

Hardware I/O Capabilities		Key: Colored Cells Indicates Supported with Avid Open I/O	(Yes) = Supported by Hardware (-) = Not Supported by Hardware
Date Completed: 10/29/2011			
Features / Functionality	HDX-SDI Motu	HD Express Motu	Notes/Comments
Video Formats			
SD - PAL 24p	Yes	Yes	No Audio Pull Up/Down
SD - PAL 25p	Yes	Yes	
SD - PAL 25i	Yes	Yes	
SD - NTSC 23.976p	Yes	Yes	
SD - NTSC 24p	Yes	Yes	No Audio Pull Up/Down
SD - NTSC 30i	Yes	Yes	
HD - 720p 23.976	Yes	Yes	
HD - 720p 25	Yes	Yes	
HD - 720p 29.97	Yes	Yes	
HD - 720p 50	Yes	Yes	
HD - 720p 59.94	Yes	Yes	
HD - 720p 60	Yes	Yes	
HD - 1080i 50	Yes	Yes	
HD - 1080i 59.94	Yes	Yes	
HD - 1080i 60	Yes	Yes	
HD - 1080PsF 23.976	Yes	Yes	
HD - 1080PsF 24	Yes	Yes	
HD - 1080PsF 25	Yes	Yes	
HD - 1080PsF 29.97	Yes	Yes	
HD - 1080PsF 30	Yes	Yes	
HD - 1080p 23.976	Yes	Yes	
HD - 1080p 24	Yes	Yes	
HD - 1080p 25	Yes	Yes	
HD - 1080p 29.97	Yes	Yes	
HD - 1080p 30	Yes	Yes	
HD - 1080p 47.96	-	-	
HD - 1080p 48	-	-	
HD - 1080p 50	-	-	
HD - 1080p 60	-	-	
2K - 47.96i	-	-	
2K - 48i	-	-	
2K - 50i	-	-	
2K - 59.94i	-	-	
2K - 60i	-	-	
2K - 14.98PsF	-	-	
2K - 15PsF	-	-	
2K - 18.98PsF	-	-	
2K - 19PsF	-	-	

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2K - 23.98PsF	-	-	
2K - 24PsF	-	-	
2K - 25PsF	-	-	
2K - 23.976p	-	-	
2K - 24p	-	-	
2K - 25p	-	-	
2K - 29.97p	-	-	
2K - 30p	-	-	
2K - 47.96p	-	-	
2K - 48p	-	-	
2K - 50p	-	-	
2K - 59.94p	-	-	
2K - 60p	-	-	
2k - 120p	-	-	
4K - 23.98PsF	-	-	
4K - 24PsF	-	-	
4K - 25PsF	-	-	
4K - 23.976p	-	-	
4K - 24p	-	-	
4K - 25p	-	-	
4K - 29.97p	-	-	
4K - 30p	-	-	
4K - 48p	-	-	
4K - 50p	-	-	
4K - 59.94p	-	-	
4K - 60p	-	-	
4k - 120p	-	-	
Video Color Space/Sampling/Precision Support			
YUV 4:2:2	Yes	Yes	
RGB 444	-	-	
8 Bit	Yes	Yes	
10 Bit	Yes	Yes	
12 Bit	-	-	
Audio Formats/Functionality Support			
S.R. - 96kHz	Yes	Yes	
S.R. - 88.2kHz	Yes	Yes	
S.R. - 48kHz	Yes	Yes	
S.R. - 44.1kHz	Yes	Yes	
S.R. - 32kHz	-	-	
S.R. - Pull-down / Pull-up	-	-	
S.R. - Audio Conversion	Yes (2 ch)	Yes (2 ch)	AES or S/PDIF input
16 Bit	Yes	Yes	

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24 Bit	Yes	Yes	
Audio Mixing (Routing, Mapping for 5.1, Mix all Channels to St.)	Yes	Yes	Done in Software
Audio Input Gain Controls	Yes	Yes	Analog Input Only
Audio Pass-through Mixing (Monitor mixing the audio being captured)	Yes	Yes	Done in Software
Input Connections (Video/Audio)			
SDI 1.5G (Video)	Yes (4:2:2 10b)	-	
SDI 3G (Video)	-	-	
SDI (Audio)	Yes (8 ch)	-	
SDI "Multiple Bridging" Dual Spigot Modes - (Video)	-	-	
Analog - Composite (Video)	Yes	Yes	
Analog - Svideo (Video)	Yes	Yes	
Analog - SD YCbCr Component (Video)	Yes	Yes	
Analog - HD YCbCr/RGB Component (Video)	Yes	Yes	
HDMI 1.3a (Video)	Yes	Yes	
HDMI 1.4 (Video)	-	-	
HDMI 1.3a (Audio) 8 Channels	Yes	Yes	
HDMI 1.4 (Audio) 8 Channels	-	-	
ADAT Optical (Audio) 8 Channels	-	-	
S/PDIF Coaxial (Audio)	-	Yes (2ch)	
S/PDIF Optical (Audio)	-	-	
AES/EBU (Audio)	Yes (8 ch)	-	
Microphone Input /Phantom Power (Audio)	-	-	
Analog XLR "Pro Level +4" (Audio)	-	-	
Analog 1/4" TRS "Pro Level +4" (Audio)	Yes (8 ch)	-	
Analog RCA "Consumer level -10" (Audio)	Yes (2ch)	Yes (2ch)	
Output Connections (Video/Audio)			
SDI 1.5G (Video)	Yes (2) (4:2:2 10b)	-	
SDI 3G (Video)	-	-	
SDI (Audio)	Yes (8 ch)	-	
SDI "Multiple Bridging" Dual Spigot Modes - (Video)	-	-	
Analog - Composite (Video)	Yes	Yes	
Analog - Svideo (Video)	Yes	Yes	
Analog - SD YCbCr Component (Video)	Yes	Yes	
Analog - HD YCbCr/RGB Component (Video)	Yes	Yes	
HDMI 1.3a (Video)	Yes	Yes	
HDMI 1.4 (Video)	-	-	
HDMI 1.3a (Audio) 8 Channels	Yes	Yes	
HDMI 1.4 (Audio) 8 Channels	-	-	
HDMI Config (Automatically configures to connected display)	-	-	
DVI (Video)	Yes	Yes	

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Display Port (Video)	-	-	
Stereo Headphone Jack with Volume Knob (Audio)	Yes	Yes	
Analog 1/4" Monitor Out (Audio)	-	-	
Analog XLR "Pro Level +4" (Audio)	-	-	
Analog 1/4" TRS "Pro Level +4" (Audio)	Yes (8 ch)	-	
Analog RCA "Consumer level -10" (Audio)	-	Yes (8 ch)	
ADAT Optical (Audio) 8 Channels	-	-	
S/PDIF Coaxial (Audio)	-	Yes (2ch)	
S/PDIF Optical (Audio)	-	-	
AES/EBU (Audio)	Yes (8 ch)	-	
Clock Source (Selectable / Detectable)			
Genlock/Reference Clock (BBG or Tri-Level)	Yes	-	
Genlock/Reference Clock (BBG or Tri-Level) Output/Pass-through	Yes	-	
Internal Clock	Yes	Yes	
S/PDIF Optical or Coaxial	-	Yes	
ADAT Optical	-	-	
SDI (SD & HD)	Yes	-	
AES/EBU	Yes	-	
HDMI	Yes	Yes	
Word Clock	-	-	
Hardware Scaling/Processing			
Raster Scaling Acceleration	-	-	
Down-Scaling/Conversion (HD to SD)	-	-	
Up-Scaling/Conversion (SD to HD)	-	-	
Cross-Conversion (720HD to 1080HD)	-	-	
Colorspace Conversion	-	-	
Hardware De-Interlacing	-	-	
Real- Time Frame Rate Conversion (2:3:2:3 & 2:3:3:2 Cadences)	-	-	
3:2 Pull-Down	-	-	
Real-Time Keyer (Alpha Ch over video, matte or framebuffer over incoming)	-	-	
3D Processing (Full Frame/Dual Stream)	-	-	
3D Processing (Frame Compatible/Frame Packed)	Yes	Yes	
DNxHD Codec Module	-	-	
AVC-I Codec Module	-	-	
H.264 Codec (Encode)	-	-	
Computer Interface			
PCI Express 8 lane, compatible with 8 and 16 lane PCIe slots	-	-	
PCI Express 4 lane, compatible with 4, 8 and 16 lane PCIe slots	-	-	
PCI Express 1 lane, compatible with 1, 4, 8 and 16 lane PCIe slots	Yes	Yes	
ExpressCard/34 Adapter (1 lane)	Yes	Yes	
Thunderbolt Adapter	-	-	
Thunderbolt	-	-	

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USB 3.0	-	-	
Firewire 800	-	-	
Miscellaneous			
Copy Protection: HDMI input is unable to capture from copy protected HDMI sources	Yes	Yes	
Device Control (RS-422)	Yes	-	
Ancillary Data RP188 Timecode In	Yes	-	
Ancillary Data RP188 Timecode Out	Yes	-	
Ancillary Data NTSC (Closed Captioning)	Yes	Yes	
Ancillary Data HD-SDI (Closed Captioning)	Yes	-	
SDI VITC Read for 3:2 Pull-Down Removal	-	-	
1D LUT Support	Yes	Yes	
Built-in safe area, safe title and letterbox generator	-	-	
LTC Input	Yes	-	
LTC Output	Yes	-	
Expandable Breakout Box	-	-	