

mDECK Densu io

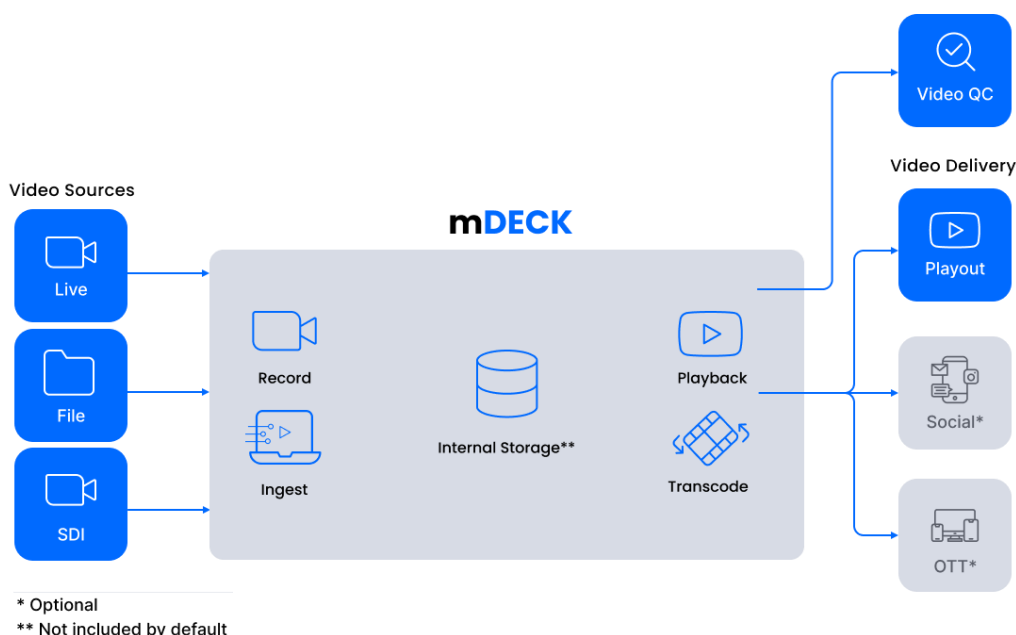


Overview

Optimize your media production and distribution workflows with mDECK Densu io, a professional media deck that can combine operations of record, ingest, transcode, and playback content in FHD, and NDI in a single box.

This compact and cost-effective media deck 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 powerful media deck comes with PSU redundancy and an OS drive, and can be pre-configured to support IP Live workflows. It also offers the possibility of adding local storage for greater flexibility and increased capacity.



Highlights

- mPAM - Content and production asset manager for up to 2 users
- mSWITCH - Remote live switching and compositing
- mTALK - Audio communication between users
- Live to live - multiple simultaneous records
- Batch capture
- Multiple simultaneous transcodes
- Automated file ingest
- Metadata preservation, enhancement, and enrichment
- File playback - multiple simultaneous plays
- Playlist management
- Quality control, audio, and video report
- Flexible file naming and renaming engine
- Locators support
- Closed captions
- Media checksum
- 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
- Mobile Studios/OB Vans
- Digitalization
- Archiving
- Post-Production
- Television/Broadcasting
- OTT & Streaming

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 (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

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

Features

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
- Playback from SDI Inputs
- Playback from Streams Inputs
- Playback 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) playback
- Directly select the storage on the dashboard instead of accessing workflow profiles
- 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

Features

- 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 OPAAtom 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 OPAAtom 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
- 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

Features

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)
- 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

Features

- Payout to stream
- Thumbnail preview of the current clip on the playlist and its remaining time until Payout 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 Payout Control
- Multi-channel payout capability
- Schedule Payout
- Choose between Payout Services available - rPlayerSDI or CasparCG
- Mini control bar for use with Payout Control
- Keyboard shortcuts for payout 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 Payout 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
- 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)

Metadata Enhancement and preservation

Artificial Intelligence

Audio

- Audio clipping detection
- Loudness detection
- Silence detection
- Voice activity detection
- Audio mute detection

Features

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

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

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 Cluster Configuration while displaying running services per node

Transfer acceleration protocols

Aspera FASP transport technology - Transfer acceleration protocol

FileCatalyst direct - Transfer acceleration protocol

Features

Hardware acceleration *If Hardware is installed or available

Intel QSV

General Purpose IN/OUT

GPI triggers supported

GPO triggers supported

Additional Highlights

REST API - allows interaction with RESTful web services

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

Control XPRESS display panel with peripheral API

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

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

Features

Dashboards

- Export dashboards from one user or all users
- Import dashboards

Data

- Clean data usage
- Clean assets, flows and notifications
- Perform a Factory Data Reset
- Erase all data and reset the system
- Force clear cache

Technical Specifications

Supported 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
- Panasonic AU-EVA1 and GH5 Cameras

Panasonic P2

- AJ-PCD 2 / AJ-PCD 20/30/35 / AJ-MPD1
- AU-XPDI1E / AU-XPDI3EJ

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)

OnPrem

- HLS Structures
- 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

Inputs

| | |
|---------------------|------------------------------------|
| 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) |
| | 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 |
| | 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) |
| | 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 | |

Outputs

| | |
|-------------|---|
| Live | 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 |
| MPEG2 LGOP 420 (FULL) 35 Mbps |
| DVCAM 25 Mbps |
| XAVC Intra 50 / 100 Mbps |
| XAVC LGOP 25 / 35 / 50 Mbps |
| DVCPRO 25/50 Mbps / DVCPRO HD 100 Mbps |
| AVC-Intra 50/100 Mbps |
| AVC-Intra 200 Mbps |
| AVC Ultra (LGOP 6/12/25/50 Mbps) |
| DNxHD (SQ/HQ/HQX/LB) |
| 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 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 |
| 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) |
| JPEG 2000 (Full HD) |
| Google® VP6 / VP7 / VP8 / VP9 (Full HD) |
| Uncompressed UYVY 422 / V210 / RGBA |
| AOMedia Video 1 (Full HD) |
| IMF (JPEG 2000 @ Full HD) |

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 |

Output Video Formats

- MPEG2 LGOP 420 (FULL) 35 Mbps
- DVCAM 25 Mbps
- XAVC Intra 50 / 100 Mbps
- XAVC LGOP 25 / 35 / 50 Mbps
- DVCPRO 25/50 Mbps / DVCPRO HD 100 Mbps
- AVC-Intra 50/100 Mbps
- AVC-Intra 200 Mbps
- AVC Ultra (LGOP 6/12/25/50 Mbps)
- DNxHD (SQ/HQ/HQX/LB)
- 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 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
- 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)
- JPEG 2000 (Full HD)
- Google® VP6 / VP7 / VP8
- Google® VP9 (Full HD)
- Uncompressed UYVY 422 / V210 / RGBA
- AOMedia Video 1 (Full HD)
- IMF (JPEG 2000 @ Full HD)

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

Output Proxy Formats

| |
|---|
| 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 *Optional

Output OTT Formats

| |
|---|
| 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 1080p 3 - 9 Mbps High Profile (Live) |
| H.264 720p 1.5 - 6 Mbps High Profile (Live) |
| H.264 480p 0.5 - 2.0 Mbps High Profile (Live) |
| H.264 360p 0.4 - 1.0 Mbps High Profile (Live) |
| H.264 240p 0.3 - 0.7 Mbps High Profile (Live) |
| H.264 360p CBR MAIN Profile |
| H.264 432p CBR MAIN Profile |
| H.264 576p CBR MAIN Profile |
| H.264 720p CBR MAIN Profile |
| H.264 1080p CBR MAIN Profile |
| H.264 576p CBR - 3 Mbps MAIN Profile |
| H.264 720p CBR - 4 Mbps MAIN Profile |
| H.264 1080p CBR - 5Mbps MAIN Profile |
| H.265/HEVC 10 Mbps LGOP |
| H.265/HEVC 25 Mbps LGOP |
| H.265/HEVC 50 Mbps LGOP |
| H.265/HEVC 100 Mbps LGOP |
| H.265/HEVC LGOP 4:2:2 |

* 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 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) | Archive |
| Peripheral Devices | Haivision SRT | XDCAM HD: Disc (PDW F70) | Archivare 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 | Densu 2U | |
| | Video IO | 2x DeckLink miniDuo2 | |
| | Operating System Drive | 480GB | |
| | Operating System | Windows 10 Enterprise (LTSC) | |
| Connectivity | Networking | 1Gb Ethernet Port | 2 |
| | | 2.5Gb Ethernet Port | 2 |
| | Video | Display Port | 2 |
| | | HDMI | 2 |
| | USB | 2.0 | 4 |
| | | 3.0 | 8 |
| | HD BNC I/O | | 8 |
| | Ref. In | | 2 |
| | Live IP Port** | | 2 |
| | LTC Input | | 2 |
| | Audio Output | | 2 |
| | Breakout Connector | | 2 |
| | Power Requirements | | Dual 300W |
| | Breakout Cable | RS422 | 8 |
| GPO branch with 4 outputs | | 2 | |
| GPI branch with 4 inputs | | 2 | |
| Other | Dimensions & Weight | 2RU, 245x484x89mm (D, W, H), ~14Kg | |
| | Delivery Packaging | 580x380x250mm (D, W, H), ~15Kg | |
| | Temperature | Storage** | -40°C to 65°C (-40°F to 149°F) |
| | | Continuous Operation | 10°C to 32°C (50°F to 89.6°F) |
| | What is Included | Power Cable | 2x C13 to C14 |
| Other | | 4x rack mount screws | |

** Not included by default

Concurrent Media Operations

With mDECK Densu 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 Densu io 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 |

Product

| Part Number | Product | Description |
|-------------|----------------|--|
| mddnio | mDECK Densu io | Compact deck appliance for hybrid workflows of up to 8 combined media operations |

Available Options

Choose from the products below to customize the mDECK Densu io according to your business rules.

Production Tools

Tools for asset management and workflow orchestration.



mPLAN

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

| Part Number | Product | Description |
|-------------|---------|--|
| mpla1c | mPLAN | Scheduler & Router Control of up to 8 channels |

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

Add-ons

Output options to complement your workflows.

| Part Number | Product | Description |
|-------------|--------------------|--|
| s2oasa | OTT & Social media | Multiple output resolutions for OTT & Simultaneous social media shares |
| s2ioiplk | IP live kit | IP media production infrastructure |

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 |
| s2aifr | Face Recognition and Age Prediction |
| s2aiod | Object Detection |
| s2aicr | Optical Character Recognition |
| s2aisr | Speech Recognition |

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

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

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