

Omneon ProXchange

Omneon ProXchange™ is a high-performance transcoding system specifically designed for high-volume multi-format media environments. As the first application to take advantage of the combined storage and processing architecture of Omneon MediaGrid, ProXchange delivers grid-based transcoding of media files stored within MediaGrid. ProXchange can transcode media files between a wide range of DV and MPEG-2 formats, including both SD and HD, as well as additional low-bit-rate distribution formats such as H.264, Windows Media & Flash Video. The scalable architecture of MediaGrid enables ProXchange to bring new levels of performance by distributing jobs across multiple processors in a MediaGrid active storage system.

The ProXchange system comprises of a core ProXchange JobDirector (PXD-2000) which is responsible for managing and controlling all jobs within the ProXchange system and optional additional ProXchange JobScalers (PXD-2001) which can be added to the system for scalability and increased performance. Depending on the desired throughput and required performance of the system, any number of additional ProXchange JobScalers can be added to the system in order to manage simultaneous processing of content stored on MediaGrid.

ProXchange JobDirector – PXD-2000

The ProXchange JobDirector runs the ProXchange server management application that contains the rules engine for managing transcode jobs within the system and is responsible for splitting and distributing jobs to the available ContentServers in the MediaGrid.

When a job is submitted to the system, it is added to the ProXchange JobDirector queue for processing. ProXchange JobDirector requests a pool of available processing resources from MediaGrid using the Grid Processing Framework. Once these resources are allocated, the application divides this job in to smaller tasks that are each assigned to a ContentServer in the MediaGrid. ContentServers process these tasks in parallel and return their results to the ProXchange JobDirector where the resulting content is reassembled in the new format on the MediaGrid.

ProXchange JobDirector PXD-2000 Specifications

Parameter	Specification
Storage	2x 3.5 inch 300GB SATA 10,000 rpm
Ethernet	Dual embedded Broadcom 10/100/1000 Gigabit NIC
Environmental	Operating Temperature 10° to 35°C (50° to 95°F) Storage Temperature -40° to 65°C (-40° to 149°F) Operating Relative Humidity 20% to 80% (noncondensing) Maximum humidity gradient: 10% per hour, operational and non-operational conditions. Storage Relative Humidity: 5% to 95% non-condensing Operating Vibration: 0.25G at 3Hz to 200Hz for 15 minutes Storage Vibration: 01.54Grms at 10Hz to 250Hz for 15 minutes Operating Shock: 1 shock pulse of 41G for up to 2ms Storage Shock: 6 shock pulses of 71G for up to 2ms Operating Altitude: -15.2m to 3,048m (-50 ft to 10,000 ft)
Safety	FCC (U.S. only) Class A ICES (Canada) Class A CE Mark (EN 55022 Class A, EN55024, EN61000-3-2, EN61000-3-3) VCCI (Japan) Class A BSMI (Taiwan) Class A C-Tick (Australia/New Zealand) Class A SABS (South Africa) Class A CCC (China) Class A MIC (Korea) Class A UL 60950 CAN/CSA C22.2 No. 60950 EN 60950

■ PRODUCT SPECIFICATION

ProXchange JobDirector PXD-2000 Specifications (continued)

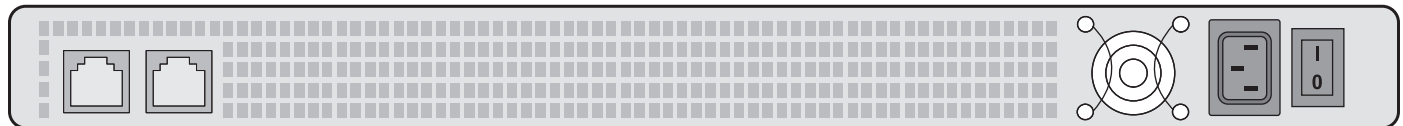
Parameter	Specification
Dimensions	44.70 cm (17.60") W
	4.27 cm (1.68") H
	54.61 cm (21.50") D
	1RU
Weight	11.80kg (26.0 lbs)
Power	110/220 Volts, 670W, Dual redundant hot-plug power supplies

Included Accessories

QTY	Description	Notes
2	Power Cord	1.83 Meters (6 ft.)
1	Rack Mount Hardware Kit	19 inch (standard)

ProXchange JobScaler – PXD-2001

ProXchange JobScalers are added to a system to increase scalability and performance for parallel processing of transcode jobs by the ProXchange system. By adding ProXchange JobScalers to the system, the ProXchange JobDirector is able to distribute the work required to the JobScalers in order to provide better performance when processing multiple parallel jobs. This becomes particularly beneficial when working with large MediaGrid systems with many available ContentServers as the volume of work that can be handled is greatly increased. Additional ProXchange JobScalers can share the load of the ProXchange JobDirector by completing the work required to split the jobs in to manageable sub-tasks and perform the wrapping and re-wrapping often required in transcode jobs.



ProXchange JobScaler PXD-2001 Specifications

Parameter	Specification
Storage	500GB 7.2K SATA Hard Disk Drive
Ethernet	2x Gigabit embedded NICs
Environmental	Operating Temperature: 10° to 35°C (50° to 95°F)
	Operating Relative Humidity: 20% to 80% (noncondensing) with a maximum humidity gradation of 10% per hour
	Operating Maximum Vibration: 0.25 G's 0-Peak, 3-200 HZ sweep @ 1/2 Octaves/minute
	Operating Maximum Shock: 31G, 2.6ms, 20inch/sec, bottom side
	Operating Altitude: -16 to 3048 m (-50 to 10,000 ft.)
	Storage Temperature: -40° to 65°C (-40° to 149°F)
	Storage Relative Humidity: 5% to 95% (noncondensing)
	Storage Maximum Vibration: 1.54 GRMS - 6 sides @ 15 min/side
Safety	Storage Maximum Shock: 71G, 2ms, 35inch/sec, 6 sides; 32G, 2ms, 270inch/sec, 6 sides
	Storage Altitude: -16 to 10,600 m (-50 to 35,000 ft.)
	FCC Part 15 Class A
	EN61000-3-2, A1, A2: Current Harmonics
	EN61000-3-3: Voltage Flicker
	EN55022: 1998 and CISPR 22: 1997 Class A
	VCCI Class 1
	MIC Class A
	BSMI
	EN55024: 1998 and CISPR 24: 1997
	IEC 61000-4-2: Electrostatic Discharge specification
	IEC 61000-4-3: Radiated Immunity
	IEC 61000-4-4: EFT/Bursts Immunity
	IEC 61000-4-5: Surge Immunity
IEC 61000-4-6: Conducted Immunity 0.15-80MHz	
IEC 61000-4-8: Power Frequency H-Field	
IEC 61000-4-11: Voltage Dips/Interrupts/Variations	

ProXchange JobScaler PXD-2001 Specifications (continued)

Parameter	Specification
Dimensions	44.70 cm (17.60") W
	4.27 cm (1.68") H
	54.61 cm (21.50") D
	1RU
Weight	11.80kg (26.0 lbs)
Power	110/220 Volts, 670W, Dual redundant hot-plug power supplies

Included Accessories

QTY	Description	Notes
1	Power Cord	1.83 Meters (6 ft.)
1	Rack Mount Hardware Kit	19 inch (standard)

Modes of Operation

Type	Details
Automated	Using the ProXchange Manager software application users can configure a set of rules for any directory on a MediaGrid system. These rules include all the required output parameters including format, bit-rate, wrapper type and output directory. The ProXchange Manager will then monitor that directory and automatically transcode the content using the parameters specified and place the output in the specified directory. This allows external applications to monitor those output directories and then post-process that content as desired.
Manual	The application allows users to browse the connected Omneon MediaGrid system to locate some content that requires conversion. Users can then select to transcode that content using a set of transcode rules already configured within the system.
API	The ProXchange API allows third-party applications to interact and control the ProXchange system via a set of external commands available via HTTP

Supported Input Formats

Type	Details
Video	DV, DV50, MPEG-2 SD, MPEG-2 HD
Audio	AIFF, WAV
Wrappers	MXF Op1a, MXF Op1b, QuickTime6 Self-contained, QuickTime6 Referenced, QuickTime7 Self-contained, QuickTime7 Referenced

Supported Output Formats

Type	Details
Video	DV, DV50, DVCProHD, MPEG-2 SD, MPEG-2 HD, H.264, Windows Media, Flash Video
Audio	AIFF, WAV, MP3, AAC, AAC+
Wrappers	MXF Op1a, MXF Op1b, QuickTime7 Referenced, MP4, Flash

Notes:

1. Users will require a separate PC to install and run the ProXchange software applications in order to allow them to configure the system, set up the transcode rules and undertake manual transcode operations. The client software is available for use on multiple PCs free of charge for ProXchange owners allowing them to be installed on as many desktops as required.
2. ProXchange does not currently support the up or down conversion of media from SD to HD. SD input formats are only supported as alternative SD formats and HD input formats are only supported as HD output formats.
3. ProXchange does not currently allow the setting of output resolutions on transcoded content. All content will be transcoded at the resolution of the input content with the exception of H.264, Windows Media & Flash Video where the ProXchange Manager allows users to configure the output resolution from a selection of available options.
4. ProXchange does not currently support MXF Op0.
5. ProXchange requires MediaGrid 2.0 in order to take advantage of the Grid Processing Framework it provides.

■ PRODUCT SPECIFICATION



U.S. Headquarters:
1237 E. Arques Ave.
Sunnyvale, CA 94085
ph +1 866.861.5690
ph +1 408.585.5000
fx +1 408.585.5099

Europe:
5 Lindenwood
Chineham, Basingstoke
RG24 8QY United Kingdom
ph +44 1256.347.400
fx +44 1256.347.410

Japan:
Ginza San-Chome Bldg. 8F
3-14-1 Ginza, Chuo-ku
Tokyo 104-0061 Japan
ph +81 03.5565.6735
fx +81 03.5565.6736

Asia/Pacific:
20 Loyang Crescent
Singapore 508984
ph +65 6548.0500
fx +65 6548.0504