mDECK Grand io

Overview

Take your content production to the next level with DECK Grand io, a professional media deck that ensures incredible reliability and elasticity with the combination of record, ingest, transcode, and playback operations in 4K, UHD, FHD, and NDI. All in a single box and with users working together as a group.

This powerful appliance ensures broadcast quality for hybrid workflows (file-based and live) while supporting the most used formats on the market.

In addition, 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 live - multiple simultaneous records
- Metadata preservation, enhancement, and enrichment
- File playback - multiple simultaneous plays
- Multiple simultaneous transcodes
- Automated file ingest
- Media checksum
- Closed captions
- 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 intelligence

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
Timecode support
LTC (SMPTE 12M)
VITC (SMPTE RP188)
Time of Day
From VTR (BVW) - 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
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 ***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
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)
Operation modes
Automatic
Manual
Scheduled
Clipnaming
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
Multi-Configuration metadata management and enrichment
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
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
Time zone Support
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
Signal error detection
Drop frame detection
Timecode breaks support
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
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
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

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
File ingest
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 OPAtom 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 OPAtom 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

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
- 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
- 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)

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

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

   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

   Dashboards presets for ease-of-use deployment

   Create custom dashboard templates

Features
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
Multiviewer
Configurable 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
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	
	GoPro Cards	
	IKEGAMI GFPAK	
	JVC (AVC HD models)	
	NextoDI NSB-25	
OnPrem	Panasonic AU-EVA1 and GH5 Cameras	
	Panasonic P2	
	AJ-PCD 2 / AJ-PCD 20/30/35 / AJ-MPD1	
	AU-XPD1E / AU-XPD3EJ	
	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	
	MPEG-TS Structures	

Inputs		
OnPrem	**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	

Outputs
Cloud
IBM Cloud Object Storage
Generic S3 storages
Social Media *Optional
Facebook
X (Twitter)
Vimeo
YouTube

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

Supported Live Outputs

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)
	Streams
	HLS
	Microsoft Smooth Streaming
	MPEG-DASH
	Low Latency Dash - LL-Dash
	NewTek NDI
	MPEG-TS
	RTMP (with support for HEVC / VP9 / AV1)
	RTP
	RTSP
	UDP
	Haivision SRT
	WebRTC
	Vizzi
	Live Output
	Social Media *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)
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 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)	
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	Platform		Dell R750
	GPU		2x Nvidia A2
	Video IO		4x DeckLink 8K Pro
	Storage Drive		8TB SSD
	Operating System Drive		480GB RAID 1
	Operating System		Windows 10 Enterprise (LTSC)
Connectivity	Networking	1Gb Ethernet Port	2
		10Gb Ethernet Port SFP+	2
	Video	VGA Out	1
	USB	2.0	1
		3.0	1
	BNC 12G In/Out		16
	Ref. In		4
	Power Requirements		Dual 1100W
Extended Connectivity	Peripheral Board**	LTC Input	1
		Audio Out	1
		Breakout Connector	1
	Breakout Cable	RS422	4
		GPO branch with 4 outputs	1
		GPI branch with 4 inputs	1
Other	Dimensions & Weight		2RU, 772x482x86.8mm (D, W, H), ~40 kg
	Delivery Packaging		970x660x310mm (D, W, H), ~45Kg
	Temperature	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

Concurrent Media Operations

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

Media operations include recording, ingest, transcoding, playback, file preview, live channel switching, and intercom.

mDECK Grand io 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 16 playback files	Up to 5 files preview	Up to 1 live switch	Up to 1 operation

Product

Part Number	Product	Description
mdgrio	mDECK Grand io	Deck appliance for hybrid workflows of up to 16 combined media operations

Available Options

Choose from the products below to customize the mDECK Grand io 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.
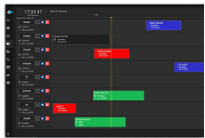
mPLAN

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

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

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