



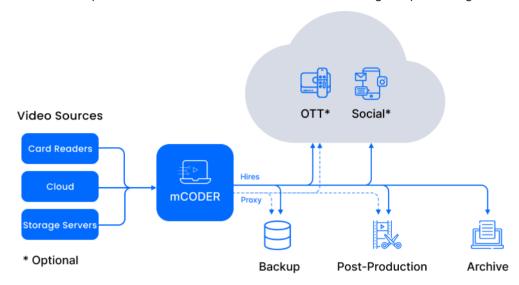
# mCODER Software



## **Overview**

mCODER is a professional multi-format and real-time transcoding system that can automatically transcode assets to internal house formats for a wide variety of media workflows.

It supports simultaneous media operations that can be a combination of transcoding and previewing files.



# **Highlights**

- Operation modes: manual, scheduled, and automatic
- Ingest and/or transcode the contents according to the destination format
- Supports spanned clips (Sony XDCAM EX, Panasonic P2, Panasonic GH5, GoPro and Canon)
- Optional remote preview for media selection, sub-clipping, and merge
- Burnt-in options: text, timecode, overlays (images and videos), and LUT
- Flexible file renaming engine
- Enable edit while ingest
- Metadata preservation and enhancement
- Multiple simultaneous transcodes
- Full featured local and remote user interface
- Proxy generation
- Artificial intelligence

# **Specially Designed For**

- Educational/Government
- Live Entertainment/Worship
- Corporate
- Sports

- Film/TV Studio/Scripted
- Digital News
- Post-Production
- Television/Broadcasting





**Features Operation modes** Manual Scheduled 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 "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 Prevent the overwrite of metadata fields Protect metadata fields Reset metadata fields Delete custom 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 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 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

DTS Coherent Acoustics (DCA)

PCM 96KHz support

Independent audio encoder for hires and proxy

Individually map your audio by output target

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 captioning for OTT (CMFT, SubRip, and WebVTT)

Stream with Closed Captions

Locators

Edit and delete locators

Merge locators

Preserve Metadata Enhancement locators created by an Automatic Job

Scheduler (Calendar View)

Schedule Automatic Jobs

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

Ability to Ignore files before a start date

Placeholder when editing an occurrence name

Use pre-set naming templates

Define events to be triggered on any day, on working days only or only on weekends

Set the Calendar Notion option to automatically adjust to daylight time

Visualize scheduled events in a List View

Checksum media

MD5 hash file

MDL - Media hash list

File ingest

Execute multiple simultaneous transcodes

Batch ingest

Card ingest

Clip merge

Clip renaming

Disable Clip File Naming generation

Ingest while growing

Growing file support for Grass valley Edius Workgroup v.9 and X

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

Ingest Apple ProRes wrapped in OP-Atom to Avid

Support of Avid OP-Atom files with Apple ProRes essence

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

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

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

Independent targets and multiple outputs

Manage via web interface or REST APIs for integration with automation system

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

Measurement of consumption (Number of bytes for input/output "files")

#### **Burn-In Video options**

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

#### **Automated ingest**

Create Automatic Jobs

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

Preview Editing Decision Lists

Preview Clip Lists

Read Metadata Timecode Package (Auto / Material Package / Source Package)

## Input/output social media \*Optional

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

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

Al Upscale

Reduce video flashing

## Additional Al Operations \*Optional

Face recognition 2.0

Face recognition - Support dataset with multiple images for each person

Object detection 2.0

Optical Character Recognition (OCR)

Speech recognition 2.0 (with ability to detect non speech tokens)

### 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

Database replication





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

#### **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)

Protection against overwriting files

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**

Unified GUI for all services and group of servers in the farm

Configurable web interface access port

Embeddable Dashboards/Widgets

Environment Dashboard which enables an overview of group servers in workgroups

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

#### Multiviewer

Define the quality and target latency of the preview stream

### 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





Features
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
	ARRI ALEXA Cameras
	BlackMagic Cameras
	RED Digital Cinema
	Avid Files
	Avid Media Files (standalone or Nexis)
	Avid Sequences (master clips and rendered sequences)
	CANON DSLR 5D, 7D, C300, C100
	Generic File Shares
	GoPro Cards
	IKEGAMI GFPAK
	JVC (AVC HD models)
	NextoDI NSB-25
	Panasonic CX350 HEVC
	Panasonic AU-EVA1 and GH5 Cameras
	Panasonic P2
	AJ PCD 2 / AJ PCD 20/30/35 / AJ MPD1
	AU-XPD1E / AU-XPD3EJ
	Multi Clip/Spanned XDCAM/XAVC/XDCAM-EX Structure
	XDCAM EX
	Sony SxS (SBAC-UT100, SBAC-US10/20/30)
	Sony XQD (MRW E-80, MRW E-90)
OnPrem	XDCAM HD
	Sony XDCAM HD: Disc (PDW-U1, PDW-U2, PDW-U4)
	XAVC Structures
	DJI (Camera Drones)
	HLS Structures
	MPEG-TS Structures
	MOG Package
	Network
	XDCAM Network
	P2 Network
	ARRI RAW Network
	Ikegami Network
	Storage
	Avid 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





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





	Outputs
	Social Media *Optional
	Facebook
Cloud	X (Twitter)
	Vimeo
	YouTube

# **Supported Live Outputs**

	Outputs
	Social Media *Optional
	Facebook
	Twitch
Live	X (Twitter)
	Vimeo
	YouTube
	Multiple and Adaptive bitrates for the OTT *Optional

# **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 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





Input Video Formats
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
MPEG-5 EVC Baseline Profile
MPEG-5 EVC Main Profile
MPEG VVC/H266 Main Profile
ProRes 422 (SQ/HQ/LT)
ProRes 4444
ProRes 4444XQ
Google® VP6 / VP7 / VP8 / 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)

# **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 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)





Output Video 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 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.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
MPEG-5 EVC Baseline Profile
MPEG VVC/H266 Main Profile
ProRes 422 (SQ/HQ/LT)
ProRes 4444
ProRes 4444XQ
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)

# **Proxy Formats**

Output Proxy Formats
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 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 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 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
Google® VP9 (Full HD)
Google® VP9 (4K)
* Optional output

<sup>\*</sup> Optional output

# **Product Integrations**

Productimegrations			
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 and Workgroup 9 and 10	AVID Interplay	Panasonic CX350 HEVC	Lumen
BlackMagic: DaVinci Resolve Studio	AXLE MAM	Ikegami Gfpack	Fastly
Autodesk: Flame	Editshare Flow	JVC AVC HD camera models	Akamai Technologies
Storage	MOG Vizzi	LUMIX DC-S1H	Microsoft Azure
AVID Nexis Storage	Medialoopster MAM	RED Digital Cinema	Cloudflare
Avid UnityTM MediaNetwork	Structures	GOPRO	Limelight Networks
Dynamic Drive Pool SAN Storage	XAVC Structures	Card Readers	Amazon CloudFront
Facilis Terrablock	Professional Cloud Storages	Panasonic P2 (AJ PCD 2 / AJ PCD 20/30/35)	BootstrapCDN
Harmonic MediaGrid	Adobe Creative Cloud	Panasonic P2 (AJ MPD1)	StackPath
Quantum: Storenext	Amazon EC2	Panasonic P2 (AU-XPD1E / AU-XPD3EJ)	KeyCDN
Scalelogic: NX2 & ZX NAS Storage	Amazon S3	Panasonic P2 (AG HPG 20)	Rackspace
Editshare EFS	Amazon S3 Glacier	Sony XDCAM EX (SxS Cards): SBAC-US10/20/30	Alibaba Cloud Content Delivery Service
EMC: Isilon	Microsoft Azure Storage	Sony XDCAM EX (SxS Cards): SBAC-UT100	CacheFly
QNAP	Microsoft Azure Virtual Machines	Sony XDCAM EX (SxS Cards): MRW E-80	Verizon
Studio Network Solutions: EVO	Tencent: Cloud Storage	Sony XDCAM EX (SxS Cards): MRW E-90	Social Media *Optional
Oracle Storage	Lucidlink Cloud NAS	Sony Disc Reader: PDW-U1, PDW-U2	Facebook
Netapp	Google Cloud Storage	VTR Decks	Twitch
Archive	IBM Cloud Object Storage	XDCAM HD: Disc (PDW 1500, PDW HD1500)	X (Twitter)
Archiware P5	Generic S3	XDCAM HD: Disc (PDW F70)	YouTube
Xendata Archive Appliances	Hypervisers	XDCAM Station (XDS1000)	Vimeo
Oracle Front Porch Digital DIVArchive	Microsoft HyperV	Transfer Acceleration Protocols	
	VMWare ESX	File Catalyst Direct	
		IBM: Aspera File Transfer	





# **Minimum Hardware Requirements**

## To ingest and transcode in UHD

Features	Specs
CPU	2x Intel Xeon Gold 6342 2.8G or above
RAM	16x 8GB DDR4
OS Drive	480GB SSD
Network	2x 10 Gb Ethernet Port + 2x 1 Gb Ethernet Port
Hardware Encoders (Recommendation)	2x Nvidia A2 (H.264)
Operating System	Windows 10 IOT LTSC or SAC

## To ingest and transcode in FHD

Features	Specs
CPU	2x Intel Xeon Silver 4314 2.4G or above
RAM	8x 8GB DDR4
OS Drive	480GB SSD
Network	2x 10Gb Ethernet Port + 2x 1 Gb Ethernet Port
Hardware Encoders (Recommendation) 1x Nvidia A2 (H.264)	
Operating System	Windows 10 IOT LTSC or SAC

# **Concurrent Media Operations**

With mCODER, it is possible to run different media operations simultaneously, thus guaranteeing distinct arrangements to meet the challenging media day-to-day activities.

Media operations include ingest, transcoding, and file preview.

It is designed to accommodate the simultaneous execution of up to 4 or 8 media operations. This versatility allows you to perfectly combine the operations shown in the table below:

Concurrent Media Operations		
Ingest & Transcode	File Preview	
4 media operations	Up to 5 files preview	
8 media operations	Up to 5 files preview	

## **Product**

Part Number	Product	Description
mc04op	mCODER software (4 Operations)	File ingest system of up to 4 simultaneous media operations
mc08op	mCODER software (8 Operations)	File ingest system of up to 8 simultaneous media operations

# **Available Options**

Choose from the products below to customize the mCODER 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.

Part Number	Product	Description
mpam1usw	mPAM	Content and production asset manager per licensed user

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







Output options to complement your workflows.

Part Number	Product	Description
cnnsmop	Social media	Simultaneous social media shares
cnnottop	OTT	Multiple OTT output resolutions

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	Al upscale	
Remove audio clipping	Blur license plates	

Additional Al Operations		
Part Number	Part Number Product	
aistop	Option to enable Speech-to-Text	
aifrop	Option to enable Face Recognition	
aiocop	aiocop Option to enable Optical Character Recognition	
aiodop	Option to enable Object Detection	

 $\textbf{\textit{Note:}} \ \textit{Adding optional features might affect the number of simultaneous operations.}$ 

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