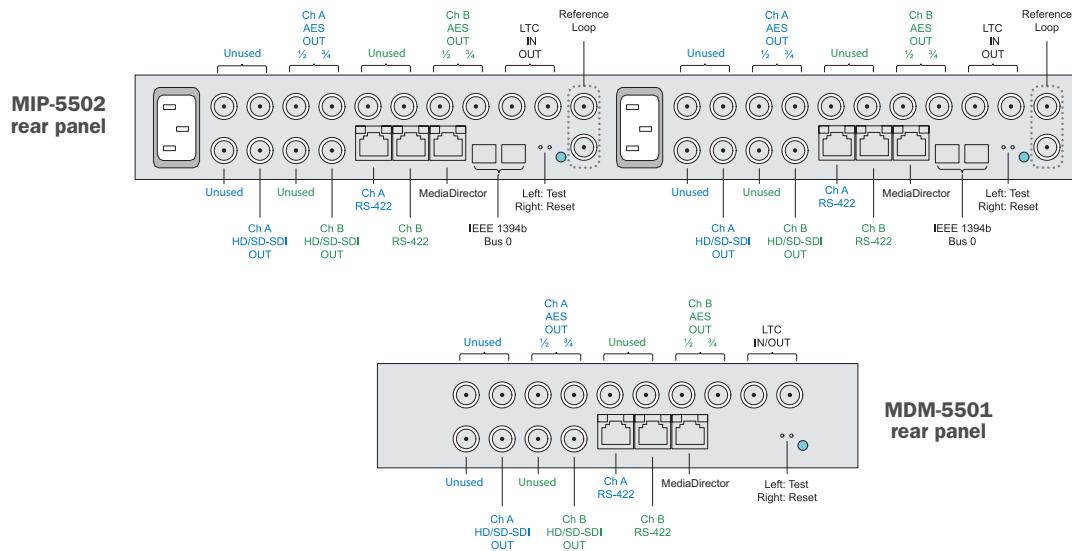


5500 Series MPEG-2/DV MediaPort: MIP-5501/2, and MDM-5501 HD or SD playback with up- and down-conversion



The Omneon 5500 series MPEG-2/DV MediaPorts provide play of HD and SD video and digital audio stored on the Omneon Spectrum Video Server and the Omneon MediaDeck. The MIP-5501 and MIP-5502 are supplied in their own enclosure and connect to the server by external cabling. The MDM 5501 plugs directly into one of the two accessory slots of the MediaDeck, which supplies power, reference, and data via the backplane connector.

These MediaPorts offer the features described below. Unless otherwise specified, each feature applies to all models in the 5500 Series.

- Two (MIP-5501 and MDM-5501) or four (MIP-5502) SDI video output channels. Each channel is independently configurable for HD or SD operation, and complies with SMPTE 292M (HD SDI) and SMPTE 259M (SD SDI) as appropriate to the operating mode.
- Each channel supports playback of both HD and SD material encoded as MPEG-2 or DV, in any combination, back-to-back. If the channel is configured for HD operation, HD material plays unaltered and SD material is upconverted to HD for playback. Similarly, a channel configured for SD operation plays SD material unaltered, and downconverts HD material for playback.
- Support for up to 16 channels of embedded audio, or up to 4 channels of discrete (AES/EBU) audio, per video channel
- Modules are “hot swappable” and can be replaced without disrupting other operations on the server
- Playback video data compressed according to the following:
 - HD: MPEG-2 Long GOP method at 18-85 Mb/s, or MPEG-2 I-frame method (selectable) at 50-100 Mb/s; DVCPRO HD
 - SD: MPEG-2 Long GOP at 3-24.9 Mb/s, MPEG-2 I-frame method at 25-50 Mb/s, or IMX 30, 40, or 50, DV, DVCPRO, DVCPRO 50
- HD frame geometry of 1920x1080i @ 25 and 29.97 Hz, and 1280x720p @ 50 and 59.94 Hz (MPEG-2 MP@HL and 422P@HL), and SD frame geometry of 720x480i @ 29.97 and 720x576i@25
- Material recorded with less than full-raster subsampling automatically upsampled for playback
- 4:2:0 or 4:2:2 chroma sampling supported at any bitrate. 4:1:1 chroma sampling supported for playback of DV material.
- User-selectable MXF OP1a (self-contained essence), MXF OP1b, or QuickTime wrapper format
- Supports SDI embedded audio compliant with SMPTE 272M (SD) and SMPTE 299M (HD)
- Supports pass-through (data mode) of pre-compressed audio such as AC-3 and Dolby™ E

Audio is supplied to the MediaPort by either the rear panel AES/EBU BNC connectors for up to 2 pairs (4 channels) per video channel, or by SDI embedded audio (16 audio channels per video channel). SDI embedded audio support in accordance with SMPTE 272M/299M is a standard feature of the 5500 series, eliminating the need for external embedders and de-embedders.

■ PRODUCT SPECIFICATION

5500 Series MPEG-2/DV Playback MediaPort Specifications

Parameter	Specification	Detail
Video	SMPT E 292M (HD) SMPT E 259M (SD) ITU-R BT.601 (data and electrical)	75 Ohm BNC 5501: 2 HD/SD SDI outputs 5502: 4 HD/SD SDI outputs
Audio	AES/EBU, 24 bits per sample @ 48 Khz Pre-Compressed Audio	4 channels (2 AES pairs), or embedded per SMPT E 272M AC. 75 Ohm BNC connector. Audio samples stored as uncompressed PCM Pass-through (data mode) of AC-3 and Dolby E
HD Video compression	MPEG-2 Long GOP 18-85 Mb/s MPEG-2 I-frame 50-100 Mb/s DVCPRO HD 4:2:0 or 4:2:2 chroma supported at any bitrate	MPEG-2 MP@HL, 422P@HL
HD Video formats	1920 x 1080i @ 25 and 29.97 fps 1440 x 1080i @ 25 and 29.97 fps 1280 x 1080i @ 29.97 fps 1280 x 720p @ 50 and 59.94 fps 960 x 720p @ 50 and 59.94 fps	Full-raster horizontal sampling $\frac{3}{4}$ - raster horizontal sampling upsampled on playback (DV @25 fps, MPEG-2) $\frac{2}{3}$ - raster horizontal sampling upsampled on playback (DV @29.97 fps) Full-raster horizontal sampling, progressive scan $\frac{3}{4}$ - raster horizontal sampling upsampled on playback (DV)
SD video compression	MPEG-2 Long GOP 3-24.9 Mb/s MPEG-2 I-frame 25-50 Mb/s IMX 30, 40, 50 DV, DVCPRO, and DVCPRO 50 4:2:0 or 4:2:2 chroma supported at any bitrate 4:1:1 chroma supported for DV material	MPEG-2 MP@ML, 422P@ML
SD Video formats	720 x 480i @ 29.97 fps 720 x 576i @ 25 fps	Interlaced 525-line frames delivered in 2 fields Interlaced 625-line frames delivered in 2 fields
Control	VDCP and limited BVW protocol Omneon Player API	RS-422 interface; RJ-45 connector, RJ-45 to DB-9 adapter supplied Control of 5500 series via software; access via Ethernet to server
Server interface	IEEE 1394b or Private 1Gb Ethernet	(MIP-550x) 1394b or dedicated Ethernet to MediaDirector (depending on MediaDirector model) (MDM-5501) 1394b interface by backplane connection to MediaDeck
Ancillary data	MPEG-2: SMPT E 328M, DV: SMPT E 370M, 375M SMPT E 334, EIA-608, EIA-708	Timecode, Dolby metadata, Japanese subtitle, user-defined HD-SDI closed caption
Timecode	LTC SMPT E 328M	75 Ohm BNC connector Supplied in MPEG2 user data
Reference timing signal	Analog composite video with color burst, black	MIP-550x: Supplied via REF LOOP connector MDM-5501: Supplied by MediaDeck; sourced from MediaDeck's REF LOOP connector
Environmental	Operating Temperature Humidity	+10C to +35C 10% to 80% non-condensing
Safety	USL/CNL	UL 670950-1, 1st Edition. CSA C22.2 No. 60950-1-03, 1st Edition IEC 60950-1 (2001) 1st Edition
EMC	FCC Part 15, ICES-003 ICES-003 Directive of Electromagnetic Compatibility (89/336/EEC) including amendments CISPR 22	Class A for Digital Equipment, USA Class A for Digital Equipment, Canada EN55022:1998, EN55024:1998 Emissions from Information Technology Equipment Immunity for Information Technology Equipment Class A
Dimensions	MIP-550x: W: 44.4 cm (17.5 inches) H: 4.4 cm (1.75 inches) D: 64.6 cm (25.43 inches) 65.4 cm (25.75 inches) 66.5 cm (26.18 inches) MDM-5501: plugs into MediaDeck accessory slot	Chassis only, inside rack 1 RU Chassis front to chassis rear Chassis front to rear of BNC connectors Front of bezel to rear of BNC connectors Front bezel extends forward [Max. 1.1 cm (0.4375 inches)] from chassis front edge and rack ear plane.
Weight	MIP-5501: 5.4 kg (12.0 lb) MIP-5502: 6.4 kg (14.2 lb) MDM-5501:	
Power	MIP-550x: 100-240V AC 45-63 Hz 120 W	MIP-550x: Dual redundant power supplies with separate IEC 60320 C-14 sockets. MDM-5501: Power supplied from MediaDeck.



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