

PX MEDIA SERVERS



PX-100 Media Server



PX-500 Media Server

With an intuitive browser-based interface, robust features, and scalable configuration options, the complete line of PX Media Servers from Focus Enhancements makes media asset management simple and cost-effective. By combining the functionality, flexibility, and scalability of a custom system with the fast implementation time and low ownership cost of an “out of the box” solution, the PX Media Server provides the performance you want at a price you can afford.

PX Media Server

A fully integrated solution, the PX-100 and PX-500 Media Servers combine PX Media Asset Management software with professional-grade server hardware to provide a turnkey media asset management system that can easily grow as your needs evolve. Media stored on the PX Media Server is accessed through an intuitive browser-based interface—no proprietary client software is required.

Media Asset Management

Designed for fast performance, the PX Media Server uses rich metadata to make it easy to find and retrieve media assets quickly. Low-resolution MPEG-4 proxy video clips of your HD, HDV, DV, and MPEG footage allow for quick preview, protect high-resolution media assets, and save network bandwidth.

The browser-based interface provides immediate access to audio, video, images, and text-based data from any location. Additional features include online and offline usage, picture-to-clip extract, multi-client support, access rights management, and NLE format compatibility via the FS DV Conversion Suite.

Applications

- Broadcast
- Digital Media Archiving
- Education and Distance Learning
- Healthcare
- Research and Development
- Video Production



- 1 Access assets through an intuitive browser-based interface with user-friendly navigation.
- 2 Manage multiple projects with unique and secure access rights.
- 3 View proxy files in the integrated player, complete with mark-in and mark-out tools.
- 4 Create, edit, or delete metadata.

Engineered for Workgroups

The PX Media Server makes it easy for workgroup members to access and work with your media library from any location. To maximize efficiency and performance, Focus offers three editions of the PX Media Server, each tailored to meet the needs of specific workgroup sizes.

Model	Edition	Users
PX-100	Small Workgroup Edition	1–10
PX-100	Workgroup Edition	1–24
PX-500	Enterprise Edition	25+

PX Media Server Editions

Available in three editions, the PX Media Server features flexible configurations to suit almost any organization. The PX-100 Small Workgroup Edition comes with up to 4TB of internal storage, can support external storage options, and is ideal for organizations with up to 10 users. The PX-100 Workgroup Edition is perfect for organizations with up to 24 users and the PX-500 Enterprise Edition is designed from the ground up for large workgroups with 25 or more users. All editions can be configured with a variety of external storage options. To obtain more information about selecting the best edition and configuration for your organization, please contact Focus Enhancements.

Supported Media Formats

The PX Media Server supports both high- and standard-definition video and generates MPEG-4 proxy files that make it fast and easy to preview footage. In addition to your media assets, the PX Media Server can also store other information that pertains to your media-based projects, such as proposals, storyboards, supporting documentation, and more.

Format	Bit Rate	File Type	Resolution
High-Definition Video			
MPEG -2	10–50 Mbps	Program Stream; Transport Stream; Elementary Stream; MP@LL, MP@ML, MP@H14, 422@ML	Up to 1080i All 18 ATSC formats
HDV	19/25 Mbps	.m2t; .mov (QuickTime)	720p; 1080i
Panasonic DVCPRO HD	100 Mbps	P2 MXF; .mov (QuickTime)	720p; 1080i
Standard-Definition Video			
DV, DVCAM	25 Mbps	AVI Type 1; AVI Type 2; RAW; .mov (QuickTime)	720 x 480/576
DVCPRO, DVCPRO 50	25/50 Mbps	P2 MXF; .mov (QuickTime)	720 x 480/576
MPEG-1, MPEG-2	1–50 Mbps	Program Stream; Transport Stream; Elementary Stream; MP@LL, MP@ML, MP@H14, 422@ML	720 x 480/576
Audio			
MPEG Audio Layer 1–2	32 kHz–48 kHz	—	—
MPEG-2	32 kHz–48 kHz	—	—
Graphics			
TIF, BMP, PNG, JPEG, GIF	—	—	—

Protecting Your Assets

To keep your media assets secure, the PX Media Server enables you to assign access rights to projects by workgroup or individual user, ensuring that you maintain complete control over who can access your footage and files.

Importing, Tagging, and Organizing Media

PX Media Transfer Utility

The PX Media Server comes with the PX Media Transfer Utility (Figure 1), featuring drag-and-drop functionality that makes it quick and easy to import individual media files or entire folders containing media files—complete with video clips, audio clips, thumbnails, timecode, and metadata—and maintain the hierarchy that you’ve already established. Although the PX preview function is designed for video, other files such as images and documents can also be stored on the PX Media Server, enabling you to store all related files in one system.

Supporting hierarchical-based file formats such as P2 MXF, the PX Media Transfer Utility enables you to preserve native metadata and file structure as you import and export video to and from the PX Media Server. With its Universal Metadata Engine™, the PX Media Transfer Utility allows you to add custom metadata to your footage.

If you’d like to bring video straight from your camera’s recording medium—hard disk, Panasonic P2 card, or tape—directly into the PX Media Server, the PX Ingest Station (sold separately) automates the process, making ingest fast and efficient.

Camera and Custom-Defined Metadata

The PX Media Server displays the metadata that your camera provides and allows you to add numerous custom fields. With its rich metadata capabilities, the PX Media Server enables you to categorize, track, search, and find clips—with amazing speed.

Projects

The PX Media Server uses projects to organize and store media and related files. When you import media, you can either create a new project or assign it to an existing project. Projects can also have subfolders, allowing you to organize files within a project. Media can be assigned to projects based on metadata. As a result, the same video clips can be shared by multiple projects for efficient storage.

Searching and Previewing Clips

Search

With the PX Media Server and its rich metadata capabilities, you’ll no longer have to thumb through tapes and DVDs on your shelves, go through folders on your hard disks, or fast-forward through hours of footage trying to find the exact clip that you need—simply enter your search criteria (Figure 2), and the PX Media Server will display the clips that meet your requirements (Figure 3). It’s that simple. Search results are displayed in containers, and with a PX Export module or the PX Payout Station (each sold separately), you can easily distribute your media.

Preview

The PX Media Server protects your footage and conserves network bandwidth by generating low-resolution MPEG-4 proxy video clips for preview. In addition to previewing clips, you can also download the entire clip or set start and end points and download a specific portion of the clip for editing or distribution.

Import



Figure 1: PX Media Transfer Utility

Search



Figure 2: Search Content



Figure 3: Search Results

Calculating Storage Requirements

Your Focus representative will help you calculate how much storage capacity you need; however, the table below provides a general guideline.

Video Format	Hours/TB
DV	79
HDV	90
MPEG-2 (4 Mbps)	538
MPEG-2 (6 Mbps)	364
MPEG-2 (10 Mbps)	222
DVCPRO HD (1080i 60)	19

About PX RAID

Ideal for storage requirements of 4TB to 60TB, PX RAID (Redundant Array of Independent Disks) is a high-capacity storage system that features multiple, independent hard disk drives that provide reliable redundant storage and quick access to your media assets.

About Optical Storage

Ideal for both nearline and offline storage, robotic optical storage solutions enable you to store media on discs. A copy of the data can be accessed and edited, or discs can be removed from the system and shelved. Either way, the PX Media Server keeps track of your footage so you can easily locate and retrieve it at any time.

In addition to JVC Blue-ray JukeBox and Plasmon G-Series (UDO) solutions, the PX Media Server also supports disc publishing solutions from Rimage.

PX Storage

The PX Media Server supports a wide range of storage options, including disk, optical, and tape-based systems. By taking a number of factors into consideration, Focus Enhancements can help you determine how much storage capacity you need and which storage option or combination of options will best serve your organization.

Online Storage

Perfect for daily use, online storage provides quick access to your digital media files over a network. PX RAID storage options support four JBOD units, providing up to 60TB of storage. To protect your valuable media, Focus offers IBM® Tivoli® Storage Manager, a suite of tools that provide a wide range of critical data protection functions, including hierarchical storage management, backup, and recovery.

Optical Storage Solutions

SAS RAID-5	PX RAID 4000	PX RAID 9000	PX RAID 12000
Storage Capacity	4TB	9TB	12TB
Hard Drives	8 x 500GB SATA II	12 x 750GB SATA II	12 x 1TB SATA II
Hard Drive Speed	7,200 rpm	7,200 rpm	7,200 rpm
Power Source	Two hot-swap redundant 400W power supplies; Input: 100–240V AC; 47–63 Hz		
Rack Mount	2U	2U	2U
Dimensions	3.46" high by 17.49" wide by 21.65" deep		
Weight	67 pounds	71 pounds	71 pounds

Nearline and Offline Storage

Ideal for media that does not require daily access, nearline and offline storage is less expensive than online storage and provides a number of cost-effective options for archiving media.

Optical Storage Solutions

Optical Storage	JVC Blue-ray JukeBox	Plasmon G-Series (Ultra-Density Optical)
Storage Capacity	2.5–30TB	218GB–5.8TB (MO) 720GB–19.1TB (UDO)
Slots	50–600	24–638
Drive Options	MC-BL10 Blu-ray	Sony 5.25" 9.1GB (14x) MO Plasmon 5.25" 30GB UDO
Number of Drives	4–6 (maximum of 12)	1, 2, 4, 6, 8, 10, or 12
Number of Magazines	1–12 (50 discs/magazine)	
Sustained Read Transfer Rate (maximum)	9 Mbps	6.1 Mbps (MO); 8 Mbps (UDO)
Robotics Average Exchange Time	2.5–4.5 seconds	6.1, 6.2, 6.3, 6.4, or 8.3 seconds
Bulk Load	50-disc magazine	10-disc magazine (not available on all models)

Tape-Based Storage Solutions

Tape-Based Storage	IBM TS3100 Tape Library Express
Storage Capacity per Tape Library (maximum)	17.6TB (compressed); 8.8TB (native)
Storage Capacity per Cartridge (maximum)	800GB (compressed); 400GB (native)
Tape Drive/Medium	1 x IMB LTO; Ultrium 3
Data Transfer Rate	Up to 80 Mbps
Tape Cartridges	22
Mail Slots	1
Form Factor	Stand-alone or rack-mount units available

PX Export Modules

Optional PX export modules make media export extremely efficient. Full-bandwidth media can be saved to a desktop or easily distributed. The PX Media Server features a number of export modules (each sold separately) that simplify the distribution process. For example, you can upload video from the PX Media Server to a web server or an FTP server. When you make video available for download, you can incorporate an order form to collect information before download can begin, ensuring that you capture information about those who use your footage. If you'd like to distribute video on DVD, the PX Media Server features a module that not only makes it easy to burn DVDs, but also creates menus and labels.

Export Modules (Optional)	Function
PX Public Export Module	Copies video or image files to a web server via FTP
PX FTP Push Export Module	Transfers high-resolution files to an FTP server via FTP
PX Order Form Export Module	Includes a customizable form to collect information before enabling a user to download files
PX Rimage DVD Authoring Export Module	Burns selected MPEG-2 video clips to a DVD Includes DVD menus and label templates

About Tape-Based Storage

Well suited for archiving large amounts of data, tape-based storage systems feature tape libraries that contain removable cartridges. Each cartridge holds up to 400GB of data—for example, one cartridge can store 50 to 250 hours of standard-definition video, depending on the compression rate. The tape-based storage options that Focus offers also feature removable magazines that make it extremely easy to load and unload media.

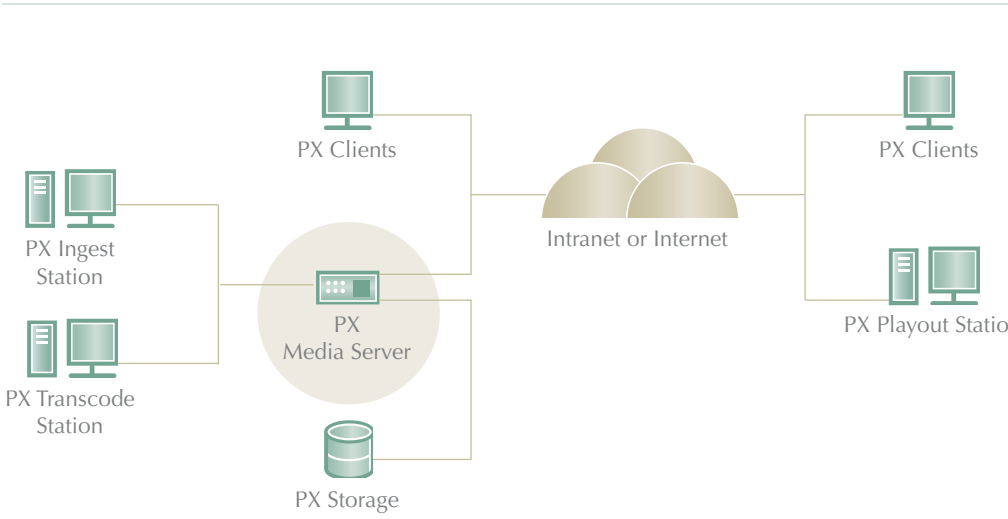


Featured Customers

- A+M Media
- ACORD
- Arizona State University (Biodesign Institute)
- AVC
- Bremen PEG Channel
- Bremerhaven PEG Channel
- Capital Vision
- Cork University
- Dortmund PEG Channel
- Dublin Central University
- DW Green
- Falco Producciones S.L.
- Financial News 24
- Florian TV
- Game TV
- German Air Force
- Giessen PEG Channel

Expanding Your System

The PX Media Server is the heart of the PX Media Asset Management system, and it enables you to manage media-based data with efficiency and ease. Depending on your needs, you can expand your media asset management system to include ingest, transcode, and playout (each option sold separately). All components are controlled by and managed through the PX Media Server, ensuring that your media assets are centralized, secure, and easily accessible.



PX Ingest Station

Providing support for high-resolution MPEG-2 and DV/DVCAM encoding, the PX Ingest Station enhances your workflow by enabling you to ingest, index, and upload multiple channels of analog or digital video to the PX Media Server.



PX Transcode Station

With the PX Transcode Station, you can encode, transcode, or convert video formats and broadcast standards quickly and easily. Support for numerous video codecs is included.



PX Playout Station

With the PX Playout Station, you can add 24/7 scheduled program playout to the PX Media Server and enjoy seamless playback of high-resolution MPEG-2 and DV formats.

PX Media Asset Management in Action

From broadcast networks and production studios to universities and medical institutions, organizations depend on PX Media Asset Management solutions to protect their valuable media libraries and provide team members with immediate access to media assets.

Digital Media Factory

A full-service studio that specializes in digital-based video production, the Digital Media Factory chose the PX Media Server as a reliable and cost-effective way to manage all of its media assets, including video, audio, and graphics. When team members shoot a project, they immediately upload the footage to the PX Media Server and store a duplicate copy on their local machine for editing. After the program is edited, it's uploaded to the PX Media Server, where all raw footage and edited programs are stored. Supporting both custom and camera-defined metadata, the PX Media Server makes it fast and easy for the team to organize, catalog, and retrieve footage, saving them countless hours of production time.

Learn more: www.focusinfo.com/go/digitalmediafactory

Old Dominion University (ODU)

At Old Dominion University (ODU), distance learning comprises 25 to 30 percent of the university's overall student population, with more than 28,000 long-distance class enrollments each year. The university leverages various delivery methods—six-channel satellite system, video conferencing, video streaming over the Internet, asynchronous online classes, and DVDs—to reach students through a network of nearly 200 community colleges and military institutions nationwide. Hampered by a labor-intensive, analog tape-based process, the university decided to automate their playout workflow. ODU selected the PX Media Asset Management solution to store, schedule, and automate content playout and distribution. With the PX Media Asset Management solution in place, ODU was able to compress its workflow steps, reducing manpower hours by 80 to 85 percent.

Learn more: www.focusinfo.com/go/odu

Vattikuti Urology Institute, Henry Ford Hospital

The Vattikuti Urology Institute (VUI) selected the PX Media Asset Management solution to streamline the tasks of recording and storing video for each robotic prostatectomy procedure performed. The PX Media Server replaces the manual management of volumes of dispersed videotapes, and it enables terabytes of low- and high-resolution video to be managed, queried, and viewed from a simple browser-based interface. In the operating room, a team member uses a barcode reader and enters key information, including the date, the patient's name, and the surgery type. Recorded footage is sent directly from their da Vinci® Surgical System to the PX Ingest Station, where it is automatically indexed according to barcoded metadata fields. Files are stored electronically in the PX Media Server, making it quick and easy to query and view surgery footage. With the PX Media Asset Management solution, VUI has reduced the time and manpower needed to find a file by approximately 66 percent.

Learn more: www.focusinfo.com/go/henryfordhospital

Featured Customers

Hanoi Music Conservatory
 Henry Ford Hospital (Vattikuti Urology Institute)
 IQ Digital
 Kassel PEG Channel
 Magdeburg Police Station
 Muenster PEG Channel
 NY Academy of Sciences
 Offenbach PEG Channel
 Old Dominion University
 Oulu University, Kajaani
 Phoenix School of Law
 Polymedia
 SAV Production
 Tralee University
 University of Freiburg
 University of Kiel

Technical Specifications

Support

When you purchase PX Media Asset Management solutions from Focus Enhancements, you not only receive reliable products that deliver superior performance every day, you also receive unconditional service and support from a team of seasoned video professionals. All products are backed by comprehensive warranties and optional support contracts that cover installation, training, 24/7 phone support, and priority parts replacement.

Consultation

With extensive experience in designing, configuring, and integrating media asset management solutions for organizations around the world, the Focus team can help you select the perfect combination of components to meet your specific needs.

PX Media Server	PX-100		PX-500
	Small Workgroup Edition	Workgroup Edition	Enterprise Edition
Workgroup Size			
Users	Up to 10 users	Up to 24 users	25+ users
Server Software			
Media Asset Management	PX Media Server Workgroup Edition 5.0	PX Media Server Workgroup Edition 5.0	PX Media Server Enterprise Edition 5.0
Operating System	SUSE Linux 10.1	SUSE Linux 10.1	SUSE Linux 10.1
Database	IBM DB2	IBM DB2	IBM DB2
Utilities	Focus Media Transfer, PX Interface Protocol, Direct File Server, FTP Server		
Client Software			
Browser (user supplied)	Windows: Firefox, Internet Explorer; Mac OS: Firefox, Safari		
Server Hardware			
Model	IBM System x3650 ¹	IBM System x3650 ¹	IBM BladeCenter HS21 (3 min./14 max.); IBM BladeCenter E Chassis 8677
Processor	Dual Core Intel® Xeon™ Processor 5140; 2.33 GHz; 1,333-MHz FSB	Dual Core Intel® Xeon™ Processor 5140; 2.33 GHz; 1,333-MHz FSB	Dual Core Intel® Xeon™ Processor 5110; 1.6 GHz; 1,066-MHz FSB
Cache	4MB L2	4MB L2	4MB L2
Memory	2GB; 667-MHz FSB; FBDIMM DDR II SDRAM	2GB; 667-MHz FSB; FBDIMM DDR II SDRAM	2GB; 667-MHz FSB; FBDIMM DDR II SDRAM
Hard Drives	2 x 73GB SAS	2 x 73GB SAS	2 x 73GB SAS
RAID Support	Integrated RAID 1	Integrated RAID 1	Integrated RAID 1
Controller	ServeRAID 8K SAS	ServeRAID 8K SAS	Fibre
Optical Drive	CD-RW/DVD-ROM Combo	CD-RW/DVD-ROM Combo	DVD-ROM
Networking	Dual Gigabit Ethernet	Dual Gigabit Ethernet	Dual Gigabit Ethernet
Power Supply	2 x 835W hot-swap redundant power supply	2 x 835W hot-swap redundant power supply	2,000W hot-swap redundant power supply
Form Factor	2U rack-optimized; black	2U rack-optimized; black	7U rack-optimized; black
Dimensions (height x width x depth)	1.72" x 17.3" x 27.5"	1.72" x 17.3" x 27.5"	BladeCenter E Chassis: 12" x 17.5" x 28"
Weight	32 pounds	32 pounds	104 pounds
Storage			
Internal	2TB or 4TB	—	—
External	Optional (see pg. 4–5)	Optional (see pg. 4–5)	Optional (see pg. 4–5)

¹ Keyboard and mouse included; monitor not included

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