# mDECK Grand dn

Overview

Produce and distribute broadcast-quality video content, with mDECK Grand dn, a professional media deck that can combine operations of record, ingest, transcode, and playback content in 4K, UHD, FHD, and NDI.

This flexible media appliance not only performs hybrid workflows (file-based and live) but also supports the most used formats on the market and allows users to work together as a group. This makes it a great choice for digital news organizations.

Additionally, it comes with 8TB local storage, PSU redundancy, an OS drive, and can be pre-configured to support IP Live workflows.
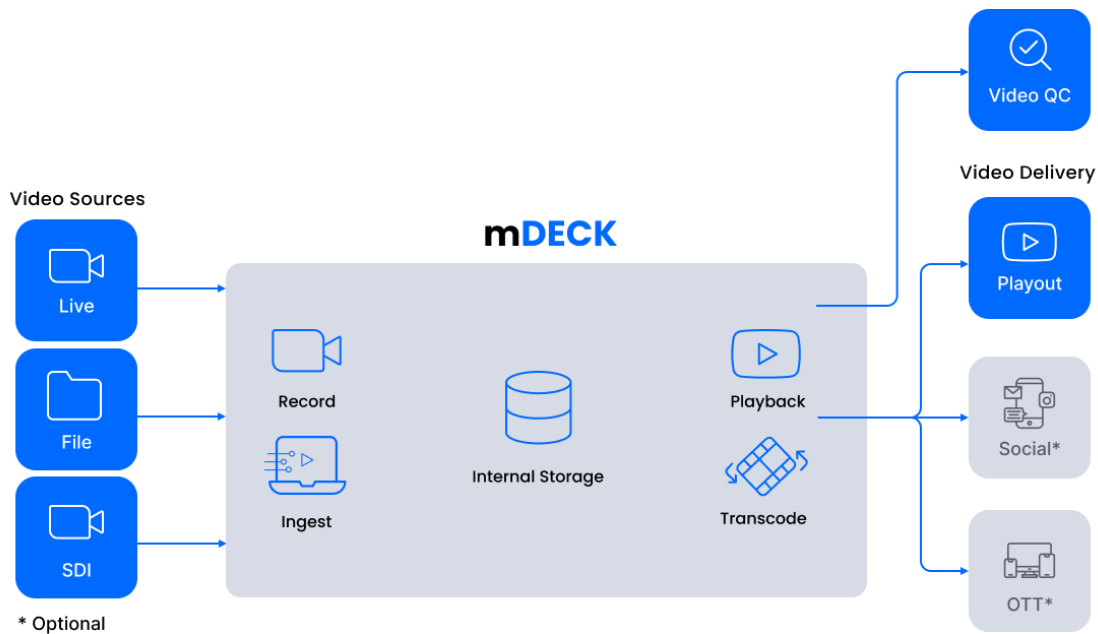
Highlights

- mSWITCH - Remote live switching and composing
- mTALK - Audio communication between users
- Live to file - multiple simultaneous records
- Metadata preservation, enhancement, and enrichment
- Flexible file naming and renaming engine

- Multiple simultaneous transcodes
- File playback - multiple simultaneous plays
- Proxy generation
- Artificial intelligence

Specially Designed For

- Educational/Government
- Live Entertainment/Worship
- Corporate
- Digital News

- Archiving
- Web publishing
- Television/Broadcasting
- System Integrators/Rentals

Features

Features
Timecode support
LTC (SMPTE 12M)
VITC (SMPTE RP188)
Time of Day
Serial Control Protocols
VTR (BVW) - Serial
VTR (VDCP) - Serial
Multiple LIVE and simultaneous records
Crash Record operations
Gang Capture operations
Independent workflow selection in Gang Captures
Unique workflow for gang captures while using clipnaming with counters
Conceal/Hide option for unused Capture Instances
Synchronize (different) Gang Captures
Flexible Gang Capture channel configurations / Choose which channels are present in the gang
Frame Chase editing
Unlimited capture duration support
Loop record support
Extend a playlist's maximum duration in a Loop Record workflow
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 ***required Nablet AMA Plugin**
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
Generate MP4 files as Fragmented MP4 via DCP Packager
Add XML sidecars with WAV file as output while recording
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
Export in "MOG playlist" format (.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)
Medialoopster Integration in Capture operations
Medialoopster Integration in Batch Capture operations
Video Router Protocols
Quartz
Probel SW-P-08
Jupiter ASCII
Blackmagic Videohub Ethernet Protocol
Operation modes
Automatic
Manual
Scheduled

Features

Clipnaming

Flexible file renaming engine

Create diversified clipnaming templates

Clipnaming based on 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

"CreationDate" field can refer to a desired Time Zone

Add the label "_p" to proxy clips' names

Multi-Configuration metadata management and enrichment

An efficient internal asset management

Quickly search for assets metadata

Directly manage your assets metadata

Generate metadata directly through capture operations

Prevent the overwrite of metadata fields

Protect metadata fields

Delete custom metadata

Edit group clips metadata

Edit a file's source metadata based on a configured metadata profile

"Description" field editable in metadata widget

Set "Description" field as a column in the Asset Explorer list view

Forward metadata to Gang Captures

Favorite metadata fields

Create custom metadata fields

Add a "Rating" metadata field

Update the source metadata directly through the metadata widget

Add asset tags insertion in preset list

Re-use lists of possible values

Update Metadata in Media Central/Interplay using AMT-3 library

Rename media in Interplay after a capture has begun

Take field (counter)

Support for "Reel" metadata field using Apple ProRes Wrapper

Read metadata from pre-configured cloud storages (Amazon S3 / Google Cloud Storage / Tencent / IBM Cloud Object Storage)

Preserve specific Arri fields

Preserve RED digital cinema color information

Find immediately and learn everything about any asset

Show or hide proxies on Asset Browser

Sort, order and search for files on Asset Browser

Asset Explorer - Resizable thumbnails

Asset Explorer - Support asset availability

Search for all assets on Asset Explorer

Extract thumbnails and posters while indexing on Asset Explorer

Asset Explorer - Playable thumbnails

Preview media with interactive Pop-up Players

Asset Explorer - View the exact duration of files with more than 24 hours

Asset Selection -View the total duration of the selected assets

Configure the asset's 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

Features
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
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
Ability to mute proxy on the 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 with Closed Captions

Locators
- Create locators with shortcut keys
- Edit and delete locators
- Edit the locators' description
- Insertion and viewing
- Create and freely customize action fields
- Insert comments in a marker's widget tab
- Locators source in markers widget
- Select multiple subcategories for a single locator
- Order asset locators by timecode
- Establish Absolute or Relative timecode for source locators
- Enter Timecode without the need of entering colons
- Eject locators using the player eject button
- Merge locators
- Support for locators with AMT captures
- Send locators directly to Gang Captures
- Send locators instantly to Playout
- Preserve Metadata Enhancement locators created by an Automatic Job

Scheduler (Calendar View)
- Schedule a Record operation
- Schedule Automatic Jobs
- Schedule Gang Captures
- Schedule Playouts
- Schedule Maintenance Tasks (Reboot, Export Logs, Export Full Backup)
- Edit individual events
- Export activity events
- Allow editing of settings for each occurrence/repetition
- Set the number of an event's repetitions
- Check for collisions between events and 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
- 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
- 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

Features
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
Perform captures from a MOG S1000
Perform captures from an Airspeed 5000
Perform captures from a Softron Movie Recorder

Scheduler (Record Grid) - Unifies in a single rollout view all ingest activities *Optional

- Schedule a Record operation
- Schedule Gang Captures
- Create new scheduled events directly from the timeline
- Perform crash record captures directly from the grid view
- Metadata Insertion availability
- Use of pre-set naming templates
- Edit scheduler individual events
- Edit an event after it has started
- Edit settings for each occurrence/repetition
- Trigger Capture events (Any day, On Working Days or only on Weekends)
- Adjust events by dragging them on the timeline
- Check collision between events with repetitions
- On channel settings assign an Input a workflow a router source and a duration and start recording on the fly
- Change router source cross point from record scheduler during a live event
- Change router source on rollout
- Copy an event's name after it is complete
- Perform captures from a MOG S1000
- Selectable MOG S1000 capture profiles
- Perform captures from an Airspeed 5000
- Perform captures from a Softron Movie Recorder
- Pre-roll and post-roll options for scheduled events
- Configure the number of events repetitions
- Define events to be triggered on any day, working days or weekends only
- Set the Calendar Notion option to automatically adjust to daylight time
- Expandable and collapsible views
- Jump to date to seek events by day or in a 7 days period
- Choose between AVID or MOG color schemes
- Confirm a "Stop" action

Scheduler (Playout Grid View) - Unifies in a single rollout view all Playout activities *Optional

- Grid View for Playout
- Crash Playout directly from the Grid View
- Loop a playlist
- Schedule Clip Lists to be Played out
- Adjust to a desired Time Zone
- Ability to set a pre-determined number of repetitions
- Trigger Playout events (Any day, On Working Days or only on Weekends)

Signal error detection and related recovery actions

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

Checksum media

- MD5 hash file
- MDL - Media hash list

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)
- Support Live Stream from sCapture as rPlayout input
- Variable Frame Rate Input
- Support IGMPv3 multicast
- Add possibility to change the transport stream segments duration

Features

MPEG-TS Support

Capture of MPEG-Transport Streams

Support of MPEG-TS program IDs

NDI

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

HLS

Configurable HLS segment duration

Configurable HLS Playlist segment count

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

Live switcher - Capture switcher producer

Commute between channels while recording

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

File ingest

Execute multiple simultaneous transcodes

Batch ingest

Card ingest

Clip merge

Clip renaming

Disable Clip File Naming generation

Partially restore clips

Rough cut

Establish priority levels

Pause File Based ingest operations

Insert Subclips SOM and EOM without colons

Automatic drag and drop ingest

Drag and drop media from several 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

Merge as sequence by sequence XML for MP4

Automatically select workflows available in job control attending the source files

Cut growing files and send them to (a playlist for) playout

Directly select the storage on the dashboard instead of accessing workflow profiles

Features
Copy assets
Group resulting assets into a single one
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 transcoding/ingesting
Place 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 OPAtom as output
Opt to not overwrite files
Support for .MOV files containing "Run-length encoding" video essence
Enable "growing" support on EDL ingest workflow
Timecode SUM of selected cuts
Merge assets as EDL, regardless of the input's format
Merge Trimmed files
Merge files with different framerates
Merge P2 with different audio channels
Merge operations for Devices sources
Allow the 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)
Create Edit Decision Lists with cut points
View the total duration of the sub-clips in an EDL widget
Ingest from cloud locations
Digital Cinema Package (DCP) support
Choose to force fragment MP4 clips while uploading to a S3 bucket
Generation of MP4 files as fragmented MP4 with DCP packager
Digital Picture Exchange (DPX) support
Select IMF (Netflix Compliant) as the output metadata
FTP for generic network devices as input
Ability to delete OPAtom source files after ingest
Support for GOPRO spanned files
Support video with vertical rotation
MOG file package support
Support MOG Package from Cloud Storages
Outgest growing media directly from Interplay
Dual check in to interplay in a merge as sequence operation with the same MOBID for the sequences
HDR (PQ, HLG) conversion to SDR as output
Ingest image files
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 match the aspect ratio
Delete an Output via Job Abort
Schedule an Ingest operation through the Calendar via Automatic Jobs
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"
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
Create Live Ingest Operations
Live Sources made available in the Asset Browser/Explorer widgets
Override start timecode

Features

Index clips with same name but with different metadata

Exclude file extensions from File inputs

Burn-In Video options

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

Quality control - Report

   Video Report

      Black frames detection

      Video freeze detection

      Scene change detection

   Audio Report

      Audio clipping detection

      Loudness detection

      Silence detection

   Others

      Timecode gap detection

Automated ingest

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

Re-process assets with the same name

Support metadata enhancement workflows

Vizzi Collections support

File playback

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

Preview Editing Decision Lists

Preview Clip Lists

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

Create new playlists with the current assets selection

High Dynamic Range (HDR) support - HLG (arib std-b67) / PQ (SMPTE 2084)

Features
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)

Playout

Playout Preparation

- 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
- 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 *Optional

- Advanced text search
- Asset browser permissions
- Asset collections
- Asset essences
- Asset essences for generic sources

Features
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
Optional Proxy creation
Manual Proxy creation
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)
Disk-to-Disk Storage Manager (Archive and Restore)

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
- 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 *Optional

- 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)

Features

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
- Token based authentication
- Two-factor authentication
- Remote services, system restart, and settings recovery features
- DASH/HLS packager with DRM
- Opt to "Keep me signed in"
- Send a User Verification through email
- Configurable password visibility in logs

Orchestration
- Orchestration View for output workflows
- Services Menu that eases Group and Cluser Configurarion while displaying running servicers per node

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
- 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

Features
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
(Set Permissions to) Activate or Deactivate Settings of a Gang Capture 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
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 File Inputs

Inputs		
	Plain Files or Structures	
	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	
OnPrem	GoPro Cards	
	IKEGAMI GFPAK	
	JVC (AVC HD models)	
	NextoDI NSB-25	
	Panasonic AU-EVA1 and GH5 Cameras	
	Panasonic P2	
	AJ-PCD 2 / AJ-PCD 20/30/35 / AJ-MPD1	
	AU-XPD1E / AU-XPD3EJ	

Inputs		
OnPrem	**XDCAM EX**	
	Sony SxS (SBAC-UT100, SBAC-US10/20/30)	
	XDCAM HD	
	Sony XDCAM HD: Disc (PDW-U1, PDW-U2, PDW-U4)	
	XAVC Structures	
	DJI (Camera Drones)	
	HLS Structures	13
	MPEG-TS Structures	
	MOG Package	
	Network	
	XDCAM Network	
	P2 Network	
	ARRI RAW Network	
	Ikegami Network	
	Storage	
	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	**Social Media**	
	Facebook	
	X (Twitter)	
	Vimeo	
	YouTube	
	Professional Cloud Storages	
	Adobe Creative Cloud	
	Amazon S3 Glacier	
	Microsoft Azure Storage	
	Tencent	
	Lucidlink Cloud NAS	
	Google Cloud Storage	
	IBM Cloud Object Storage	
	Generic S3 storages	
	Consumer Cloud Storages	
	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	**Consumer Cloud Storages**
	Apple I Cloud Drive
	Dropbox
	Google Drive
	Microsoft One Drive
	Multiple and Adaptive bitrates for the OTT *Optional
	Professional Cloud Storages
	Adobe Creative Cloud
	Amazon S3 Glacier
	Microsoft Azure Storage
	Tencent
	Lucidlink Cloud NAS
	Google Cloud Storage
	IBM Cloud Object Storage
	Generic S3 storages
	Social Media *Optional
	Facebook
	X (Twitter)
	Vimeo
	YouTube

Supported Live Inputs

Inputs	
Live	**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)
	Support for 8, 10 and 12 bits
	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

Inputs		
Live	**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	
	ST2110 - NMOS IS-04 and IS-05 support	

Supported Live Outputs

Outputs		
Live	**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)	
	Support for 8, 10 and 12 bits	
	Streams	
	HLS	
	HTTPS Push	
	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 *Optional	
	Facebook	
	Twitch	
	X (Twitter)	
	Vimeo	
	YouTube	
	Multiple and Adaptive bitrates for the OTT *Optional	
	IP Live *Optional	
	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)
Digital Picture Exchange (DPX)
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

Input Video Formats
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)
IMF (JPEG 2000 @ 4K)
IMF (JPEG 2000 @ 8K)

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 1080i 35 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
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

Output Video Formats
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)
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 1080i 35 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)

Output OTT Formats
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
Google® VP9 (Full HD)
Google® VP9 (4K)

* Optional output

Product Integrations

Editing Sytems	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 UnityTM 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-XPD1E / AU-XPD3EJ)	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)	**Archive**
Peripheral Devices	Haivision SRT	XDCAM HD: Disc (PDW F70)	Archiware P5
Countour Shuttle Pro V2	Zixi	XDCAM Station (XDS1000)	**Audio**
Elgato Stream Deck	**Structures**		Dante *Negotiated separately
	XAVC Structures		

Server Options

Features		Specs
System	**Platform**	Dell R750
	GPU	1x Nvidia A2
	Video IO	1x DeckLink 8K Pro
	Storage Drive	8TB SSD
	Operating System Drive	480GB RAID 1
	Operating System	Windows 10 Enterprise (LTSC)

	Features		Specs
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		4
	Ref. In		1
	Power Requirements		Dual 1100W

	Features		Specs
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

	Features		Specs
Other	**Dimensions & Weight**		2RU, 772x482x86.8mm (D, W, H), ~40 kg
	Delivery Packaging		970x660x310mm (D, W, H), ~45Kg
	Temperature	**Storage**	−40°C to 65°C (−40°F to 149°F)
		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 mDECK Grand dn, 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 dn supports up to 8 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 4 live channels	Up to 1 operation	Up to 4 playback files	Up to 5 files preview	Up to 1 operation	Up to 1 operation

Note: when using operations dependent on video inputs and outputs, the physical limit of the video card must be respected. Thus, the sum of these operations cannot be greater than 4.

Product

Part Number	Product	Description
mdgrdn	mDECK Grand dn	Deck appliance for digital news workflows of up to 8 combined media operations

Available Options

Choose from the products below to customize the mDECK Grand dn 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	Options 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.*

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 2 UHD IP channels into your media production infrastructure

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.