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.
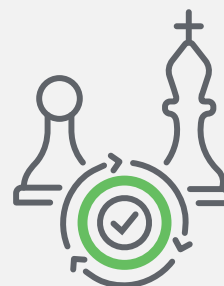
Reliable & Feature-Rich

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 ±400%

Automatic proxy generation, including growing files

Picon generation

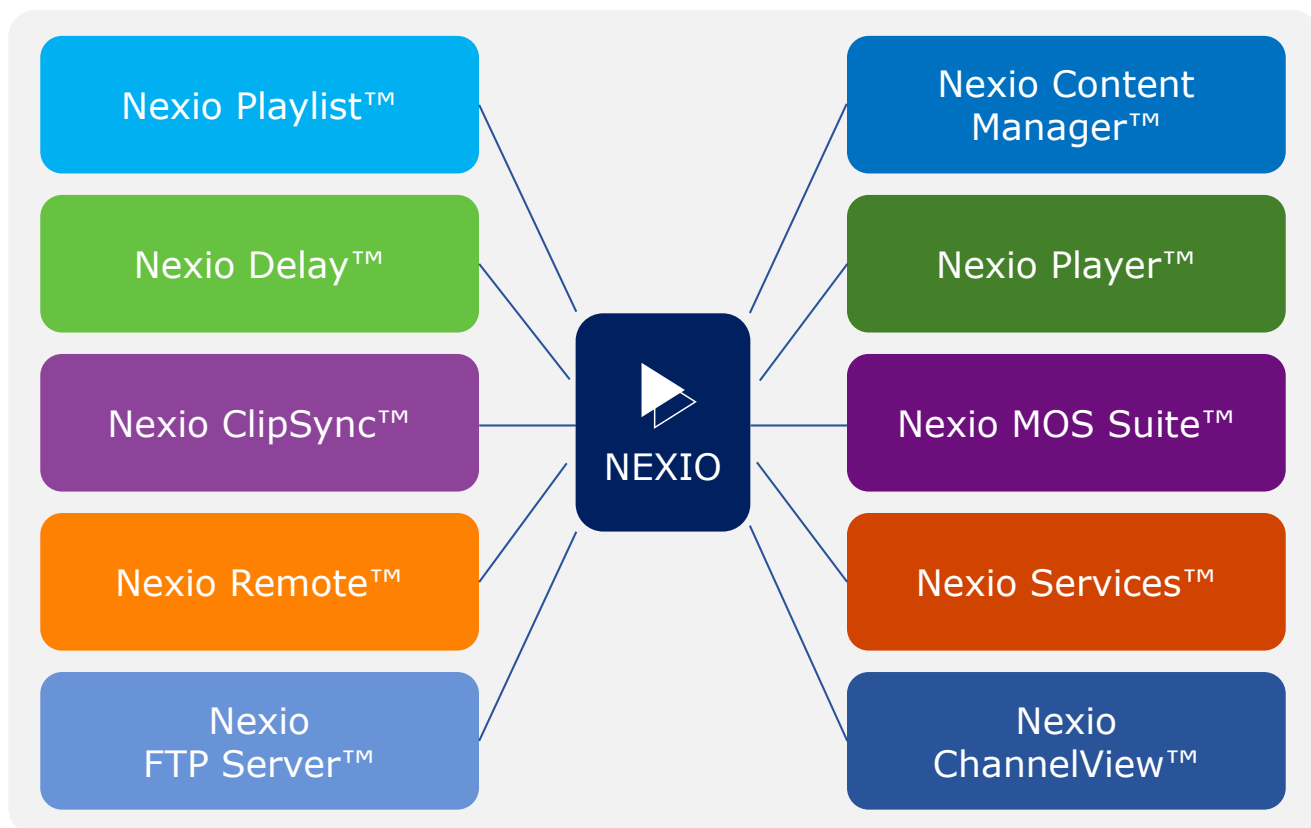Sub-clipping

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

Nexio Playlist™	Nexio Content Manager™
Nexio Delay™	Nexio Player™
Nexio ClipSync™	Nexio MOS Suite™
Nexio Remote™	Nexio Services™
Nexio FTP Server™	Nexio ChannelView™

NEXIO

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 thee 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® 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® 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™

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.

SPECIFICATIONS

VIDEO I/O FORMATS

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

CHANNEL CONFIGURATIONS

Mixed SD/HD Up/Down/Crossconversion	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
UHD-1 Ultra Hi-Def	1 bidirectional channel

BROADCAST SIGNAL I/O HD/SDI INPUT

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

AUDIO

Inputs	8 pairs (16 channels) embedded HD-BNC
Outputs	8 pairs (16 channels) embedded HD-BNC
Storage	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
Sample Precision	16-, 20- or 24-bit PCM, 48 kHz
Compressed Audio Pass-Through	Dolby® Digital (AC-3), Dolby® Digital Plus (E-AC-3), Dolby® E, DTS/DTS-HD pass through
Compressed Audio Playback	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

SD Video Formats	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
HD 1080i, 1080p/PsF, 720p Video Formats	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
HD 1080p Video Formats	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
UHD-1 2160p Video Formats	XAVC Long-GOP Class 188/300 (playback-only)	XAVC-Intra Class 300

ASPECT RATIO

HD (SD)	16:9, (16:9, 4:3)
Aspect Ratio Conversion	Up/down/cross conversion support with NTSC EIA- 608 <> 708 caption conversion Up/down/cross conversion support with PAL WST/OP42 <> OP47 caption conversion
AFD Support	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

Chassis Dimensions	1.7 x 17.1 x 27.5 inches (4.32 x 43.47 x 69.85 cm)
Media Drives	Up to 8 SFF
Weight (approximate)	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

Dimensions	3.44 x 17.54 x 26.75 in (8.73 x 44.55 x 67.94 cm)
Media Drives	Up to 16 SFF
Weight (approximate)	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 1RU and 2RU Turnkey Platforms

NEX-AMP-1UG10-2	Nexio+ AMP 1RU turnkey platform. 6-in/6-out/reference HD/SDI PCIe interface included. Up to 6 HD or 1 UHD channels. 128GB, redundant 2x OS SSD, 4x 1Gb Ethernet included, and Windows Server 2016 for Embedded Systems standard. Purchase Fibre Channel HBA, 25/10GbE NIC, or SAS internal RAID with 8 SSD/HDD bays as needed per customer storage and I/O requirement.
NEX-AMP-2UG10-2	Nexio+ AMP 2RU turnkey platform. 6-in/6-out/reference HD/SDI PCIe interface included. Up to 6 HD or 1 UHD channels. 128GB, redundant 2x OS SSD, 4x 1Gb Ethernet included, and Windows Server 2016 for Embedded Systems standard. Purchase Fibre Channel HBA, 25/10GbE NIC, or SAS internal RAID with 8 SSD/HDD bays as needed per customer storage and I/O requirement.

Channel & Codec Software Licenses

PLSHD1CH	Nexio+ 1x SD/HD Playback & Encode Channel License, includes royalty for MPEG2/XDCAM, H.264/AVC-Intra/XAVC, DV/DVCam/DVCPro, Avid DNxHD, JPEG2000, and Apple ProRes codecs
PLSUHDCH	Nexio+ 1x UHD Playback & Encode Channel License, includes royalty for MPEG2, H.264/XAVC, Avid DNxHR, JPEG2000, and Apple ProRes codecs
PLSPR1CH	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.

Nexio+ AMP & Appliance Network Options

VER-HW-NIC-25GM	Mellanox ConnectX-4 Lx 2-port 25GbE LOM NIC for Imagine 1RU and 2RU platforms. Includes 2x 25Gbps SFP28 and 2x 5m LC-LC OM4 multimode fiber cables
VER-HW-NIC-2X25PM	Mellanox Connect X-4 Lx 2-port 25GbE PCIe NIC for Imagine 1RU and 2RU platforms. Includes 2x 25Gbps SFP28 and 2x 5m LC-LC OM4 multimode fibre cables
VER-HW-NIC-10GI	Intel® 82599 2-port 10GbE LOM NIC for HP 1RU and 2RU platforms. Includes 2x 10GbE SFP multimode modules and 2x fibre 50/125μ 3m LC-LC cables.
VER-HW-NIC-10GTI	Intel X540 2-port 10Gbase-T LOM NIC for HPE 1RU and 2RU platforms. Includes 2x Cat-6A cables.
VER-HW-NIC-10PTI	Intel X540 2-port 10Gbase-T PCI NIC for HPE 1RU and 2RU platforms. Includes 2x Cat-6A cables.
VER-HW-1UG10-RAID	BTO Internal RAID Storage Kit for DL360 1RU Gen-10, enables up to 8 media and/or graphics HDD or SSD.
VER-HW-2UG10-RAID	BTO Internal RAID Storage Kit for DL380 2RU Gen-10, enables up to 16 media and/or graphics HDD or SSD. Includes integrated RAID controller, modular drive bays, and necessary cable harnesses.
VER-HW-HDD-1T	Media HDD kit, 1x 1TB 2.5 inch Enterprise, order 1x, 4x, 8x, or 16x as needed.
VER-HW-HDD-2T	Media HDD kit, 1x 2TB 2.5 inch Enterprise, order 1x, 4x, 8x, or 16x as needed.
PLHAB5QU	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
PLHAB5RA	Interface module 1RU rack. Up to 4 1/4-width modules per rack
NXUSBTC	USB powered House Timecode Input to Nexio

Nexio® ClipSync™	Channel Synchronization Software
NXSCSYNC	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
Nexio® Remote™	Monitoring and Control Software
NXSREMOT	Nexio+ NXOS Remote license.
Nexio® Playlist™	Event-Sequencing Software
NXSPLAY1	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.
NXSPLAY4	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.
NXSPLAY8	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.
Nexio® Delay™	Recording and Playback Software
VER-SW-OPT-DELAY1	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.
VER-SW-OPT-DELAY2	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.
VER-SW-OPT-DELAY4	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.
Nexio® Content Manager™	Content Synchronization Software
NXA1000CM	Nexio Content Manager software and manual, mirrors two domains or one domain and one network attached storage device using FTP
Nexio AMP® ChannelView™	Integrated Multiviewer I/O Monitoring
NXA1000CVIEW	Nexio AMP ChannelView multiviewer media application for the Nexio AMP advanced media platform
Nexio® Player™	Hi-Res and Low-Res Content Review Software
NXA-NXP-1	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
NXA-NXP-5	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
NXA-NXP-10	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

Nexio Turnkey Appliances (Hardware + Software)

NXPF1A0A	Nexio+ FTP Gateway (MGX) turnkey 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; Windows Server 2016 for Embedded Systems standard.
NXPM1A0A	Nexio+ Media I/O Host (MIOH) turnkey 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; Windows Server 2016 for Embedded Systems standard.
NXPG1A0A	Nexio+ MOS Gateway appliance. 2x 25/10Gb Ethernet NIC sold separately as required by customer topology. 16GB, redundant 2x OS SSD, 4x 1Gb Ethernet included; Windows Server 2016 for Embedded Systems standard.
NXPL1A0A	Nexio+ MOS Playlist turnkey appliance. Includes USB trigger panel. 2x 25/10Gb Ethernet NIC sold separately as required by customer topology. 16GB, redundant 2x OS SSD, 4x 1Gb Ethernet included; Windows Server 2016 for Embedded Systems standard.
NEX-PT-1UG10-2	Nexio+ Proxy Transcoder turnkey 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; Windows Server 2019 for Embedded Systems standard. PLSPR1CH proxy channel licenses purchased separately.

Nexio Appliances (Software only)

PLFTPSLV	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.
PLIOHSLK	Nexio+ Media I/O Host Software License. Requires purchase of FC HBA and 10GB Ethernet NIC
PLMGWSLV	Nexio+ MOS Gateway Software License. Virtual-Machine eligible; Windows Server 2012 R2 License sold separately, or customer provided
PLMOPSLK	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.
PLPTCSLV	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

EASY-TO-ORDER BUNDLES

	6 Channels	12 Channels	18 Channels	24 Channels
Without ADC				
Internal storage	NX6-G10-BNDL	-	-	-
Non-HA IOX	-	NX12-40T-G10-BNDL	NX18-40T-G10-BNDL	NX24-40T-G10-BNDL
HA IOX	-	NX12-56T-G10-BNDL	NX18-56T-G10-BNDL	NX24-56T-G10-BNDL
With ADC				
Internal storage	NX6-ADC-G10-BNDL	-	-	-
Non-HA IOX	-	NX12-40T-ADC-G10-BNDL	NX18-40T-ADC-G10-BNDL	NX24-40T-ADC-G10-BNDL
HA IOX	-	NX12-56T-ADC--G10-BNDL	NX18-56T-ADC-G10-BNDL	NX24-56T-ADC-G10-BNDL