

# NEXIO® PRX Transcoder

## Low-Resolution Transcoding Server



The NEXIO® PRX Transcoder is part of the Harris® NewsForce™ HD/SD news platform. A key component of the NEXIO Global Proxy solution, the PRX Transcoder server automatically converts high-resolution files from the NEXIO storage area network (SAN) into low-resolution H.264 MP4 proxy files. It reads all NEXIO-supported, high-resolution, high-definition (HD) and standard-definition (SD) formats, and can automatically transcode four or eight independent, simultaneous streams up to four times faster than real time.

Once transcoded into low resolution, all MP4 proxy files are stored on industry-standard storage arrays where they can be viewed, edited and conformed back to high resolution with other components of the NewsForce platform.

The NEXIO PRX Transcoder works in conjunction with NEXIO PRX Scavenger, a rules-based application that automatically determines which high-resolution clips need to be transcoded, as well as transcoder assignment, metadata updates and low-resolution deletion.

### PRODUCT DETAILS

The NEXIO PRX Transcoder represents the latest in NEXIO server technology and is built on the powerful NEXIO NX1011 series 1RU platform. It reads high-resolution files from the NEXIO SAN in all NEXIO-supported SD and HD formats through its on-board, dual-port Fibre Channel adapter or via Gigabit Ethernet when using the Media Host architecture. The NEXIO PRX Transcoder performs a real-time transcode of four to eight independent, simultaneous streams and writes those proxy files to standard IT storage.

The NEXIO PRX Transcoder includes the PRX Scavenger software application, which communicates with both the high-resolution NEXIO SAN and the low-resolution storage system.

It is a synchronization application that automatically determines which high-resolution clips need to be transcoded, as well as the transcoder channel assignments, metadata updates and low-resolution clip deletion. Rules can be defined to control creation and deletion of low-resolution content. Under the control of PRX Scavenger, the PRX Transcoder application performs the actual transcode from high-resolution media to low-resolution global proxy file.

The H.264 MP4 proxy files generated by the NEXIO PRX Transcoder are available for browse viewing with any standard media player. Alternately, due to the unique implementation of the global proxy file format, the MP4 files created by the NEXIO PRX Transcoder can be viewed with the same metadata information that is saved with the high-resolution files on the NEXIO SAN, either in a Harris® PRXPlayer or through the NEXIO MediaBase plug-in.

The MP4 proxy files are also available for editing with Velocity PRX™ proxy editors (version 2.0 or higher). Projects edited with Velocity PRX using global proxy files can be conformed directly to high-resolution clips using the NEXIO InstantOnline III™ conforming engine or sent to Velocity ESX™ and/or Apple® Final Cut Pro® for high-resolution finishing. The NEXIO PRX Transcoder is also capable of creating low-resolution proxy files from clips that are currently being ingested by a NEXIO AMP® ingest channel, clips that are created by Velocity™ or Final Cut Pro® editors, clips that are created by InstantOnline III and clips that are being transferred into the NEXIO SAN via FTP or other import methods. Proxy creation begins shortly after a record or file creation is initiated.

### FEATURES

- Transcodes NEXIO content to 384 Kb/s, 768 Kb/s or 1.5 Mb/s proxy video with audio content to 64 Kb/s audio (per pair); up to eight pairs
- Transcodes HD NEXIO content to 640x360 resolution
- Transcodes SD NEXIO content to 352x240 (NTSC) or 352x288 (PAL) resolution
- Transcodes four independent, simultaneous streams faster than real time
- Includes software option for additional four transcode streams
- Creates universally accepted MP4 file format on standard storage devices
- Reads all NEXIO-supported high-resolution HD and SD formats
- Supports NEXIO shared storage, including NEXIO Farad™
- Supports NEXIO-patented Intrinsic Mirroring™
- Supports redundant Ethernet topology for NEXIO LAN traffic
- Includes PRX Scavenger and PRX Transcoder software

NEXIO Global Proxy media can be used by NEXIO, Velocity and Invenio® digital asset management, as well as many other third-party applications, thus eliminating redundant proxy generation. The proxies are viewable in common players like QuickTime® or Windows Media Player® and can provide content to Apple® iPhone®, Blackberry and other mobile devices. In addition, they can be used to link multiple NEXIO server systems in different locations. Synchronization of multiple sites is maintained by Invenio Motion. This workflow allows local editors to choose and pull high-resolution content from any linked NEXIO system before editing, or edit the low-resolution proxy and use InstantOnline III to conform later. InstantOnline III is capable of instructing Invenio Motion to gather the high-resolution media required to conform the edit from remote locations, as well as from its assigned NEXIO shared storage system.

The NEXIO PRX Transcoder:

- Eliminates the need for expensive and complicated baseband infrastructure for proxy generation
- Provides high-quality, low bit-rate, frame accurate transcoding
- Provides flexible transcoding options
- Facilitates simple and scalable browse viewing and editing
- Speeds editing and play to air
- Simplifies media management

# NEXIO® PRX Transcoder

## Low-Resolution Transcoding Server

### SPECIFICATIONS

Specifications are subject to change without notice.

<b>System Configuration</b> . . . . .	Mainframe
	Dual AMD multi-core processors
	PCIe platform
	16 GB ECC RAM
	Solid-state 2.5" boot drive
	Dual-port 8 Gb/s Fibre Channel host bus adapter
	6 x 10/100/1000Base-T Ethernet ports
	VGA monitor interface
	4 USB 2.0 ports (2 front, 2 rear)
	PS/2 keyboard and mouse ports
	Windows® 7 Professional x64
Video Formats . . . . .	HD 1080i @ 29.97 f/s and 25 f/s
	SD 525 @ 29.97 f/s, 625 @ 25 f/s
	720p @ 59.94 f/s and 50 f/s

### Storage

Options . . . . .	Fibre Channel storage with 8 or 16 drives per chassis; up to 192 drives (300 GB or 600 GB) per NEXIO shared storage system
	Fibre Channel storage with up to 384 drives (300 GB or 600 GB) per NEXIO shared storage system using Intrinsic Mirroring

### NEXIO Farad storage

Interface . . . . .	Dual-port, redundant Ethernet via NEXIO Media Host system architecture
	Dual-port, redundant 8 Gb/s Fibre Channel optical connectivity

### SD Transcoding

MPEG-2 I-frame . . . . .	4:2:0 (4 to 15 Mb/s), 4:2:2 (10 to 50 Mb/s)
MPEG-2 long-GOP . . . . .	4:2:0 (4 to 15 Mb/s), 4:2:2 (10 to 50 Mb/s)
IMX . . . . .	30, 40 and 50 Mb/s
	DVCPRO25, DVCPRO50, DVCAM (625 only)

### HD Transcoding

MPEG-2 I-frame . . . . .	4:2:0 (50, 80 and 100 Mb/s)
	4:2:2 (50, 70, 80, 100, 120 and 150 Mb/s)
MPEG-2 long-GOP . . . . .	4:2:0 (50, 60, 70 and 80 Mb/s)
	4:2:2 (50, 70 and 80 Mb/s)
XDCAM HD . . . . .	35 and 50 Mb/s
XDCAM EX . . . . .	35 Mb/s
DVCPRO HD . . . . .	100 Mb/s
AVC-Intra . . . . .	50 and 100 Mb/s
H.264 . . . . .	4:2:0 (6 to 40 Mb/s), 4:2:2 (6 to 40 Mb/s)
DNxHD (optional) . . . . .	120, 145, 180 and 220 Mb/s

### Physical Characteristics

Dimensions (H x W x D) . . . . .	1.7 x 17.2 x 23.5 in (4.3 x 43.7 x 59.7 cm)
Weight . . . . .	30 lbs (14 kg)

### Power

Power Supply . . . . .	Dual redundant, hot-swappable
Voltage . . . . .	100 to 240 VAC
Current . . . . .	8 to 4 A
Frequency . . . . .	60 to 50 Hz
Total DC Output . . . . .	650 W
Idle Consumption . . . . .	144 W @ 240 V, 156 W @ 120 V
Peak Consumption . . . . .	264 W @ 240 V, 296 W @ 120 V

### Environmental

Operating Temperature . . . . .	50° to 95° F (10° to 35° C)
Non-operating Temperature . . . . .	-40° to 158° F (-40° to 70° C)
Operating Relative Humidity . . . . .	8% to 90% RH and non-condensing
Non-operating Relative Humidity . . . . .	5% to 95% RH and non-condensing
Operating Altitude . . . . .	10,000 ft (3,048 m) @ 77° F (25° C)

### ORDERING INFORMATION

NX1011PTCD . . . . .	PRX Transcoder
NXA-PTCD-8X . . . . .	Software only option for additional four transcode channels
NXA-PTCD-DNXHD . . . . .	Software only option for support of Avid DNxHD content
NXA-PTCD-H264 . . . . .	Software only option for support of H.264 content
NXA-PTCD-SC . . . . .	Software-only option for support of Smart SubClip creation

### IMAGES/DIAGRAMS

NX1011PTCD Rear View

