.264 - High Profile |
| NDI HX H.265 - High Profile |

OTT Formats

Output OTT Formats

| |
|---|
| H.264 2160p 35 - 68 Mbps High Profile |
| H.264 1440p 16 - 24 Mbps High Profile |
| H.264 1080p 8 - 12 Mbps High Profile |
| H.264 720p 5 - 7.5 Mbps High Profile |
| H.264 480p 2.5 - 4 Mbps High Profile |
| H.264 360p 1 - 1.5 Mbps High Profile |
| H.264 2160p 13 - 51 Mbps High Profile (Live) |
| H.264 1440p 6 - 18 Mbps High Profile (Live) |
| H.264 1080p 3 - 9 Mbps High Profile (Live) |
| H.264 720p 1.5 - 6 Mbps High Profile (Live) |
| H.264 480p 0.5 - 2.0 Mbps High Profile (Live) |
| H.264 360p 0.4 - 1.0 Mbps High Profile (Live) |
| H.264 240p 0.3 - 0.7 Mbps High Profile (Live) |
| H.264 360p CBR MAIN Profile |
| H.264 432p CBR MAIN Profile |
| H.264 576p CBR MAIN Profile |
| H.264 720p CBR MAIN Profile |
| H.264 1080p CBR MAIN Profile |
| H.264 576p CBR - 3 Mbps MAIN Profile |
| H.264 720p CBR - 4 Mbps MAIN Profile |
| H.264 1080p CBR - 5Mbps MAIN Profile |
| H.265/HEVC 10 Mbps LGOP |
| H.265/HEVC 25 Mbps LGOP |
| H.265/HEVC 50 Mbps LGOP |
| H.265/HEVC 100 Mbps LGOP |
| H.265/HEVC LGOP 4:2:2 |

Product Integrations

| Stream | CDN's |
|------------------------------|--|
| Newtek NDI | Lumen |
| Haivision SRT | Fastly |
| Zixi | Akamai Technologies |
| Social Media | Microsoft Azure |
| Facebook | Cloudflare |
| Twitch | Limelight Networks |
| X (Twitter) | Amazon CloudFront |
| YouTube | BootstrapCDN |
| Vimeo | StackPath |
| Hypervisors | KeyCDN |
| Microsoft HyperV | Rackspace |
| VMWare ESX | Alibaba Cloud Content Delivery Service |
| Audio | CacheFly |
| Dante *Negotiated separately | Verizon |

Server Options

| Features | | Specs | |
|-----------------------|------------------------|------------------------------|---------------------------------------|
| System | Platform | Dell R750 | |
| | GPU | 2x Nvidia A2 | |
| | Video IO | 4x DeckLink 8K Pro | |
| | Operating System Drive | 480GB RAID 1 | |
| | Operating System | Windows 10 Enterprise (LTSC) | |
| Connectivity | Networking | 1Gb Ethernet Port | 2 |
| | | 10Gb Ethernet Port SFP+ | 2 |
| | Video | VGA Out | 1 |
| | USB | 2.0 | 1 |
| | | 3.0 | 1 |
| | BNC 12G In/Out | | 16 |
| | Ref. In | | 4 |
| Power Requirements | | Dual 1100W | |
| Extended Connectivity | Peripheral Module** | LTC Input | 1 |
| | | Audio Out | 1 |
| | | Breakout Connector | 1 |
| | Breakout Cable** | RS422 | 4 |
| | | GPO branch with 4 outputs | 1 |
| | | GPI branch with 4 inputs | 1 |
| Other | Dimensions & Weight | | 2RU, 772x482x86.8mm (D, W, H), ~40 kg |
| | Delivery Packaging | | 970x660x310mm (D, W, H), ~45Kg |
| | Temperature | Continuous Operation | 10°C to 35°C (50°F to 95°F) |
| | What is Included | Power Cable | 2x C13 to C14 |
| | | Other | Static rails for 2/4-post racks |

** Not included by default

Concurrent Media Operations

With mLIVE Grand io, it is possible to run different media operations simultaneously, thus guaranteeing a universe of distinct arrangements to meet the challenging day-to-day activities of media production companies.

Media operations include live video streams, file preview, live channel switching, and intercom.

mLIVE Grand io supports up to 18 media operations at the same time. Within this margin, you can combine the operations shown in the table below:

| Concurrent Media Operations | | | |
|-----------------------------|------------------------|-------------------|-------------------|
| Live Video Streams | File Preview | Live Switch | Intercom |
| Up to 16 live channels | Up to 10 files preview | Up to 1 operation | Up to 1 operation |

Product

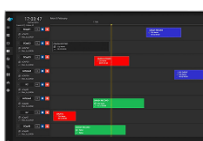
| Part Number | Product | Description |
|-------------|----------------|---|
| mlgrio | mLIVE Grand io | Encode/decode appliance of up to 18 combined media operations |

Available Options

Choose from the products below to customize the mLIVE Grand io according to your business rules.

Production Tools

Tool for workflow orchestration.



mPLAN

Setup scheduled events not only from the standard scheduler but through a unique roll out view interface. mPLAN is a tool that maintains a single rollout view of all scheduled events, allowing the management of the ingests process very efficiently. It manages multiple scheduled events across a variety of recording platforms in a multichannel environment using router control cross-points.

| Part Number | Product | Description |
|-------------|---------|---|
| mpla1c | mPLAN | Scheduler & Router Control per licensed channel |

Note: Adding optional features might affect the number of simultaneous operations.

Plugins

Complement any media production and distribution workflow with turnkey plugins and extensions.



Screen-m

Quickly capture and deliver your screen contents to your production environment.

Easily record your screen in its entirety or choose one of the open windows. You can even enable the capture of a microphone and the mouse cursor to make it easier to explain any presentation.

| Part Number | Product | Description |
|-------------|-----------------|---------------------------|
| scpi | Screen-m plugin | Screen capture & Delivery |

Note: Adding optional features might affect the number of simultaneous operations.

Hardware

Customize your solution to your day-to-day media needs.

| Part Number | Product | Description |
|-------------|-------------------|---|
| pcbx | Peripheral module | Optional MOG module to expand I/O available with 1x LTC, 1x audio output, 1x GPI, 1x GPO and 4x RS422 |
| - | IP live card* | Add up to 4 UHD IP channels into your media production infrastructure |

* Each Live IP card effectively replaces 8 SDI input/output channels. This offers the flexibility to opt for a hybrid appliance supporting both SDI and IP or, by integrating two Live IP cards, all current SDI inputs/outputs will be seamlessly transformed into IP-based connections.

Note: Adding optional features might affect the number of simultaneous operations.

Contact our sales team at sales@mog-technologies.com to find out how to purchase or in case you need more information.

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