

# Nexio+™ AMP

## High-Performance SDI Video Server

The Nexio+ AMP advanced media server is an efficient and integrated media platform for managing digital content from ingest to playout. It combines industry-leading Hewlett Packard Enterprise Gen10 server models and Imagine software/hardware bundle kits, enabling software-defined applications while delivering the exceptional reliability, flexibility and format transparency that broadcast operations demand.



### Reliable & Feature-Rich

Offers unmatched quality for all broadcast-grade codecs and high-availability playout and ingest operations (beyond five nines of reliability)



### Highly Interoperable with Flexible Deployment Options

Integrates with dozens of control applications (internal or third-party), scaling to hundreds of channels, available with internal or external storage, and MOS-compatible



### Ideal Solution for MCRs

Supports distributed architectures for multi-vendor playout system deployments, and content playback, recording, and workflow reviews

## FEATURES

Ingest and playback of content in SD, 720p, 1080i, 1080p and UHD on PAL & NTSC

Extensive range of software-based codecs and formats: work with different codecs without software upgrades or extra licensing (XDCAM, AVC, XAVC, ProRes, DNxHD, MPEG-2, H.264)

Seamless playout of different flavors and resolutions, back-to-back

Up/down/cross conversion

Import & export content in various wrappers (MXFOP1a, MOV, QuickTime Ref, AVI, GXF, MPG, MP4, LXF)

Auto-detection of unhealthy video files during file import

Automatic input format detection

Different storage options: internal RAID storage or connected to online IOX storage over Ethernet

Closed Caption import

Uncompressed PCM audio and compressed audio pass-through or playback decode:

- DTS, Dolby Digital and Dolby E compressed audio pass-through
- MPEG-1/Layer-II (MP2) and Advanced Audio Coding (AAC) compressed audio playback decode

Audio track management - control audio track tagging, addition, deletion, shuffling and playback routing

AFD and ARC support

Smooth variable/off-speed play up to  $\pm 400\%$

Automatic proxy generation, including growing files

Picon generation

Sub-clipping

SNMP for monitoring

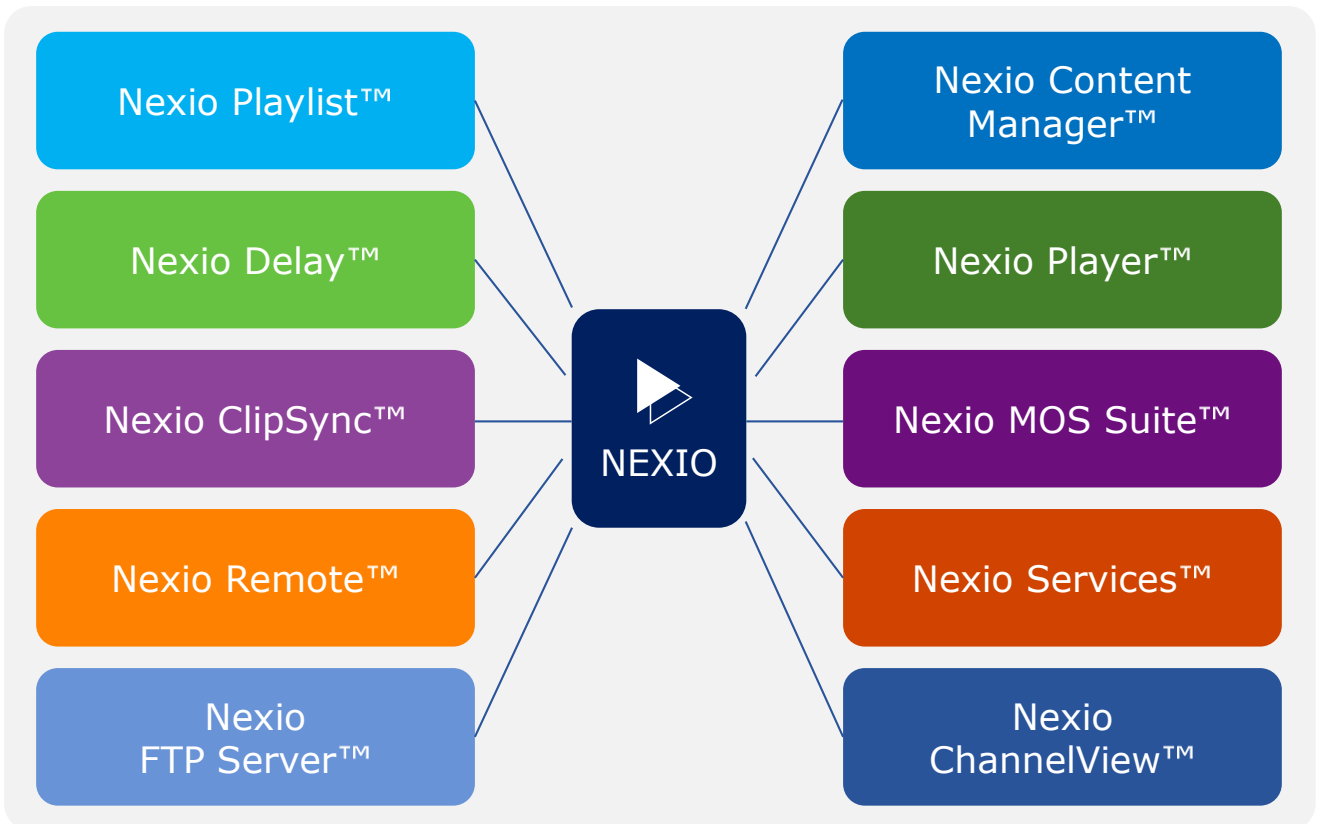
Fault tolerance through dual hot-swappable power supplies, dual mirrored boot drives and RAID content protection

Content synchronization, playlist creation and control, delayed playback, simple efficient workflows

## BENEFITS

- High channel density reduces hardware footprint
- Broadcast-grade codecs maximize video and audio quality during ingest and playback
- No single point of failure ensures exceptional on-air reliability
- High availability for all playout and ingest operations guarantees you will never miss a frame
- Flexible designs simplify scaling of systems from small integrated servers to 1000+ channels with internal storage or online NAS architecture
- Expansion of channel count or storage capacity/bandwidth with no system downtime allows hassle-free scalability
- Support for multiple content formats and control applications (internal or third-party, VDCP, native API) enables deployment of highly interoperable systems
- Suited to any requirement — from distributed architecture (external payout automation) for MCRs to standalone for smaller environments or studios
- Easy serviceability and maintenance ensure worry-free operations

## APPLICATIONS OVERVIEW



## APPLICATIONS IN DETAIL

### **Nexio® Playlist™**

Nexio® Playlist™ is an event-sequencing application that controls Nexio+ AMP servers, facilitating play-to-air operations in transmission, sports and news environments. It is ideal for small/mid-market programming where full station automation is not required. Nexio Playlist can also be used to inexpensively backup station automation systems. The application enables you to choose clips from the Nexio MediaBase™ asset inventory and arrange them in order for play-to-air, sequentially or timed. You can also create lists of clips that loop, trigger GPI events during playback or import traffic files.

### **Nexio® Delay™**

Nexio® Delay™ is a software application for Nexio servers to provide a time-delay recording and playout. Nexio Delay allows a frame-accurate time delay with a range of a few seconds up to 24 hours. You can pre-program the Nexio server to record an inbound feed and play at a later time; you can also delay playouts for live event censoring or for time zone-based delayed broadcasts.

### **Nexio® ClipSync™**

Nexio® ClipSync™ is an optional software application that allows Nexio+ AMP servers to synchronize two playout channels so that they act as one single channel. This capability allows two clips to be played in sync for key-plus-fill, looping, single-channel playback and other production processes.

### **Nexio® Remote™**

Nexio® Remote™ is used to monitor and control channels on one or more Nexio servers over a local area network (LAN). From a single user interface, baseband ingest, playout and content management can be controlled for up to six Nexio channels on any of the servers in a single server system. In addition, it supports optional applications including Nexio® Playlist™, ClipSync™ and Delay™.

When a channel from a Nexio server is connected to Nexio Remote, control of that channel is locked to the application. Operators can connect and disconnect from different servers in the system, maximizing flexibility and control.

### **Nexio® Content Manager™**

Nexio® Content Manager offers automatic file synchronization between independent Nexio storage domains. It reduces the complexity and cost of implementing a mirrored backup solution to automatically maintain a current copy of local on-air media on a remote and completely independent storage array.

It supports bidirectional (mirroring) or one-direction transfer operations. Fully customizable transfer and delete rules can be created to exact user specification.

### **Nexio® Player™**

Nexio® Player™ is a multi-purpose player application designed to work with either high-res or low-res content, giving an easy preview control of clips in the Nexio MediaBase. It allows you to quickly filter, search, and sort media assets (IDs) on the shared or local storage.

Nexio Player allows you to preview selected IDs inside a dedicated player window. Full screen and closed caption viewing modes can be enabled. Basic transport controls, scrubbing, audio channel monitoring, I/O marking, sub-clipping, and locator marks are also included.

### **Nexio® MOS Suite™**

The Nexio® MOS Suite is an interoperable collection of applications that connects a MOS-enabled Newsroom Computer System (NRCS) to the Nexio server system. Nexio MOS objects are created and associated with the NRCS rundown (newscast schedules). When a MOS connection is established, the NRCS rundown drives the Nexio MOS Playlist Manager application (or Newsroom Automation System), which in turn controls the Nexio video playback channels.

- **Nexio MOS Gateway** serves as a gateway between the MOS-enabled NRCS and the Nexio servers.
- **Nexio MOS Playlist Manager (MPLM)** parses rundown information from the NRCS, generates a playlist, and gives play-to-air commands to Nexio server channels.
- **Nexio NXMB Plugins** run in the workspace of the NRCS client application, retrieve and display the contents of the MediaBase for inclusion within the NRCS rundown. It also has a low-res preview option.

### **Nexio® FTP Server™**

Nexio® FTP Server is a powerful interface for file interchange operations. It supports on-the-fly re-wrapping of files being received to or sent from the storage, load balancing of media transfer queues, and handles many simultaneous file transfers. All operations are intuitively driven and monitored from the Nexio® FTP Client.

### **Nexio® Services™**

Layer of services providing a simple REST API to integrate with third-party systems, and web User Interfaces for system monitoring.

### **Nexio AMP® ChannelView™**

The Nexio AMP® ChannelView™ is a software application for Nexio AMP video servers. It allows you to easily and cost-effectively monitor a server's input and output ports on the ChannelView display. ChannelView delivers a complete view of up to six channels through the GPU port to an attached display screen.

## SPECIFICATIONS

### VIDEO I/O FORMATS

<b>SD-SDI 270 Mb/s</b>	SMPTE ST 259M 525i @ 29.97 fps, 625i @ 25 fps
<b>HD/SDI 1.5 Gb/s</b>	SMPTE ST 274M 1080i, 1080p, 1080PsF @ 23.98, 24, 25, 29.97 fps SMPTE ST 296M 720p @ 23.98, 24, 25, 29.97, 50, 59.94 fps
<b>HD/SDI 3.0 Gb/s</b>	SMPTE ST 425 Level-A 1080p @ 50, 59.94 fps
<b>Quad-Link 3.0 Gb/s (SQD)</b>	SMPTE ST 435, SMPTE ST 2036 2160p @ 23.98, 24, 25, 29.97, 50, 59.94 fps

### CHANNEL CONFIGURATIONS

<b>Mixed SD/HD Up/Down/Crossconversion</b>	Up to 6 bidirectional channels Automatic input format detection Automatic aspect-ratio conversion (ARC) with Active Format Descriptor (AFD) support All channels software license key (SLK) enabled
<b>UHD-1 Ultra Hi-Def</b>	1 bidirectional channel

### BROADCAST SIGNAL I/O HD/SDI INPUT

<b>HD/SDI Input Video:</b>	6x High Density BNC (HD-BNC)
<b>HD/SDI Output Video:</b>	6x High Density BNC (HD-BNC)
<b>RS-422 Serial Control:</b>	Optional 8x RS422 I/O Interface; RJ12 connectors. Includes cables and RJ12->DB9 adapters.
<b>RS-232 LTC Input:</b>	DB9
<b>Reference Sync Input:</b>	1x High Density BNC (HD-BNC) Analogue Bi-Level 1080i Tri-Level

### AUDIO

<b>Inputs</b>	8 pairs (16 channels) embedded HD-BNC
<b>Outputs</b>	8 pairs (16 channels) embedded HD-BNC
<b>Storage</b>	Up to 32 tracks of PCM uncompressed audio per ID Up to 8 channels per track compressed, up to 256 compressed audio channels per ID
<b>Sample Precision</b>	16-, 20- or 24-bit PCM, 48 kHz
<b>Compressed Audio Pass-Through</b>	Dolby® Digital (AC-3), Dolby® Digital Plus (E-AC-3), Dolby® E, DTS/DTS-HD pass through
<b>Compressed Audio Playback</b>	AAC/HE-AAC/HE-AACv2, MPEG1-LayerII (MP2)

### FILE INTERCHANGE

Supports 20+ simultaneous transactions; active and passive (FXP: File exchange protocol)
Support for LXF, GXF, MXF OP1a, Self-Contained MOV (QuickTime), MP4/M4V
Import support for Pinnacle, Quantel, MXF OP-Atom, MXF OP1b, Reference MOV (QuickTime), AS-03/-10/-11, MPEG-ES/PS/TS/MTS/EVO/VOB/M2V

**CODECS SUPPORTED**

<b>SD Video Formats</b>	MPEG-2 I-Frame MPEG-2 Long-GOP IMX 30, 40, 50 (D-10) DVCPRO25, DVCPRO50	DVCAM (PAL only) DV (NTSC only) Apple ProRes LT/422/HQ H.264/AVC Long-GOP
<b>HD 1080i, 1080p/PsF, 720p Video Formats</b>	MPEG-2 I-Frame & Long-GOP XDCAM HD/EX/422 AVC-Intra Class 50/100, AVC-Ultra Class 200 XAVC-Intra & Long-GOP	H.264/AVC-HD Long-GOP DVCPRO HD Avid DNxHD Apple ProRes LT/422/HQ
<b>HD 1080p Video Formats</b>	MPEG-2 I-Frame & Long-GOP AVC-Intra Class 100 XAVC-Intra & Long-GOP	H.264/AVC-HD Long-GOP Avid DNxHR Apple ProRes LT/422/HQ
<b>UHD-1 2160p Video Formats</b>	XAVC Long-GOP Class 188/300 (playback-only)	XAVC-Intra Class 300

**ASPECT RATIO**

<b>HD (SD)</b>	16:9, (16:9, 4:3)
<b>Aspect Ratio Conversion</b>	Up/down/cross conversion support with NTSC EIA- 608 <> 708 caption conversion Up/down/cross conversion support with PAL WST/OP42 <> OP47 caption conversion
<b>AFD Support</b>	Insert/fill/override embedded AFD metadata frame-by-frame on a per-ID or per-port basis SMPTE 2016 and ATSC TSG-814

**1RU Server Physical Attributes**

<b>Chassis Dimensions</b>	1.7 x 17.1 x 27.5 inches (4.32 x 43.47 x 69.85 cm)
<b>Media Drives</b>	Up to 8 SFF
<b>Weight (approximate)</b>	Minimum (one hard drive, power supply, and processor installed): 8SFF Model 27lb. (12.25 kg)  Maximum (all hard drives, power supply, and processor installed): 8 SFF Model 33.3 lb. (15.31 kg) NOTE: Includes 2 SFF Option for a total of 10 SFF HDD

**2RU Server Physical Attributes**

<b>Dimensions</b>	3.44 x 17.54 x 26.75 in (8.73 x 44.55 x 67.94 cm)
<b>Media Drives</b>	Up to 16 SFF
<b>Weight (approximate)</b>	Minimum: 32.6 lb (14.759 kg) (Minimum - 8SFF server with 1xSFF HDD and 7 HDD blanks, 1x processor, 1x power supply (plus blank), 1x Flexible Smart Array, 1x Riser installed)  Maximum: 51.5 lb (23.6 kg) (Maximum - 12 LFF hard drives, 2x processors, 2x power supplies, 1x Flexible Smart Array, 2xRisers installed)

## ORDERING INFORMATION

### Nexio+ AMP 2RU Turnkey Platform

<b>NEX-AMP-2UG11</b>	Nexio+ AMP 2RU HPE Gen11 platform. 6-in/6-out/reference HD-SDI PCIe interface included. Up to 6-In/Out HD-SDI or 1 UHD channels. 96GB, redundant 2x OS SSD, 4x 1Gb Ethernet included, 2x 10/25Gb NIC, 4 x PCIE slots, NVIDIA T400 Graphics Card and Windows Server 2022 for Embedded Systems standard. Purchase internal RAID as needed per customer storage and I/O requirement.
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### Channel & Codec Software Licenses

<b>PLSHD1CH</b>	Nexio+ 1x SD/HD Playback & Encode Channel License, includes royalty for MPEG2/XDCAM, H.264/AVC-Intra/XAVC, DV/DVCam/DVCPPro, Avid DNxHD, JPEG2000, and Apple ProRes codecs
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<b>PLSUHDCH</b>	Nexio+ 1x UHD Playback & Encode Channel License, includes royalty for MPEG2, H.264/XAVC, Avid DNxHR, JPEG2000, and Apple ProRes codecs
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<b>PLSPR1CH</b>	Nexio+ 1x Proxy Encode Channel License for both Nexio AMP Server with internal proxy and for standalone Proxy Transcode engine. Up to 6 channels per server and up to 24 channels for Proxy Transcode engine.
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### Nexio+ AMP & Appliance Options

<b>NEX-HW-G11-STOR-24TB</b>	Nexio Gen11 24TB Internal Storage Package - 3Gbps Bandwidth, 20TB Usable Capacity. Includes 12 x 2TB Enterprise Drives, MR416i-p Storage Controller, 12LFF Front Upgrade Kit.
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<b>NEX-HW-G11-STOR-72TB</b>	Nexio Gen11 72TB Internal Storage Package - 3Gbps Bandwidth, 60TB Usable Capacity. Includes 12 x 6TB Enterprise Drives, MR416i-p Storage Controller, 12LFF Front Upgrade Kit.
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<b>NEX-HW-G11-STOR-96TB</b>	Nexio Gen11 96TB Internal Storage Package - 3Gbps Bandwidth, 80TB Usable Capacity. Includes 12 x 8TB Enterprise Drives, MR416i-p Storage Controller, 12LFF Front Upgrade Kit.
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<b>NEX-HW-NIC-PCIE-1G</b>	Intel I350-T4 Ethernet 1Gb 4-port BASE-T NIC for Imagine 2RU platforms. 4x 3m Cat6 Ethernet cables included
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<b>NEX-HW-NIC-PCIE-1025</b>	Broadcom 2-port 10/25GbE PCIE NIC for Imagine 1RU and 2RU platforms. Purchase SFP cables and optics separately
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<b>NEX-HW-NIC-OCP-1025</b>	Broadcom 2-port 10/25GbE OCP NIC for Imagine 1RU and 2RU platforms. Purchase SFP cables and optics separately
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<b>NEX-HW-G11-6xPCIE</b>	6 PCIe Enablement Kit for HPE Gen11 2RU. Enables the use of 6 PCIe x16 slots.
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<b>NEX-HW-G11-4xPCIE</b>	4 PCIe Enablement Kit for HPE Gen11 2RU. Enables the use of 4 PCIe x16 slots. (Slots 1,2,3,6)
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<b>PLHAB5QU</b>	Afterburner5 RS-422 and GPI interface module. 1/4 width 1RU up to 4 in each 1RU module rack (sold separately). Includes 8x RS-422, 16x GPI-In and 16x GPI-Out. USB connection to host server and loop-out. Includes 8x RJ12 RS-422 cables and RJ12-DB9 adapters
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<b>PLHAB5RA</b>	Interface module 1RU rack. Up to 4 1/4-width modules per rack
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<b>NXUSBTC</b>	USB powered House Timecode Input to Nexio
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<b>Nexio® ClipSync™</b>	Channel Synchronization Software
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<b>NXSCSYNC</b>	Nexio ClipSync Software License. ClipSync is an application that synchronizes two or more channels of an AMP server so that they can act as one single channel for graphics key/fill or to allow a single automation controller to simulcast the same content in two or more different resolutions
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<b>Nexio® Remote™</b>	Monitoring and Control Software
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<b>NXSREMOT</b>	Nexio+ NXOS Remote license.
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<b>Nexio® Playlist™</b>	Event-Sequencing Software
<b>NXSPLAY1</b>	Nexio Playlist 1-Channel License. Nexio Playlist is an Event-Sequencing application that controls AMP servers to facilitate Play-to-Air operations in Transmission, Sports, and News. NXSPLAY1 provides a license for 1 channel of playback.
<b>NXSPLAY4</b>	Nexio Playlist 4-Channel License. Nexio Playlist is an Event-Sequencing application that controls AMP servers to facilitate Play-to-Air operations in Transmission, Sports, and News. NXSPLAY4 provides a license for 4 channel of playback.
<b>NXSPLAY8</b>	Nexio Playlist 8-Channel License. Nexio Playlist is an Event-Sequencing application that controls AMP servers to facilitate Play-to-Air operations in Transmission, Sports, and News. NXSPLAY8 provides a license for 8 channel of playback.
<b>Nexio® Delay™</b>	Recording and Playback Software
<b>VER-SW-OPT-DELAY1</b>	Versio Delay 1-channel record + 3-channel playback license. Versio Delay is an application that controls Versio or Nexio AMP Media Server channels to provide a time-delay function for time zone program shifting or for live-event censor purposes. Delay application can control a maximum licensed 4-channels record and 12-channels playback per instance.
<b>VER-SW-OPT-DELAY2</b>	Versio Delay 2-channels record + 6-channels playback license. Versio Delay is an application that controls Versio or Nexio AMP Media Server channels to provide a time-delay function for time zone program shifting or for live-event censor purposes. Delay application can control a maximum licensed 4-channels record and 12-channels playback per instance.
<b>VER-SW-OPT-DELAY4</b>	Versio Delay 4-channels record + 12-channels playback license. Versio Delay is an application that controls Versio or Nexio AMP Media Server channels to provide a time-delay function for time zone program shifting or for live-event censor purposes. Delay application can control a maximum licensed 4-channels record and 12-channels playback per instance.
<b>Nexio® Content Manager™</b>	Content Synchronization Software
<b>NXA1000CM</b>	Nexio Content Manager software and manual, mirrors two domains or one domain and one network attached storage device using FTP
<b>Nexio AMP® ChannelView™</b>	Integrated Multiviewer I/O Monitoring
<b>NXA1000CVIEW</b>	Nexio AMP ChannelView multiviewer media application for the Nexio AMP advanced media platform
<b>Nexio® Player™</b>	Hi-Res and Low-Res Content Review Software
<b>NXA-NXP-1</b>	Nexio Player single license allows Nexio Player to preview Nexio Storage high resolution IDs. Connects to the license server or local SLK. Requires LLM connection and customer furnished PC. Allows viewing of Nexio metadata, subclipping, fullscreen preview
<b>NXA-NXP-5</b>	Nexio Player 5 license bundle allows Nexio Players to preview Nexio Storage high resolution IDs. Connects to the license server or local SLK. Requires LLM connection and customer furnished PC. Allows viewing of Nexio metadata, subclipping, fullscreen preview
<b>NXA-NXP-10</b>	Nexio Player 10 license bundle allows Nexio Players to preview Nexio Storage high resolution IDs. Connects to the license server or local SLK. Requires LLM connection and customer furnished PC. Allows viewing of Nexio metadata, subclipping, fullscreen preview
<b>Nexio® Options</b>	Clip Editing Integration
<b>NEX-PNL-PPRO</b>	Nexio panels for Premiere Pro. Includes licenses for single client of MediaBase and Export panels. Mac or Windows. Premiere Pro and Adobe Media Encoder licenses provided by the customer

**Nexio Turnkey Appliances (Hardware + Software)**

<b>NEX-PT-2UG11</b>	Nexio+ Proxy Transcoder 2RU HPE Gen11 appliance. Fibre Channel HBA and/or 2x 25/10Gb Ethernet NIC sold separately as required by customer topology. 64GB, redundant 2x OS SSD, 4x 1Gb Ethernet included, 4 x PCIE slots; Windows Server 2022 for Embedded Systems standard. PLSPR1CH proxy channel licenses purchased separately.
<b>NEX-MGX-2UG11</b>	Nexio+ FTP Gateway (MGX) 2RU HPE Gen11 appliance. Fibre Channel HBA and/or 2x 25/10Gb Ethernet NIC sold separately as required by customer topology. 32GB, redundant 2x OS SSD, 4x 1Gb Ethernet included, 2 x PCIE slots; Windows Server 2022 for Embedded Systems standard.
<b>NEX-MOS-PL-2UG11</b>	Nexio+ MOS Playlist 2RU HPE Gen11 appliance. Includes USB trigger panel. 2x 25/10Gb Ethernet NIC sold separately as required by customer topology. 32GB, redundant 2x OS SSD, 4x 1Gb Ethernet included, 2 x PCIE slots; Windows Server 2022 for Embedded Systems standard.
<b>NEX-MOS-GW-2UG11</b>	Nexio+ MOS Gateway 2RU HPE Gen11 appliance. 2x 25/10Gb Ethernet NIC sold separately as required by customer topology. 32GB, redundant 2x OS SSD, 4x 1Gb Ethernet included, 2 x PCIE slots; Windows Server 2022 for Embedded Systems standard.
<b>NEX-MIOH-2UG11</b>	Nexio+ Media I/O Host (MIOH) 2RU HPE GEN11 appliance. 2x 25/10Gb Ethernet NIC sold separately as required by customer topology. 32GB, redundant 2x OS SSD, 4x 1Gb Ethernet included, 2 x PCIE slots; Windows Server 2022 for Embedded Systems standard.
<b>NEX-NSH-2UG11</b>	Nexio+ Network Server Host (NSH) 2RU HPE GEN11 appliance. 2x 25/10Gb Ethernet NIC sold separately as required by customer topology. 32GB, redundant 2x OS SSD, 4x 1Gb Ethernet included, 2 x PCIE slots; Windows Server 2022 for Embedded Systems standard.

**Nexio Appliances (Software only)**

<b>PLFTPVLV</b>	Nexio+ FTP Gateway Software License. May require purchase of FC HBA and/or 10GB Ethernet NIC depending on storage topology and throughput requirements. Virtual-Machine eligible; Windows Server 2012 R2 License sold separately, or customer provided.
<b>PLIOHSLK</b>	Nexio+ Media I/O Host Software License. Requires purchase of FC HBA and 10GB Ethernet NIC
<b>PLMGWSLV</b>	Nexio+ MOS Gateway Software License. Virtual-Machine eligible; Windows Server 2012 R2 License sold separately, or customer provided
<b>PLMOPSLK</b>	Nexio+ MOS Playlist Software License; PLMOPHTP USB trigger panel sold separately. GPU required such as PLHGPK06, NVIDIA Maxwell K620 GPU PCIe v2 1-slot. for PLHP1UAP appliance server or customer-provided GPU for CFE server.
<b>PLPTCSLV</b>	NEXIO+ PROXY TRANSCODE ENGINE SOFTWARE LICENSE. MAY REQUIRE PURCHASE OF FC HBA AND/OR 10GB ETHERNET NIC DEPENDING ON STORAGE TOPOLOGY AND THROUGHPUT REQUIREMENTS. VIRTUAL-MACHINE ELIGIBLE; WINDOWS SERVER 2012R2 LICENSE SOLD SEPARATELY OR CUSTOMER-PROVIDED

