

## mDECK Grand av

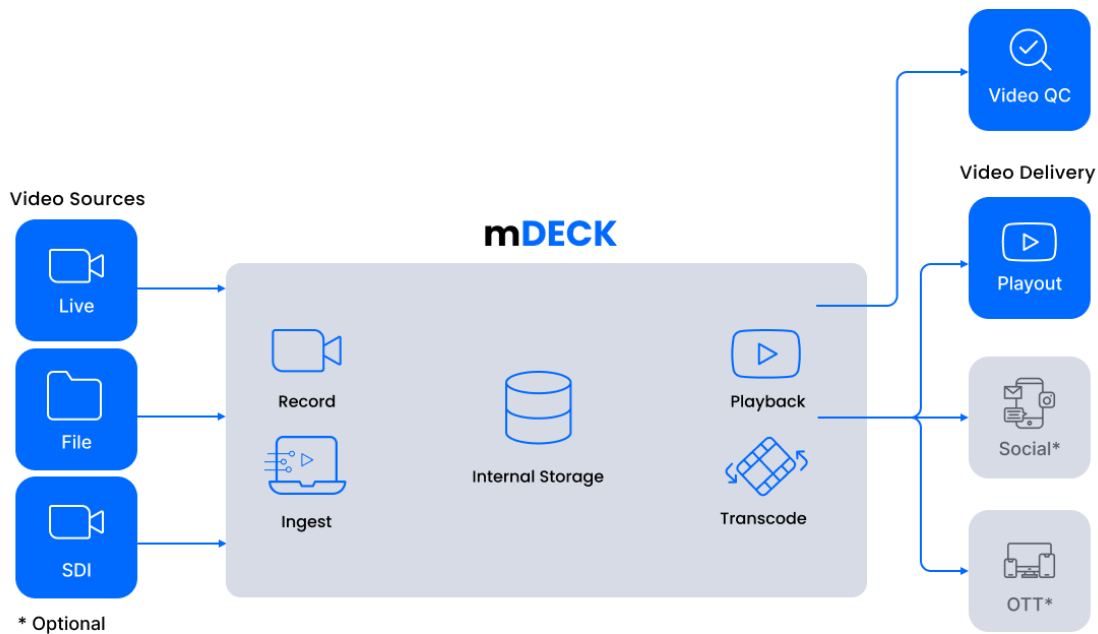


### Overview

Streamline your workflows with mDECK Grand av, an all-in-one deck appliance that can combine operations of record, ingest, transcode, and playback content in 4K, UHD, FHD, and NDI. All in a single box, with an additional XAVC & AVC-Ultra hardware encoder accelerator.

This flexible media deck easily performs hybrid workflows (file-based and live), supporting the most used formats on the market, and allows users to work together as a group.

Additionally, it comes with local storage of 8TB, PSU redundancy, and an OS Drive.



### Highlights

- mSWITCH - Remote live switching and compositing
- mTALK - Audio communication between users
- Live to live - multiple simultaneous records
- Closed captions
- Multiple simultaneous transcodes
- Automated file ingest
- Media checksum
- File playback - multiple simultaneous plays
- Metadata preservation, enhancement, and enrichment
- Playlist management
- Quality control, audio, and video report
- Flexible file naming and renaming engine
- Locators support
- Batch capture
- Supports spanned clips
- Proxy generation
- Playout preparation and control
- Improved security
- Artificial engine

### Specially Designed For

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

## Features

| Features   |
|--|
| <b>Timecode support</b>  |
| LTC (SMPTE 12M)  |
| VITC (SMPTE RP188)   |
| Time of Day  |
| From VTR (BVW) - Serial  |
| <b>Multiple LIVE and simultaneous records</b>  |
| Crash Record operations  |
| Gang Capture operations  |
| Independent workflow selection in Gang Captures  |
| Unique workflow for gang captures while using clipnaming with counters                           |
| Hide unused Capture Instances  |
| Synchronized gang captures   |
| Ability to choose which channels are present in the gang   |
| Frame Chase editing  |
| Unlimited capture duration support   |
| Loop record support  |
| Extend playlist maximum duration in Loop Record workflows  |
| Perform Loop record captures through automatic jobs  |
| Growing files support  |
| Growing file support for Grass valley Edius Workgroup v.9 and X                                  |
| Growing XDCAM MXF OP1a file support on Avid Media Composer <b>*required Nablet AMA Plugin</b>    |
| Automatic Stream Control - Detect input streams and start recording automatically                |
| Continuous recording support   |
| Continuous live stream capture   |
| Recording timer for captures   |
| Abort or force stop a capture or a stream  |
| Frame rate conversion option on Capture workflows  |
| Generation of MP4 files as fragmented MP4 with DCP packager                                      |
| Generate XML sidecars with WAV file as output while recording                                    |
| Perform "Run after completion" scripts   |
| Live Probing option  |
| Stream Closed Captions   |
| Edit a Workflow directly from the Player   |
| Option to start timecode recording from 00:00:00:00  |
| Export MOG playlist (.XML Sidecar containing information about the chunks of the recorded media) |
| Batch record support   |
| Deck control through Serial Ports  |
| Pre-roll and post-roll options   |
| LiveU NewsML batch capture   |
| LiveU NewsML metadata import   |
| LiveU NewsML - support XML from devices (Live U, Android and iPhone)                             |
| LiveU include subfolder browse   |
| Contribution Web Video Player - Aspect marker, Safe Area Marker, and Center marker               |
| Player Overlay - Center Dot and Cross  |
| Support for Active Format Description (AFD)  |
| <b>Operation modes</b>   |
| Automatic  |
| Manual   |
| Scheduled  |
| <b>Clipnaming</b>  |
| Flexible file renaming engine  |
| Create multiple and diverse Clipnaming templates   |
| Clipnaming based under metadata profiles   |
| Use of common labels (Id, label, Counter, Date, Original Source Name, Weekday, User)             |
| Field numeric representation of the day of the week  |
| Folder Structure creation  |
| Drag and Drop support  |
| Restore auto numbering on capture abort in naming templates                                      |
| Time Zone Support when the "CreationDate" field is selected                                      |
| Support to append "_p" to proxy clip names   |
| <b>Multi-Configuration metadata management and enrichment</b>                                    |
| Internal asset management  |
| Quickly search for assets metadata   |
| Metadata management  |
| Metadata generation on capture operations  |
| Metadata fields - prevent overwrite  |
| Protection of metadata fields  |
| Delete custom metadata   |
| Edit group clip metadata   |
| Edit source metadata based on a metadata profile   |
| "Description" field editable in metadata widget  |
| "Description" field as a column in the asset explorer list view                                  |
| Send metadata to Gang Captures   |
| Favorite metadata fields   |
| Create custom metadata fields  |
| Rating metadata field  |

**Features**

- Metadata source update directly in the metadata widget
- Add asset tags insertion in preset list
- Support re-using lists of possible values
- Update Metadata in Media Central/Interplay using AMT-3 library
- Ability to rename media in Interplay after capture began
- Take field (counter)
- Support for "Reel" metadata field using Apple ProRes Wrapper
- Read metadata from cloud storage (Amazon S3 / Google Cloud Storage / Tencent / IBM Cloud Object Storage)
- Preserve Arri specific fields
- Preserve RED digital cinema color information

**Find immediately and learn everything about any asset**

- Asset Browser - Show/hide proxies
- Asset Browser - Sort, order, and search
- Asset Explorer - Resizable thumbnails
- Asset Explorer - Support asset availability
- Asset Explorer - Search all
- Asset Explorer - Extraction of thumbnails and posters while indexing
- Asset Explorer - Playable thumbnails
- Asset Explorer - Pop-up player
- Asset Explorer - View the exact duration of files with more than 24 hours
- Asset Selection -View the total duration of the selected assets
- Asset Selection - Configurable asset preview duration
- Asset Selection - Add Numeric Input

**Asset management Check-in**

- AVID AAF
- AVID interplay
- XML support
- XSLT transformation - XML sidecar
- Edit share flow
- Vizzi OTT check in
- Support for update on Vizzi OTT check-in

**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)
- PCM 96KHz support
- Independent audio encoder for hires and proxy
- Individual audio mapping by output target
- Record audio only streams
- Playout audio only streams
- Loudness normalization (EBU R128)
- Audio downmixing & upmixing
- External audio files support (.WAV)
- MPEG-4 Audio (M4A) audio format as output
- Mute proxy option in output

**Close captions**

- CEA/EIA - 608
- Scenarist (SCC)
- Add sidecar - SubRip (SRT)
- Add sidecar - Fragmented WebVTT
- Add sidecar - ISMT/CMFT subtitles
- DCP subtitle burn-in (.SCC)
- Digital Cinema Package (DCP) open captioning
- Support DVB-S captions in streams
- Support captioning for OTT (CMFT, SubRip, and WebVTT)
- Stream Closed Captions

**Locators**

- Create locators with shortcut keys
- Edit and delete locators
- Edit locators description
- Insertion and viewing
- Action fields creation and customization
- Comments insertion in a markers widget tab
- Locators source in markers widget
- Multiple subcategories for a locator
- Order asset locators by timecode
- Absolute timecode for source locators
- Enter Timecode without the need of entering colons
- Eject locators using the player eject button
- Locators merge
- Support for locators with AMT captures
- Send locators to gang captures
- Send locators to playout
- Preserve Metadata Enhancement locators created by an Automatic Job

**Scheduler (Calendar View)**

- Scheduled Record
- Scheduled Automatic Jobs via Scheduler

**Features**

|  |
|--|
| Edit individual events   |
| Allow editing of settings for each occurrence/repetition   |
| Configure the number of events repetitions   |
| Check collision between events with repetitions  |
| Ability to Ignore files before a start date  |
| Placeholder when editing an occurrence name  |
| Enable field event name as AVID Interplay clipname by default  |
| Pre-set naming templates   |
| Independent targets and multiple outputs support   |
| Capability to set a maximum capture duration   |
| Configurable number of iterations when using maximum capture duration                                    |
| Use AVID Interplay clip name as event name on crash record events  |
| Pre-roll and post-roll options for scheduled events  |
| Define events to be triggered on any day, on working days only or only on weekends                       |
| Possibility to use the calendar notion option in order to adjust for daylight saving time automatically  |
| Ability to edit Start Time field after the first recording   |
| Visualize scheduled events in a List View  |
| Export activity events   |
| Perform captures from a MOG S1000  |
| Perform captures from an Airspeed 5000   |
| Perform captures from a Softron Movie Recorder   |
| <b>Scheduler (Playout Grid View) - Unifies in a single rollout view all Playout activities *Optional</b> |
| Grid View for Playout  |
| Crash Playout directly from the Grid View  |
| Loop a playlist  |
| Schedule Clip Lists to be Played out   |
| Time zone Support  |
| Ability to set a pre-determined number of repetitions  |
| Trigger Playout events (Any day, On Working Days or only on Weekends)                                    |
| <b>Signal error detection and related recovery actions</b>   |
| Signal error detection   |
| Drop frame detection   |
| Timecode breaks support  |
| Configurable capture resume methodology  |
| Automatic streaming (headless) - Restart capture after stopping/crashing or rebooting                    |
| <b>Checksum media</b>  |
| MD5 hash file  |
| MDL - Media hash list  |
| <b>Live to Live</b>  |
| 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)  |
| Support Live Stream from sCapture as rPlayout input  |
| Variable Frame Rate Input  |
| Support IGMPv3 multicast   |
| <b>MPEG-TS Support</b>   |
| Capture of MPEG-Transport Streams  |
| Support of MPEG-TS program IDs   |
| <b>NDI</b>   |
| Native NDI output  |
| NDI HX Support   |
| NDI audio and video synchronized mechanism   |
| NDI discovery mechanism  |
| Capture multiple NDI sources   |
| Time of day and embedded timecode options in NDI input   |
| <b>RTMP</b>  |
| 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   |
| <b>SRT</b>   |
| 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   |
| <b>WebRTC</b>  |
| h.264 Support  |
| VP8 Support  |
| VP9 Support  |
| <b>Live switcher - Capture switcher producer</b>   |
| Commute between channels while recording   |

### Features

|   |
|---|
| Record audio and video from one channel, or just audio or video                               |
| Playout from SDI Inputs   |
| Playout from Streams Inputs   |
| Playout from File Inputs  |
| Overlay graphics support  |
| Chroma Key as Input   |
| <b>File ingest</b>  |
| Multiple simultaneous transcodes  |
| Batch ingest  |
| Card ingest   |
| Clip merge  |
| Clip renaming   |
| Disable Clip File Naming generation   |
| Partial restore   |
| Rough cut   |
| Insert Subclips SOM and EOM without colons  |
| Automatic drag and drop ingest  |
| Drag and drop from social networks  |
| Generate XML sidecar with WAV file as output while ingest                                     |
| Generate a .xml file for each output AVID clip or AVID sequence                               |
| Merge as Sequence from MP4 proxy files  |
| Automatically select workflows available in job control attending the source files            |
| Allow the creation of clip cuts in growing files to be added to a playlist for playout        |
| Directly select the storage on the dashboard instead of accessing workflow profiles           |
| Copy assets   |
| Group Assets - Group the resulting outputs into a single asset                                |
| Copy - Transfer sidecars if available   |
| Encode the contents according to the destination format                                       |
| Decode the contents according to the destination format                                       |
| Move assets   |
| Edit while ingest   |
| Use locators on growing files   |
| Multiple resolutions check-in   |
| Frame rate conversion   |
| Variable Frame Rate Input   |
| High Dynamic Range (HDR) support - HLG (arib std-b67) / PQ (SMPTE 2084)                       |
| High Frame Rate (HFR) up to 120fps (ST2081-10, ST2081-11, ST2082-10, ST2082-11 and ST2082-30) |
| Ability to perform "Run after completion" scripts   |
| Audio only OPAAtom as output  |
| Do not overwrite files option   |
| Support for .MOV files containing "Run-length encoding" video essence                         |
| Enable "growing" support on EDL ingest workflow   |
| Merge as EDL independent of input format  |
| Merge Trimmed files   |
| Merge files with different framerates   |
| Merge P2 with different audio channels  |
| Merge operations for Devices sources  |
| Allow merge of more than 200 assets   |
| Support for spanned Panasonic P2 structure  |
| Preserve original time code breaks in Panasonic P2 Format                                     |
| Mute proxy option in output (requires proxy option)   |
| Edit decision lists with cut points   |
| Display the total duration of sub-clips on Edit Decision List widget                          |
| Ingest from cloud locations   |
| Digital Cinema Package (DCP) support  |
| DCP Packager - Possibility to force fragmented MP4 while uploading to S3 buckets              |
| Generation of MP4 files as fragmented MP4 with DCP packager                                   |
| Digital Picture Exchange (DPX) support  |
| IMF (Netflix Compliant) output metadata   |
| FTP for generic network devices as input  |
| Ability to delete OPAAtom source files  |
| Support for GOPRO spanned files   |
| Support video with vertical rotation  |
| MOG file package support  |
| Support MOG Package from Cloud Storages   |
| Outgest growing media from Interplay  |
| HDR (PQ, HLG) conversion to SDR as output   |
| Support for image files ingest  |
| Support 48fps drop frame media (DJI Camera Drones)  |
| Support for spanned clips   |
| XDCAM support for spanned & merge clips in network locations/network devices                  |
| Add black bars to respect aspect ratio  |
| Delete Output on Job Abort  |
| Schedule ingest (Calendar) - Automatic Job  |
| Ingest and/or transcode the contents according to the destination format                      |
| Vubiquity assets support  |
| Support for Vizzi collections as input files  |
| Browse Avid Interplay folder structure from within the "Workflow selection window"            |

## Features

|   |
|---|
| Avid Sub Clip export referencing Growing Master Clip  |
| Generate Avid OPAtom assets to an FTP server  |
| Update Metadata in Media Central/Interplay using AMT-3 library                                |
| Live Ingest Operations  |
| Live sources available in asset browser/explorer  |
| Override start timecode   |
| <b>Burn-In Video options</b>  |
| Graphic burn-in while recording   |
| Graphic burn-in while ingesting   |
| Text (Position, Text color, Box Color, Font Size)   |
| Timecode (Position, Text color, Box Color, Font Size)   |
| Overlays support (images and videos positioning)  |
| LUT (Look-Up Table) - Save particular color grades as a template                              |
| <b>Quality control - Report</b>   |
| <b>Video Report</b>   |
| Black frames detection  |
| Video freeze detection  |
| Scene change detection  |
| <b>Audio Report</b>   |
| Audio clipping detection  |
| Loudness detection  |
| Silence detection   |
| <b>Others</b>   |
| Timecode gap detection  |
| <b>Automated ingest</b>   |
| Dynamic workflows using metadata fields   |
| Dynamic workflows with support for metadata without sidecars                                  |
| Delete Assets in Dynamic Jobs   |
| Support different input types on dynamic configurations                                       |
| Ignore files before a start date  |
| Support metadata enhancement workflows  |
| Vizzi Collections support   |
| <b>File playback</b>  |
| Simultaneous playback   |
| Composition play  |
| Instant play  |
| Gang Play   |
| Replay a group or an individual asset   |
| Loop playback   |
| Group Loop Playback   |
| Gridline (3x5) Overlay  |
| Remote preview  |
| Support for 10bit   |
| Synchronous SDI playback of multiple files  |
| Closed captions   |
| Cue mode  |
| Monitor - support HDR   |
| Option to add locators  |
| Play assets from cloud storages   |
| Playback - 8K UHD   |
| Embedded VITC output support  |
| Step multiple frames forward and backwards on SDI/gang playback                               |
| Timecode and metadata overlaying on SDI out   |
| Support for growing assets in player  |
| Support for spanned assets in player  |
| Timecode only monitoring  |
| Use of a contour shuttle to control an asset during playback                                  |
| Playback duration showing the remaining time of the clip                                      |
| Remove clips  |
| Reorder clips   |
| Export playlist   |
| High Dynamic Range (HDR) support - HLG (arib std-b67) / PQ (SMPTE 2084)                       |
| High Frame Rate (HFR) up to 120fps (ST2081-10, ST2081-11, ST2082-10, ST2082-11 and ST2082-30) |
| Preview - Possibility to change the playback speed by multiplier factors                      |
| Simple Time Delay: Scheduling a Playback of a Single File in Growing Recording Mode           |
| Read Metadata Timecode Package (Auto / Material Package / Source Package)                     |
| <b>Playout</b>  |
| <b>Playout Preparation</b>  |
| Build playlists in a Playlist Builder widget  |
| Create multiple Playlists   |
| Allow configuring playout clip action while preparing the playlist                            |
| Support visual separators for rPlayout playlists  |
| Drag and Drop clips to the player for media preparation                                       |
| Support insertion of Timecodes without separators ":" in the playlist builder                 |
| Use both types of TC (Relative and Absolute) for Mark-ins and mark-out at playlist builder    |
| Trim clips to be included in the Playlist   |
| Editable timecodes of the in and out points   |
| Re-arrange clips order  |

## Features

Duplicate Edit Decision Lists

Export Edit Decision Lists

### Playout Control

Edit playlist on the fly and while playing

Playlist countdown and clip countdown

File and clip list progress bars

Playout Capture streams through SDI and native window

Print to tape

Queue clip on the playlist

Queue on first frame and last frame

Queue on first frame the first clip of the playlist

Bypass action for playout clips

Pause Playlist

Playout to stream

Thumbnail preview of the current clip on the playlist and its remaining time until Playout of the next clip

On Air - current loaded playlist name

Loop a playlist

Loop one or more assets in the playlist

Drag and Drop Clip List entries in Playout Control

Multi-channel playout capability

Schedule Playout

Choose between Playout Services available - rPlayerSDI or CasparCG

Mini control bar for use with Playout Control

Keyboard shortcuts for playout control and associated WEB player

Autoplay option

As Run Log's containing Date, Time, Clip name, Time Code In, and Time Code Out

Prepare the Playout clip actions while preparing the playlist

### Input/output social media \*Optional

Google Chrome Social-m Plugin

Social-m - Add support for live stream capture

Metadata in Chrome Social-m Plugin

Capture to Facebook Live

Stream to Facebook Live

Stream to Twitch Live

Capture to YouTube Live

File based YouTube Upload

Capture X (Twitter) Live

Stream to X (Twitter) Live

Upload to Vimeo

Metadata social annotation and enhancement

### PAM - Production Asset Management

Advanced text search

Asset browser permissions

Asset collections

Asset essences

Asset essences for generic sources

Asset comments

Enable on-the-fly tagging

Flexible metadata management

Dynamic Automatic Jobs - Age value for CreationDate (Available for Copy, Move, Archive Workflows)

Display of Essences File Paths

Check-in via detector

Check-in via metadata update

Check-in via workflow

Interactive approval workflows

MOG player proxy

Move option in asset collections

Collections as input in automatic jobs

Private and shared asset collections

Show the creator of the collection

Statistics for collections

Save searches and filters

Rich logging workflows

User abstraction for in/out assets

Instant play, anytime and anywhere of any asset (with or without proxy)

### Metadata Enhancement and preservation

#### Artificial Intelligence

##### Audio

Audio clipping detection

Loudness detection

Silence detection

Voice activity detection

Audio mute detection

Audio phase detection

Mono audio detection

##### Video

Black frames detection

Video freeze detection

**Features**

- Scene change detection
- Black Margins detection
- Flashing video detection

**Object**

- Concept tagger 2.0
- Vehicle detection
- License plate detection

**Others**

- Timecode gap detection
- Update existing interplay entry with new metadata
- Possibility to add bounding boxes to player

**Transform**

- Automatically Blur License Plates
- Black margins automatic crop
- Remove audio clicks
- Remove audio clipping
- AI Upscale
- Reduce video flashing

**Additional AI Operations**

- Face recognition 2.0
- Face recognition - Support dataset with multiple images for each person
- Age prediction detection
- Object detection 2.0
- Optical Character Recognition (OCR)
- Speech recognition 2.0 (with ability to detect non speech tokens)

**mTALK**

- Audio communication between users
- QR code implementation
- WebApp (requires Android smartphone)
- Toggle Mode

**Analytics**

- Google Analytics and Tag Manager integration
- Option to enable and disable Analytics
- Track menu events
- Video metrics
- Track job control widget events
- Track asset explorer widget events

**Improved security**

- Support for Windows UAC
- Support for HTTP/HTTPS Ingress
- HTTPS (Hypertext Transfer Protocol Secure) for REST API
- Secure login
- User Impersonation
- Token based authentication
- Two-factor authentication
- Remote services, system restart, and settings recovery features
- DASH/HLS packager with DRM
- "Keep me signed in" login option
- User Verification through email
- Configurable password visibility in logs

**Transfer acceleration protocols**

- Aspera FASP transport technology - Transfer acceleration protocol
- FileCatalyst direct - Transfer acceleration protocol

**Hardware acceleration** \*If Hardware is installed or available

- Sony XAVC
- Panasonic AVC-Ultra
- Nvidia Nvenc

**General Purpose IN/OUT**

- GPI triggers supported
- GPO triggers supported

**Additional Highlights**

- REST API - allows interaction with RESTful web services
- Change Aspect Ratio (4:3 / 16:9 / 1.9:1 / 2:1 or use same as source)
- Active Format Description (Option to Preserve, Discard or Override)
- 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 - Human readable information on Services logs
- Logging - Add user information on flow actions
- Logging - Structured Logging
- SMTP E-mail Notifications
- Support an external Database
- Microsoft Edge / Firefox 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



### Features

|  |
|--|
| Dashboards presets for ease-of-use deployment  |
| Create custom dashboard templates  |
| Import and export of users Dashboards  |
| Associate same dashboards to multiple users  |
| LDAP user authentication   |
| User profile management  |
| Users permissions control  |
| Widget based modular interface   |
| Lock/Unlock widgets permission   |
| 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                                      |
| View which servers in a group are running Capture and Ingest Operations in a Group activity widget |
| Possibility to remove quick edit button from Job Control widget                                    |
| Permissions to activate or deactivate settings of Gang Capture widget                              |
| <b>Multiviewer</b>   |
| Configurable quality and target latency of the preview stream                                      |
| Ability to control to up to 4 players in a single dashboard  |
| <b>Maintenance</b>   |
| <b>Scheduler</b>   |
| Reboot host or group   |
| Export database (backup) as a scheduled task   |
| Export logs as a scheduled task  |
| <b>Activity</b>  |
| Export last activity   |
| Export all activity  |
| Export activity from a date range  |
| Clear all activity   |
| <b>Logs</b>  |
| Export logs  |
| <b>Backup</b>  |
| Export full backup - A full backup will create an archive of all the files and configurations      |
| Import full backup   |
| <b>Dashboards</b>  |
| Export dashboards from one user or all users   |
| Import dashboards  |
| <b>Data</b>  |
| Clean data usage   |
| Clean assets, flows and notifications  |
| Factory data reset   |
| Erase all data and reset the system  |
| Force clear cache  |

## Technical Specifications

### Supported File Inputs

#### Inputs

|                     |  |
|---------------------|--|
| <b>OnPrem</b>       | <b>Plain Files or Structures</b>                     |
|                     | ARRI ALEXA Cameras                                   |
|                     | BlackMagic Cameras                                   |
|                     | RED Digital Cinema                                   |
|                     | Avid Files   |
|                     | Avid Media Files (standalone or Nexis/ISIS)          |
|                     | Avid Sequences (master clips and rendered sequences) |
|                     | CANON DSLR 5D, 7D, C300, C100                        |
|                     | GoPro Cards  |
|                     | IKEGAMI GFPAK  |
|                     | JVC (AVC HD models)                                  |
|                     | NextoDI NSB-25                                       |
|                     | Panasonic AU-EVA1 and GH5 Cameras                    |
|                     | <b>Panasonic P2</b>                                  |
|                     | AJ-PCD 2 / AJ-PCD 20/30/35 / AJ-MPD1                 |
|                     | AU-XPDI1E / AU-XPDI3EJ                               |
|                     | <b>XDCAM EX:</b>                                     |
|                     | Sony SxS (SBAC-UT100, SBAC-US10/20/30)               |
|                     | <b>XDCAM HD</b>                                      |
|                     | Sony XDCAM HD: Disc (PDW-U1, PDW-U2, PDW-U4)         |
| XAVC Structures     |  |
| DJI (Camera Drones) |  |
| HLS Structures      |  |
| MPEG-TS Structures  |  |

### Inputs

|                              |                                    |
|------------------------------|------------------------------------|
| OnPrem                       | <b>Network</b>                     |
|                              | XDCAM Network                      |
|                              | P2 Network                         |
|                              | ARRI RAW Network                   |
|                              | Ikegami Network                    |
|                              | <b>Storage</b>                     |
|                              | Avid ISIS / Nexis                  |
|                              | Avid Unity™ MediaNetwork           |
|                              | DDP – Dynamic Drive Pool           |
|                              | Facilis TerraBlock                 |
|                              | Harmonic MediaGrid                 |
|                              | Editshare EFS                      |
|                              | NAS / SAS (SMB 2.0 and 3.0)        |
|                              | Quantum StorNext                   |
|                              | ScaleLogic NX2 & ZX NAS Storage    |
| EMC Isilon                   |                                    |
| QNAP                         |                                    |
| Studio Network Solutions EVO |                                    |
| Oracle Storage               |                                    |
| Netapp                       |                                    |
| Cloud                        | <b>Social Media</b>                |
|                              | Facebook                           |
|                              | X (Twitter)                        |
|                              | Vimeo                              |
|                              | YouTube                            |
|                              | <b>Professional Cloud Storages</b> |
|                              | Adobe Creative Cloud               |
|                              | Amazon S3 Glacier                  |
|                              | Microsoft Azure Storage            |
|                              | Tencent                            |
|                              | Lucidlink Cloud NAS                |
|                              | Google Cloud Storage               |
|                              | IBM Cloud Object Storage           |
|                              | Generic S3 storages                |
|                              | <b>Consumer Cloud Storages</b>     |
| Apple I Cloud Drive          |                                    |
| Dropbox                      |                                    |
| Google Drive                 |                                    |
| Microsoft One Drive          |                                    |

### Supported File Outputs

### Outputs

|                     |   |
|---------------------|---|
| OnPrem              | Avid ISIS / Nexis   |
|                     | Avid Unity™ MediaNetwork                                    |
|                     | DDP – Dynamic Drive Pool                                    |
|                     | Facilis TerraBlock  |
|                     | Harmonic MediaGrid  |
|                     | Editshare EFS   |
|                     | NAS / SAS (SMB 2.0 and 3.0)                                 |
|                     | Quantum StorNext  |
|                     | ScaleLogic NX2 & ZX NAS Storage                             |
|                     | EMC Isilon  |
|                     | QNAP  |
|                     | Studio Network Solutions EVO                                |
|                     | Oracle Storage  |
|                     | Netapp  |
|                     | FTP Servers (List on request)                               |
| Generic File Shares |   |
| Cloud               | <b>Consumer Cloud Storages</b>                              |
|                     | Apple I Cloud Drive   |
|                     | Dropbox   |
|                     | Google Drive  |
|                     | Microsoft One Drive   |
|                     | <b>Multiple and Adaptive bitrates for the OTT *Optional</b> |
|                     | <b>Professional Cloud Storages</b>                          |
|                     | Adobe Creative Cloud  |
|                     | Amazon S3 Glacier   |
|                     | Microsoft Azure Storage                                     |
|                     | Tencent   |
|                     | Lucidlink Cloud NAS   |
|                     | Google Cloud Storage  |
|                     | IBM Cloud Object Storage                                    |
|                     | Generic S3 storages   |

**Outputs**

|              |                               |
|--------------|-------------------------------|
| <b>Cloud</b> | <b>Social Media *Optional</b> |
|              | Facebook                      |
|              | X (Twitter)                   |
|              | Vimeo                         |
|              | YouTube                       |

**Supported Live Inputs**

**Inputs**

|   |  |
|---|--|
| <b>Live</b>   | <b>SDI</b>   |
|   | 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)                           |
|   | <b>Streams</b>                                       |
|   | Video Content Hyperlinks                             |
|   | HLS  |
|   | MPEG-TS  |
|   | MPEG-DASH  |
|   | RTMP (with support for HEVC / VP9 / AV1)             |
|   | RTP  |
|   | RTSP   |
|   | NewTek NDI   |
|   | UDP  |
|   | Haivision SRT  |
|   | WebRTC   |
|   | <b>Social Media</b>                                  |
|   | Facebook   |
|   | Twitch   |
|   | X (Twitter)  |
|   | YouTube  |
|   | <b>IP Live *Optional</b>                             |
|   | ST2022-6   |
|   | ST2022-7   |
| ST2110-10, ST2110-20, ST2110-21, ST2110-30, ST2110-31 |  |
| ST2110-40   |  |

**Supported Live Outputs**

**Outputs**

|   |  |
|---|--|
| <b>Live</b>   | <b>SDI</b>   |
|   | 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)                           |
|   | <b>Streams</b>                                       |
|   | 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   |
|   | <b>Vizzi</b>   |
|   | Live Output  |
|   | <b>Social Media *Optional</b>                        |
|   | Facebook   |
|   | Twitch   |
|   | X (Twitter)  |
|   | Vimeo  |
| YouTube   |  |
| <b>Multiple and Adaptive bitrates for the OTT *Optional</b> |  |
| <b>IP Live *Optional</b>                                    |  |
| ST2022-7  |  |
| ST2110-10, ST2110-20, ST2110-21, ST2110-30, ST2110-31       |  |
| ST2110-40   |  |

## Formats

### Input Formats

#### Input Video Formats

|   |
|---|
| ARRI ARRIRAW                                  |
| Blackmagic RAW                                |
| Digital Cinema Packages (DCP)                 |
| RED Digital Cinema                            |
| IMX 30/40/50 Mbps                             |
| MPEG2 LGOP 18/25/35 Mbps 4:2:0                |
| MPEG2 LGOP 50/70 Mbps 4:2:2                   |
| MPEG2 LGOP 422 50 Mbps                        |
| MPEG2 LGOP 420 1440x1080 35 Mbps              |
| MPEG2 LGOP 420 (FULL) 35 Mbps                 |
| DVCAM 25 Mbps                                 |
| XAVC Intra 50 / 100 Mbps                      |
| XAVC Intra 300 / 300 VBR / 480 / 480 VBR Mbps |
| XAVC LGOP 25 / 35 / 50 Mbps                   |
| XAVC LGOP 60 / 100 / 140 / 150 / 200 Mbps     |
| DVCPRO 25/50 Mbps / DVCPRO HD 100 Mbps        |
| AVC-Intra 50/100 Mbps                         |
| AVC-Intra 200 Mbps                            |
| AVC-Intra 2K422                               |
| AVC-Intra 4K422                               |
| AVC Ultra (LGOP 6/12/25/50 Mbps)              |
| DNxHD (SQ/HQ/HQX/LB)                          |
| DNxHR (SQ/HQ/HQX/LB)                          |
| H.264 4320P 80 - 150 Mbps High Profile        |
| H.264 4320P 150 - 280 Mbps High Profile       |
| 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 L10 10 Mbps                             |
| H.264 MOG 1Mbps                               |
| 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                    |
| H.265/HEVC 8K 25 Mbps LGOP                    |
| H.265/HEVC 8K 50 Mbps LGOP                    |
| H.265/HEVC 8K 100 Mbps LGOP                   |
| H.265/HEVC 4:2:2 LGOP                         |
| H.265/HEVC 4K 4:2:2 LGOP                      |
| H.265/HEVC 8K 4:2:2 LGOP                      |
| NDI HX H.264 - High Profile                   |
| NDI HX H.265 - High Profile                   |
| MPEG-5 EVC Baseline Profile                   |
| MPEG-5 EVC Main Profile                       |
| MPEG VVC/H266 Main Profile                    |
| ProRes 422 (SQ/HQ/LT)                         |
| ProRes 4444                                   |
| ProRes 4444XQ                                 |
| JPEG 2000 (Full HD)                           |
| JPEG 2000 (4K)                                |
| JPEG 2000 (8K)                                |
| Google® VP6 / VP7 / VP8 / VP9 (Full HD)       |
| Uncompressed UYVY 422 / V210 / RGBA           |
| AOMedia Video 1 (Full HD)                     |
| AOMedia Video 1 (4K)                          |
| AOMedia Video 1 (8K)                          |
| IMF (JPEG 2000 @ Full HD)                     |

### Input Video Formats

IMF (JPEG 2000 @ 4K)  
IMF (JPEG 2000 @ 8K)

### Output Formats

#### Output Video Formats

IMX 30/40/50 Mbps  
MPEG2 LGOP 18/25/35 Mbps 4:2:0  
MPEG2 LGOP 50/70 Mbps 4:2:2  
MPEG2 LGOP 422 50 Mbps  
MPEG2 LGOP 420 1440x1080 35 Mbps  
MPEG2 LGOP 420 (FULL) 35 Mbps  
DVCAM 25 Mbps  
XAVC Intra 50 / 100 Mbps  
XAVC Intra 300 / 300 VBR / 480 / 480 VBR Mbps  
XAVC LGOP 25 / 35 / 50 Mbps  
XAVC LGOP 60 / 100 / 140 / 150 / 200 Mbps  
DVCPRO 25/50 Mbps / DVCPRO HD 100 Mbps  
AVC-Intra 50/100 Mbps  
AVC-Intra 200 Mbps  
AVC-Intra 2K422  
AVC-Intra 4K422  
AVC Ultra (LGOP 6/12/25/50 Mbps)  
DNxHD (SQ/HQ/HQX/LB)  
DNxHR (SQ/HQ/HQX/LB)  
H.264 4320p 150 - 280 Mbps High Profile  
H.264 4320p 80 - 150 Mbps High Profile  
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 15-30 Mbps MAIN Profile  
H.264 L10 10 Mbps  
H.264 WebRTC Baseline  
H.265/HEVC LGOP 4:2:2  
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  
H.265/HEVC 8K 25 Mbps LGOP  
H.265/HEVC 8K 50 Mbps LGOP  
H.265/HEVC 8K 100 Mbps LGOP  
NDI HX H.264 - High Profile  
NDI HX H.265 - High Profile  
MPEG-5 EVC Baseline Profile  
MPEG-5 EVC Main Profile  
MPEG VVC/H266 Main Profile  
ProRes 422 (SQ/HQ/LT)  
ProRes 4444  
ProRes 4444XQ  
JPEG 2000 (Full HD)  
JPEG 2000 (4K)  
JPEG 2000 (8K)  
Google® VP6 / VP7 / VP8  
Google® VP9 (Full HD)  
Google® VP9 (4K)  
Google® VP9 (8K)  
Uncompressed UYVY 422 / V210 / RGBA  
AOMedia Video 1 (Full HD)

**Output Video Formats**

- AOMedia Video 1 (4K)
- AOMedia Video 1 (8K)
- IMF (JPEG 2000 @ Full HD)
- IMF (JPEG 2000 @ 4K)
- IMF (JPEG 2000 @ 8K)

**Proxy Formats**

**Output Proxy Formats**

- XAVC LGOP 25 / 35 Mbps
- AVC Ultra (LGOP 6/12/25 Mbps)
- H.264 @ 500 Kbps Flash
- H.264 @ 486p 1 / 1.5 Mbps Flash
- H.264 360p @ 1.6 Mbps Flash
- H.264 720 480p @ 8 / 10 Mbps Flash
- H.264 720p @ 8 / 15 / 16 / 20 / 24 / 25 Mbps Flash
- H.264 854 480p @ 8 / 10 Mbps Flash
- H.264 960 540p @ 3 Mbps Flash
- H.264 1080p @ 8 / 15 / 16 / 20 / 24 / 25 Mbps Flash
- H.264 SD @ 4 / 8 / 15 / 20 / 25 Mbps
- H.264 480p @ 0.5 - 2 Mbps High Profile (Live)
- H.264 360p @ 0.4 - 1 Mbps High Profile (Live)
- H.264 240p @ 0.3 - 0.7 Mbps High Profile (Live)
- ProRes Proxy 1920x1080
- ProRes Proxy 1280x720
- ProRes Proxy 960x540
- ProRes Proxy SD (16:9 Raster)
- ProRes Proxy SD
- MPEG-1 (layer 2) @ 1.5 Mbps
- Avid MPEG-2 (SIF @ 2Mbps)
- H.264 MOG 1Mbps
- H.264 Interplay Web (SD, 800 Kbps, and 2 Mbps)
- Sony Proxy AV (MPEG-4 Part-2) @1.5 Mbps

**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.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
- Google® VP9 (Full HD)
- Google® VP9 (4K)

\* Optional output

## Product Integrations

| Editing Systems                    | MAM / PAM / DAM                  | Cameras                                    | Consumer Cloud Storages                |
|------------------------------------|----------------------------------|--|--|
| Adobe Premiere Pro                 | CatDV MAM                        | Canon (DSLR5D, DSLR 7D)                    | Dropbox                                |
| AVID Media Composer                | CatDV PAM                        | Canon (DSLR C300, DSLR C100)               | Google Drive                           |
| AVID Media Central UX              | CatDV DAM                        | ARRI Alexa XT (ARRIRAW)                    | Microsoft One Drive                    |
| AVID Media Central Cloud UX        | eMAM Media Asset Management      | Panasonic AU-EVA1                          | Apple I Cloud Drive                    |
| Apple Final Cut Pro X              | Telestream: Masstech             | Panasonic GH5 Cameras                      | CDN's                                  |
| Edius: Pro 8, Workgroup 9          | AVID Interplay                   | Panasonic CX350 HEVC                       | Lumen                                  |
| BlackMagic: DaVinci Resolve Studio | AVID Media Central UX            | Panasonic PTZ Cameras                      | Fastly                                 |
| Autodesk: Flame                    | AVID Media Central Cloud UX      | Ikegami Gfpack                             | Akamai Technologies                    |
| Storage                            | AXLE MAM                         | JVC AVC HD camera models                   | Microsoft Azure                        |
| AVID ISIS Storage                  | Editshare Flow                   | LUMIX DC-S1H                               | Cloudflare                             |
| AVID Nexis Storage                 | MOG Vizzi                        | NewTek PTZ3 UHD Camera                     | Limelight Networks                     |
| Avid Unity™ MediaNetwork           | Medialoopster MAM                | NewTek PTZ3 Camera                         | Amazon CloudFront                      |
| Dynamic Drive Pool SAN Storage     | Professional Cloud Storages      | RED Digital Cinema                         | BootstrapCDN                           |
| Facilis Terrablock                 | Adobe Creative Cloud             | GOPRO                                      | StackPath                              |
| Harmonic MediaGrid                 | Amazon EC2                       | Card Readers                               | KeyCDN                                 |
| Quantum: Storenext                 | Amazon S3                        | Panasonic P2 (AJ PCD 2 / AJ PCD 20/30/35)  | Rackspace                              |
| Scalelogic: NX2 & ZX NAS Storage   | Amazon S3 Glacier                | Panasonic P2 (AJ MPD1)                     | Alibaba Cloud Content Delivery Service |
| Editshare EFS                      | Microsoft Azure Storage          | Panasonic P2 (AU-XPDI1E / AU-XPDI3EJ)      | CacheFly                               |
| EMC: Isilon                        | Microsoft Azure Virtual Machines | Panasonic P2 (AG HPG 20)                   | Verizon                                |
| QNAP                               | Tencent: Cloud Storage           | Sony XDCAM EX (SxS Cards): SBAC-US10/20/30 | Social Media *Optional                 |
| Studio Network Solutions: EVO      | Lucidlink Cloud NAS              | Sony XDCAM EX (SxS Cards): SBAC-UT100      | Facebook                               |
| Oracle Storage                     | Google Cloud Storage             | Sony XDCAM EX (SxS Cards): MRW E-80        | Twitch                                 |
| Netapp                             | IBM Cloud Object Storage         | Sony XDCAM EX (SxS Cards): MRW E-90        | X (Twitter)                            |
| Transfer Acceleration Protocols    | Generic S3                       | Sony Disc Reader: PDW-U1, PDW-U2           | YouTube                                |
| File Catalyst Direct               | Stream                           | VTR Decks                                  | Vimeo                                  |
| IBM: Aspera File Transfer          | Newtek NDI                       | XDCAM HD: Disc (PDW 1500, PDW HD1500)      |  |
| Peripheral Devices                 | Haivision SRT                    | XDCAM HD: Disc (PDW F70)                   |  |
| Countour Shuttle Pro V2            | Structures                       | XDCAM Station (XDS1000)                    |  |
| Elgato Stream Deck                 | XAVC Structures                  |  |  |

## Server Options

|                           | Features                       | Specs                                 |                                |
|---------------------------|--------------------------------|---------------------------------------|--------------------------------|
| System                    | <b>Platform</b>                | Dell R750                             |                                |
|                           | <b>GPU</b>                     | 2x Nvidia A2                          |                                |
|                           | <b>Video IO</b>                | 2x DeckLink 8K Pro                    |                                |
|                           | <b>AVC Hardware Encoder</b>    | 2x Matrox                             |                                |
|                           | <b>Storage Drive</b>           | 8TB SSD                               |                                |
|                           | <b>Operating System Drive</b>  | 480GB RAID 1                          |                                |
|                           | <b>Operating System</b>        | Windows 10 Enterprise (LTSC)          |                                |
| Connectivity              | <b>Networking</b>              | 1Gb Ethernet Port                     | 2                              |
|                           |                                | 10Gb Ethernet Port SFP+               | 2                              |
|                           | <b>Video</b>                   | VGA Out                               | 1                              |
|                           |                                | 2.0                                   | 1                              |
|                           | <b>USB</b>                     | 3.0                                   | 1                              |
|                           |                                | BNC 12G In/Out                        | 8                              |
|                           | Ref. In                        | 2                                     |                                |
| <b>Power Requirements</b> | Dual 1100W                     |                                       |                                |
| Extended Connectivity     | <b>Peripheral Board**</b>      | LTC Input                             | 1                              |
|                           |                                | Audio Out                             | 1                              |
|                           |                                | Breakout Connector                    | 1                              |
|                           | <b>Breakout Cable</b>          | RS422                                 | 4                              |
|                           |                                | GPO branch with 4 outputs             | 1                              |
|                           |                                | GPI branch with 4 inputs              | 1                              |
| Other                     | <b>Dimensions &amp; Weight</b> | 2RU, 772x482x86.8mm (D, W, H), ~40 kg |                                |
|                           | <b>Delivery Packaging</b>      | 970x660x310mm (D, W, H), ~45Kg        |                                |
|                           | <b>Temperature</b>             | <b>Storage</b>                        | -40°C to 65°C (-40°F to 149°F) |
|                           |                                | <b>Continuous Operation</b>           | 10°C to 35°C (50°F to 95°F)    |
|                           | <b>What is Included</b>        | <b>Power Cable</b>                    | 2x C13 to C14                  |
| <b>Other</b>              |                                | Static rails for 2/4-post racks       |                                |

## Concurrent Media Operations

With mDECK Grand av, 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 recording, ingest, transcoding, playback, file preview, live channel switching, and intercom.

mDECK Grand av supports up to 16 media operations at the same time. Within this margin, you can combine the operations shown in the table below:

| Concurrent Media Operations |                    |                        |                       |                     |                   |
|-----------------------------|--------------------|------------------------|-----------------------|---------------------|-------------------|
| Record                      | Ingest & Transcode | Playback               | File Preview          | Live Switch         | Intercom          |
| Up to 16 live channels      | Up to 4 operations | Up to 8 playback files | Up to 5 files preview | Up to 1 live switch | Up to 1 operation |

**Note:** when using operations dependent on video inputs and outputs, the physical limit of the video cards must be respected. Thus, the sum of these operations cannot be greater than 8, but when using the AVC encoder, the limit is 4 UHD.

## Product

| Part Number | Product        | Description   |
|-------------|----------------|---|
| mdgrav      | mDECK Grand av | Deck appliance for hybrid workflows with additional XAVC & AVC-Ultra hardware encoder accelerator of up to 16 combined media operations |

## Available Options

Choose from the products below to customize the mDECK Grand av according to your business rules.

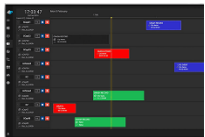
### Production Tools

Tools for asset management and workflow orchestration.



#### mPAM

Benefit from a state-of-the-art content and production asset manager tool with mPAM. Streamline daily operations and empower your creative teams with the right tools to find, manage, track, enhance and deliver media files throughout the entire production ecosystem from a single interface.



#### 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  |
|-------------|---------|--|
| mpam1u      | mPAM    | Content and production asset manager per licensed user |
| mpla1c      | mPLAN   | Scheduler & Router Control per licensed channel        |

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

### Add-ons

Output options to complement your workflows.

| Part Number | Product            | Description  |
|-------------|--------------------|--|
| groasa      | OTT & Social media | Multiple output resolutions for OTT & Simultaneous social media shares |

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



## Plugins

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



### Social-m

Quickly fetch and publish your live or VoD contents to social media.

This social media plugin for Chrome will let users ingest media without having to access the mDECK GUI, allowing the content to be ready for editing or any other task, in no time. Simply open the plugin, insert the URL and run the workflow to fetch your video, with option to preserve metadata.



### 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                       |
|-------------|-----------------|-----------------------------------|
| smpi        | Social-m plugin | Social media capture & Publishing |
| scpi        | Screen-m plugin | Screen capture & Delivery         |

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

## Artificial Intelligence

Artificial intelligence engine to boost and facilitate media tasks even more.

| Default (already included) |   |
|----------------------------|---|
| Black frames detection     | Voice activity detection                          |
| Video freeze detection     | Silence detection                                 |
| Black margins detection    | Loudness detection                                |
| Audio clipping detection   | Loudness balance                                  |
| Audio mute detection       | Vehicle detection                                 |
| Audio phase detection      | License plate detection                           |
| Audio mono detection       | Concept tagger                                    |
| Timecode gap detection     | Bouncing boxes                                    |
| Scene change detection     | Update existing interplay entry with new metadata |
| Transformation             |   |
| Frame rate conversion      | Crop black margins                                |
| Remove audio clicks        | AI upscale  |
| Remove audio clipping      | Blur license plates                               |

| Additional AI Operations |                                     |
|--------------------------|-------------------------------------|
| Part Number              | Product                             |
| graifr                   | Face Recognition and Age Prediction |
| graiod                   | Object Detection                    |
| graicr                   | Optical Character Recognition       |
| graisr                   | Speech Recognition                  |

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

## Cards

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

| Part Number | Product         | Description   |
|-------------|-----------------|---|
| pcbx        | Peripheral card | 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. Therefore, when integrating a Live IP card, all existing SDI inputs/outputs will be seamlessly replaced.

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

Contact our sales team at [sales@mog-technologies.com](mailto:sales@mog-technologies.com) to find out how to purchase or in case you need more information.

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