



PCIe Card	macOS Windows Linux VMWare	M1/M2 Mac Com- patible Driver	Echo Express SEL	Echo Express SE I	Echo Express SE III/ IIIe	Echo I, Breakaway Box	Echo IIDV, Echo III, Echo Express III	xMac mini Server
			TB3	TB3	TB3	TB3	TB3	TB3
			1 Low Profile	1 Full Height Half Length + 1 AUX	3 Full Height Half Length+	1 Full Height Full Length	3 Full Height Full Length	1 FHFL + 1 FHHL + 1 AUX ¹
ADC, DAC, Digital I/O, Waveform Generators								
Acquiris U5309A	WL	-	-	-	√ SE IIIe only ¹²	√	√	-
Acquiris U5310A	WL	-	-	-	-	√	√	-
Acquiris U5303A	WL	-	-	-	√ SE IIIe only ¹²	√	√	-
Acquiris SA220P	WL	-	-	-	√ SE IIIe only ¹²	√	√	-
Spectrum Instrumentation 22xx ADC Digitizer²⁵	WL	-	-	-	-	√	√	-
Spectrum Instrumentation 33xx ADC Digitizer^{13,25}	WL	-	-	-	-	√	√ Except Echo IIDV	-
Spectrum Instrumentation 44xx ADC Digitizer²⁵	WL	-	-	-	-	√	√	-
Spectrum Instrumentation 59xx ADC Digitizer²⁵	WL	-	-	-	√	√	√	-
Spectrum Instrumentation 65xx DAC AWG²⁵	WL	-	-	-	√	√	√	-
Spectrum Instrumentation 66xx DAC AWG²⁵	WL	-	-	-	-	√	√	-
Spectrum Instrumentation 75xx Digital I/O²⁵	WL	-	-	-	√	√	√	-
Spectrum Instrumentation 77xx Fast Digital Waveform Acquisition²	WL	-	-	-	-	√	√	-
Audio Pro Cards								
Apogee Symphony 64 PCIe Card ^{d,2}	M	Yes	-	-	√	√	√	√
Avid HD Native ^{d,2}	M	Yes ²⁷	-	-	SE IIIe only	√	√	√
Avid Pro Tools HDX²⁸	MW	Yes	-	-	-	√	√ ³	√ ³
BSS Audio BLU-PCI 64-channel PCIe BLU Link Card ^{d,4}	W	-	√	√	√	√	√	√
Creative Sound Blaster AE-9	W	-	-	√	√	√	√	-
Dante PCIe-R Soundcards^{d,5}	MW	No	-	√	√	√	√	√
Audinate PCIe-R Soundcard ^{d,5}	MW	No	-	√	√	√	√	√
Focusrite RedNet Dante PCIe-R Soundcard ^{d,5}	MW	No	-	√	√	√	√	√
Solid State Logic Dante PCIe-R Soundcard ^{d,5}	MW	No	-	√	√	√	√	√
Yamaha Dante Accelerator PCI-R Audio Soundcard ^{d,5}	MW	No	-	√	√	√	√	√
Focusrite PCIeNX Dante Interface	MW	Yes	-	√	√	√	√	√
Lynx AES16e	MW	Yes	-	√	√	√	√	√
Lynx AES16e-SRC	MW	Yes	-	√	√	√	√	√
Lynx AES16e-50	MW	Yes	-	√	√	√	√	√
Lynx E22	MW	-	-	√	√	√	√	√
Lynx E44	MW	-	-	√	√	√	√	√
RME HDSPe AES	MW	Yes	-	√ ²⁶	√	√	√	√
RME HDSPe AIO^d	MW	-	-	√ ²⁶	√	√	√	√
RME HDSPe MADI	MW	Yes	-	√ ²⁶	√	√	√	-
RME HDSDe MADI FX	MW	Yes	-	√ ²⁶	√	√	√	-
RME HDSPe RavDAT	MW	Yes	-	√ ²⁶	√	-	√	-
RME HDSPe PCI ^d	MW	No	√	√ ²⁶	√	√	√	-
Solid State Logic MadiXtreme 64 ^d	-	No	-	-	-	-	-	-
Solid State Logic MadiXtreme 128 ^d	-	No	-	-	-	-	-	-
Universal Audio UAD-2 Solo, Duo DSP Accelerator⁵	MW	Yes	-	√	√	√	√	√
Universal Audio UAD-2 Quad, Octo DSP Accelerator^{2,6}	MW	Yes	-	-	√	√	√	√
Ethernet Adapters (2.5GbE)								
Sonnet Solo2.5G	WL	-	√	√	√	√	√	√
Ethernet Adapters (10GbE)								
ASUS XG-C100C	WL	-	√	√	√	√	√	-
ATTO Fast Frame 10GbE (All generations)	MWL	Yes	√	√	√	√	√	√
QINAP QXG-10G1T^d	WL	-	√	√	√	√	√	-
Sonnet Solo10G G10E-2X-E3 1-Port Card (10GBASE-T)	MWL	Yes	√	√	√	√	√	√
Sonnet Solo10G SFP+ G10E-SFP-1X-E3 1-Port Card (SFP+)	MWL	Yes	√	√	√	√	√	√
Sonnet McFiver	MWL	Yes	-	√	√	√	√	√
Sonnet Twin10G (Presto) 10GbE G10E-2X-E3 2-Port Card	MWLV	Yes	√	√	√	√	√	√
Sonnet Twin10G (Presto) 10GbE SFP+ 2-Port Card (SFP+)	MWLV	Yes	√	√	√	√	√	√
Ethernet Adapters (25GbE)²²								
NVIDIA ConnectX-4 ^d	WL	-	√	√	√	√	√	√
NVIDIA ConnectX-5 ^d	WL	-	√	√	√	√	√	√
NVIDIA ConnectX-6 LX	WL	-	√	√	√	√	√	√
Sonnet Twin25G PCIe Card	MWL	Yes	√	√	√	√	√	√

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			TB3	TB3	TB3	TB3	TB3	TB3
			1 Low Profile	1 Full Height Half Length + 1 AUX	3 Full Height Half Length+	1 Full Height Full Length	E3/EEIII/xMPS: 3 FHFL BB: 1 DWFHFL	1 FHFL + 1 FHHL + 1 AUX ¹
Fibre Channel								
ATTO Celerity FC-81EN ^d	MWLV		√	√	√	√	√	√
ATTO Celerity FC-82EN ^d	MWLV		√	√	√	√	√	√
ATTO Celerity FC-84EN ^d	MWLV		-	√	√	√	√	√
ATTO Celerity FC-161E	MWLV	Yes	√	√	√	√	√	√
ATTO Celerity FC-162E⁸	MWLV	Yes	√	√	√	√	√	√
ATTO Celerity FC-164E⁸	MWLV	Yes	-	√	√	√	√	√
ATTO Celerity FC-321E⁸	MWLV	Yes	√	√	√	√	√	√
ATTO Celerity FC-322E⁸	MWLV	Yes	√	√	√	√	√	√
ATTO Celerity FC-324E⁸	MW ²⁵ LV	Yes	√	√	√	√	√	√
FireWire								
Startech PEX1394A2V FW800	M		-	√	√	√	√	√
Startech PEX1394B3LP FW800	M		√	√	√	√	√	√
PCIe Bus Extender								
Accusys ExaSAN Single Port QSFP to PCIe HBA Card	MW	No	√	√	√	√	√	√
Accusys ExaSAN Dual Port QSFP to PCIe HBA Card	MW	No		√	√	√	√	√
Avid Moio DX (with PCIe Host Interface Board) ¹⁵	MWL	No	√	√	√	√	√	√
Avid Nitris DX (with PCIe Host Interface Board) ¹⁵	MWL	No	√	√	√	√	√	√
SAS/SATA								
Areca ARC-1883x 8-port 12Gb SAS RAID adapter⁸	MWLV	Yes	√	√	√	√	√	√
ATTO ExpressSAS H680	MWLV		√	√	√	√	√	√
ATTO ExpressSAS H1280 ^d	MWLV		√	√	√	√	√	√
ATTO ExpressSAS H12F0 ^d	MWLV		√	√	√	√	√	√
ATTO ExpressSAS H1280GT	MWLV		√	√	√	√	√	√
ATTO ExpressSAS H12F0GT	MWLV		√	√	√	√	√	√
ATTO ExpressSAS R680 RAID Adapter ^{d,9}	MW	No	√	√	√	√	√	√
CalDigit FASTA-2e ^d	-	No	-	-	-	-	-	-
CalDigit FASTA-6GU3 ^d	-	No	-	-	-	-	-	-
CalDigit FASTA-6GU3 PRO ^d	MW	No	-	√	√	√	√	√
HighPoint Rocket RAID SAS 2711/2722 ^d	-	No	√	√	√	√	√	√
HighPoint Rocket RAID SAS 3742A	MW	No	-	-	-	-	-	-
HighPoint Rocket RAID SAS 4522SGL ^d	-	No	√	√	√	√	√	√
HighPoint Rocket RAID SATA 644L/644LS ^d	-	No	-	√	√	√	√	√
NewerTech MAXPower USB/eSATA 2x2 Host Adapter ^d	-	No	-	√	√	√	√	√
Sonnet Tempo Duo PCIe ^d	MW	No	-	√	√	√	√	√
Sonnet Tempo SATA E2P ^d	-	No	-	-	-	-	-	-
Sonnet Tempo SATA Pro 6Gb PCIe 2.0 ^d	MWL	Yes	√	√	√	√	√	√
Sonnet Tempo SATA 6Gb Pro 4-port ^d	MWL	Yes	-	√	√	√	√	√
SSD								
Icy Dock MB987M2P-B NVMe M.2 SSD Adapter	MWL	Yes	√ ²³	√	√	√	√	√
Icy Dock MB987M2P-1B NVMe M.2 SSD Adapter with heat sink	MWL	Yes	√ ²³	√	√	√	√	√
Icy Dock MB840M2P-B Removable M.2 Adapter	-	-	-	-	-	-	-	-
Intel Optane 900P, 905P PCIe SSD	MW		√	√	√	√	√	√
OWC Accelsior 1M2	MWL	Yes	√	√	√	√	√	√
OWC Accelsior 4M2	M	Yes	-	√	√	√	√	√
OWC Accelsior 8M2	M	Yes	-	-	-	√	√	√
QNAP QM2-2P-344	M	Yes	√	√	√	√	√	√
Sonnet M.2 2x4 PCIe Card	MWL	Yes	√	√	√	√	√	√
Sonnet M.2 4x4 PCIe Card	MWL	Yes	-	-	-	√	√	√ (FHFL slot)
Sonnet M.2 8x4 PCIe Card	MWL	Yes	-	-	-	√	√	√ (FHFL slot)
Sonnet McFiver	MWL	Yes	-	√	√	√	√	√
Sonnet Fusion Dual U.2 PCIe Card	MWL	Yes	-	-	-	√	√	√ (FHFL slot)
Sonnet Fusion Dual 2.5 Inch SSD RAID	MWL	Yes	-	-	-	√	√	√ (FHFL slot)
Sonnet Tempo SSD	MWL	Yes	-	√ ¹¹	√ ¹¹	√	√	√
Western Digital BLACK AN1500 NVMe SSD Card	MWL		-	√	√	√	√	√ (FHFL slot)

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			TB3	TB3	TB3	TB3	TB3	TB3
			1 Low Profile	1 Full Height Half Length + 1 AUX	3 Full Height Half Length+	1 Full Height Full Length	E3/EEIII/xMPS: 3 FHFL BB: 1 DWFHFL	1 FHFL + 1 FHFL + 1 AUX ¹
Video Capture & Processing								
Acasis Dual 4K60 HDMI Video Capture Card	W		-	√	√	√	√	-
Acasis Quad 1080p60 HDMI Video Capture Card	W		-	√	√	√	√	-
Acasis Quad 1080p60 SDI Video Capture Card	W		-	√	√	√	√	-
AJA Corvid 3G ^d	MWL		-	√ TB2 only	√	√	√	√
AJA Corvid 3G LP ^d	MWL		√ TB2 only	√ TB2 only	√	√	√	√
AJA Corvid 3G Fibre ^d	MWL		-	√ TB2 only	√	√	√	√
AJA Corvid	MWL		-	√	√	√	√	√
AJA Corvid LP	MWL		√	√	√	√	√	√
AJA Corvid 22	MWL		-	√	√	√	√	√
AJA Corvid 24	MWL		-	√	√	√	√	√
AJA Corvid 44/44LP	MWL		-	√	√	√	√	√
AJA Corvid 44 12G	MWL	Yes	-	√	√	√	√	NR ²¹
AJA Corvid 44 BNC	MWL	Yes	-	√	√ SE IIIe only ¹²	√	√	NR ²¹
AJA Corvid 88/88LP	MWL	Yes	-	√	√	√	√	NR ²¹
AJA Corvid HEVC	MWL		-	-	√ SE IIIe only ¹²	√	√	NR ²¹
AJA Corvid HB-R	MWL		-	√	√	√	√	√
AJA Kona LHe Plus	MWL	Yes	-	√ TB2 only	√	-	√	√
AJA Kona LHi	MWL	Yes	-	√ TB2 only	√	-	√	√
AJA Kona 1	MWL	Yes	-	√	√	√	√	√
AJA Kona 3G ^d	MWL		-	√	√	√	√	√
AJA Kona HDMI	MWL	Yes	-	√	√	√	√	NR ²¹
AJA Kona 4	MWL	Yes	-	√	√	√	√	NR ²¹
AJA Kona IP	MWL	Yes	-	-	√	√	√	NR ²¹
AJA Kona 5 ^{8,18}	MWL	Yes	-	-	√ SE IIIe only ¹²	√	√	-
Blackmagic DeckLink 4K ^d	MW	No	√	√	√	√	√	√
Blackmagic DeckLink 4K Extreme ^{d, 13}	MW	Yes	-	√	√	√	√ Echo III, EE III Only	√
Blackmagic DeckLink 4K Extreme 12G ¹³	MWL	Yes	-	-	√ SE IIIe only ¹²	√	√ Echo III, EE III Only	NR ²¹
Blackmagic DeckLink 4K Pro ^d	MW	Yes	-	-	√	√	√	√
Blackmagic DeckLink 8K Pro ⁸	MWL	Yes	-	-	√ SE IIIe only ¹²	√	√	NR ²¹
Blackmagic DeckLink Duo 2	MWL	Yes	-	√	√	√	√	√
Blackmagic DeckLink Duo 2 Mini	MWL	Yes	√	-	-	-	-	-
Blackmagic DeckLink Mini Monitor	MWL	No	√	√	√	√	√	√
Blackmagic DeckLink Mini Monitor 4K	MWL	Yes	√	√	√	√	√	√
Blackmagic DeckLink Mini Recorder	MWL	Yes	√	√	√	√	√	√
Blackmagic DeckLink Mini Recorder 4K	MWL	Yes	√	√	√	√	√	√
Blackmagic DeckLink HD Extreme 3D ^d	MW	No	-	√	√	√	√	√
Blackmagic DeckLink Quad ⁽⁶⁾	MW	No	-	√	√	√	√	√
Blackmagic DeckLink Quad 2	MWL	Yes	-	-	√	-	√ TB3 only	NR ²¹
Blackmagic DeckLink Quad HDMI Recorder⁸	MWL	Yes	-	√	√	√	√ TB3 only	NR ²¹
Blackmagic DeckLink SDI ^d	MW	No	-	√	√	√	√	√
Blackmagic DeckLink SDI 4K	MWL	Yes	-	√	√	√	√	√
Blackmagic DeckLink Studio ^d	MW	No	-	√	√	√	√	√
Blackmagic DeckLink Studio 2 ^d	MW	No	-	√	√	√	√	√
Blackmagic DeckLink Studio 4K ¹⁴	MWL	Yes	-	√	√	√	√ TB3 only	√
Blackmagic Intensity Duo ^d	MW	No	-	√	√	√	√	√
Blackmagic Intensity Pro ^d	MW	No	-	√	√	√	√	√
Blackmagic Intensity Pro 4K	MWL	Yes	-	√	√	√	√	√
Bluefish444 2K Core ^d	M		-	-	-	√	√	-
Bluefish444 2K Ultra ^d	M		-	-	-	√	√	-
Bluefish444 Create HD ^d	M		-	-	-	√	√	-
Bluefish444 Create 3D ^d	M		-	-	-	√	√	-
Bluefish444 Create 3D Ultra ^d	M		-	-	-	√	√	-
Bluefish444 Epoch 2K Horizon ^d	M		-	-	-	√	√	-
Bluefish444 Epoch Neutron	MWL		-	√	√	√	√	√
Bluefish444 Epoch Neutron LP	MWL		√	√	√	√	√	√
Bluefish444 Epoch 4K Neutron	MWL		-	√	√	√	√	√
Bluefish444 Epoch 4K Neutron LP	MWL		√	√	√	√	√	√
Bluefish444 Epoch 4K Neutron Turbo (2 cards)	MWL		-	√	√	√	√	-
Bluefish444 Epoch 4K Neutron Turbo LP (2 cards)	MWL		-	√	√	√	√	√
Bluefish444 Epoch 4K Supernova	MWL		-	-	-	√	√	√
Bluefish444 Epoch 4K Supernova EX (2 cards)	MWL		-	-	-	√	√	-
Bluefish444 Epoch 4K Supernova Turbo (2-3 cards)	MWL		-	-	-	√	√	-
Bluefish444 Epoch 4K Supernova S+	MWL		-	√	√	√	√	√
Bluefish444 Epoch 4K Supernova S+ Turbo (2 cards)	MWL		-	-	√	√	√	-
Bluefish444 Epoch 4K Supernova S+ Ex (2 cards)	MWL		-	-	√	√	√	-
Bluefish444 Epoch Supernova CG	MWL		-	√	√	√	√	√
Bluefish444 KRONOS elektron	MWL		-	√	√ SE IIIe only ¹²	√	√	√
Bluefish444 KRONOS optós	MWL		-	√	√ SE IIIe only ¹²	√	√	√

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			TB3	TB3	TB3	TB3	TB3	TB3
			1 Low Profile	1 Full Height Half Length + 1 AUX	3 Full Height Half Length+	1 Full Height Full Length	E3/EEIII/xMPS: 3 FHFL BB: 1 DWFHFL	1 FHFL + 1 FHFL + 1 AUX ¹
Video Capture & Processing (continued)								
Deltacast Delta-3G-elp-d 8c	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp-d 8b	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp-d 80	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp-d 84	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp-d 4c	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp-2key-d 22	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp-key-d 2K	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp-2key-d 44	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -01	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -02	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -10	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -11	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -key-11	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -20	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -40	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 01	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 02	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 04	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 10	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 11	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 12	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 20	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 21	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 22	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-elp -d 40	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G40-hd40-elp-d	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-h3k2-elp 20	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-h4k-elp 20	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-asi-elp-d 8C	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G4c-ASI4c-elp-d	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-asi-elp-d 4C	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-asi-elp 11	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-asi-elp 40	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-HD-E XX	MW		-	-	-	✓	✓	-
Deltacast Delta-HD-E-KEY 22	MW		-	-	-	✓	✓	-
Deltacast Delta-3G-ELP 40	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-ELP 20	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-ELP-KEY 11	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-E-KEY 22	MW		-	✓	✓	✓	✓	✓
Deltacast Delta-HD-ELP-D 80	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-HD-ELP-D 44	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-HD-ELP-D 62	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-ELP-D 22	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-ELP-D 04	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-H4K-ELP 20	MW		✓	✓	✓	✓	✓	✓
Deltacast Delta-3G-DVI-E 20	MW		-	✓	✓	✓	✓	✓
Elgato 4K60PRO			-	-	-	-	-	-
Matrox Mojito MAX^d	W ¹⁵		-	-	-	✓	✓	-
Matrox Morphis	W ¹⁵		-	✓	✓	✓	✓	✓
Magewell Pro Capture HDMI	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture Dual HDMI	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture Quad HDMI²	MWL		-	-	✓	✓	✓	✓
Magewell Pro Capture HDMI 4K	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture HDMI 4K Plus	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture HDMI 4K Plus LT	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture Dual HDMI 4K Plus LT	MWL		-	✓	✓	✓	✓	✓
Magewell Pro Capture SDI	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture Dual SDI	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture Quad SDI	MWL		-	✓	✓	✓	✓	✓
Magewell Pro Capture SDI 4K Plus	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture Dual SDI 4K Plus	MWL		-	✓	✓	✓	✓	✓
Magewell Pro Capture AIO	MWL		-	✓	✓	✓	✓	✓
Magewell Pro Capture AIO 4K	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture AIO 4K Plus	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture DVI	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture Dual DVI	MWL		-	✓	✓	✓	✓	✓
Magewell Pro Capture DVI 4K	MWL		✓	✓	✓	✓	✓	✓
Magewell Pro Capture Hexa CVBS	WL		✓	✓	✓	✓	✓	✓
MOTU PCIe-424 ¹³			-	-	-	-	-	-
RED ROCKET ¹⁶	MW		-	-	-	✓	✓	✓
RED ROCKET X ¹⁷	MW		-	-	-	✓	✓	✓

PCIe Card	macOS Windows Linux VMWare	M1/M2 Mac Com- patible Driver	Echo Express SEL	Echo Express SE I	Echo Express SE III, IIIe	Echo I, Breakaway Box	Echo IIDV, Echo III, Echo Express III	xMac mini Server
			TB3	TB3	TB3	TB3	TB3	TB3
			1 Low Profile	1 Full Height Half Length + 1 AUX	3 Full Height Half Length+	1 Full Height Full Length	E3/EEIII/xMPS: 3 FHFL BB: 1 DWFHFL	1 FHFL + 1 FHHL + 1 AUX ¹
USB 3								
Sonnet Allegro USB 3.2 PCIe 4-Port	MWL	Yes	-	√	√	√	√	√
Sonnet Allegro Pro USB 3.2 PCIe (4-Port)	MWL	Yes	-	√	√	√	√	√
Sonnet Allegro USB 3.2 (7-Port)	MWL	Yes	-	√	√	√	√	√
Sonnet Allegro USB-C PCIe (2-port)	MWL	Yes	√	√	√	√	√	√
Sonnet Allegro USB-C 4-Port	MWL	Yes	-	√	√	√	√	√
Sonnet Allegro USB-C 8-port	MWL	Yes	-	-	-	√	√	-
Sonnet Allegro Max USB-C 20Gbps 1-port	M ² WL	Yes	√	√	√	√	√	√
Sonnet McFiver	MWL	Yes	-	√	√	√	√	√

Technical Notes

- d. These cards has been discontinued. Continuing OS support may be limited.
- Only 2nd Generation Thunderbolt 2 xMac mini Server, part number XMAC-MS-A, supports an AUX card. All Thunderbolt 3 models support an AUX card.
 - These cards draw more than 3 Amps at 3.3V, exceeding the specification for the single PCIe slot Echo Express SE I chassis.
 - Echo III Desktop and Rackmount chassis (introduced Dec. 2020): supports three HDX cards.
Echo Express III chassis (discontinued Dec. 2020): only TB2 and TB3 HDX support HDX cards; TB3 Edition not compatible with HDX cards.
xMac Pro Server: compatible with HDX Cards.
xMac mini Server: supports one HDX card.
Breakaway Box: supports one HDX card
Sonnet Power Adapter Cable for one HDX card, P/N TCB-HDXB supports EI, E III, EE III, xMPS and xMMS (but not BB); sold separately.
 - BSS Audio believes that BLU-PCI 64-channel PCIe BLU Link Card is Thunderbolt compatible, but they have not tested it. Worst case is that the card may not be hot-pluggable.
[5. Requires firmware version 4.0.10.5+ & hardware version 4.2.0.9+; Supports macOS 10.14-11 \(except M1 Macs\) and Windows 10 and 11 with Rednet Control software 2.8.5+.](#)
 - Mac Pro 6,1 (Late 2013) computers require UAD v9.6.1 Build 62772 or higher.
 - Only Sonnet Presto Gigabit Pro PCIe model number GE1000LAB-E (shipping on or after January 1, 2014) is Thunderbolt compatible.
 - These are PCIe 3 x8 cards, and they may not achieve maximum bandwidth or number of video channels over Thunderbolt 3, which provides PCIe 3 x4.
For example, a card that captures four 4k@60Hz channels may capture only two channels in a Thunderbolt chassis; or possibly four channels but at only @30Hz.
 - Cooling Kit for ATTO R680 RAID Card (Sonnet Part No. CK-R680) required for Echo Express III or xMac mini Server chassis.
Ambient temperature limited to 30°C in Echo Express SE series chassis.
 - Requires macOS 10.13.6+
 - Single SSD in this chassis.
 - These cards require PCIe auxiliary power. The Echo Express SE IIIe provides a total power of 80W to the auxiliary power and PCIe connectors.
Please make sure that the combined power requirements of all installed cards fit within this power budget.
 - This is a single slot but doublewide PCIe card that occupies two slot spaces. Fits in Breakaway Box.
 - This card has a cabled daughter card that can be installed in the SE I or SE II AUX card space, and takes two slots in other chassis. Does not fit in Breakaway Box.
 - Matrox cards do not support Windows 10 Fast Startup. Please disable this feature if you are using a mobile workstation.
After every Windows Update you may have to disable Fast Startup again.
 - Uses beta driver. Hot plug not supported.
In Sonnet tests, RED ROCKET with a Thunderbolt 2-equipped Echo Express III supported:
 - 24 fps @ 5K, full-frame, 8-bit
 - 11 fps @ 5K, full-frame, 16-bit
These results may vary depending on configuration and are provided for information purposes. Sonnet does not guarantee any particular performance of third-party cards.
 - In Sonnet tests, RED ROCKET X with a Thunderbolt 2-equipped Echo Express III supported:
 - 32 fps @ 5K, full-frame, 8-bit (note: should be sufficient for playback of dailies in the field)
 - 16 fps @ 5K, full-frame, 16-bit
 - 22 fps @ 6K, full-frame, 8-bit
 - 12 fps @ 6K, full-frame, 16-bit
 - 64.5 fps @ 6K, full-frame, 8-bit, exporting to 1080
 - 58.5 fps @ 6K, full-frame, 8-bit, exporting to 1080 (note: should be able to do 3D 1080 in real time)
These results may vary depending on configuration and are provided for information purposes. Sonnet does not guarantee any particular performance of third-party cards.
 - In Sonnet tests, a Kona 5 card in an Echo Express SE IIIe with AJA Device Test, we have achieved
 - 103 FPS to capture and 105 FPS to playback footage at a resolution of 4096x2160 4K-2160 and a pixel format of 10 bit YUV.
These results may vary depending on configuration and are provided for information purposes. Sonnet does not guarantee any particular performance of third-party cards.
 - 6-pin to 8-pin PCIe power adapter cable required, sold separately.
 - Requires macOS 10.15+
 - Not Recommended. These cards are supported, but the resolution and/or number of video streams may be limited.
 - Thunderbolt 3 has the bandwidth to support at full bandwidth 1) two 10GbE connections ; or 2) a single 25GbE connection.
 - With optional 3rd party low profile bracket, not included
 - These cards are PCIe 4.0 x8 and they will not be able to achieve maximum simultaneous bandwidth across four or more ports in a Thunderbolt expansion chassis.
 - Spectrum Instrumentation cards have options that can extend the cards' length and/or the width (front side or back side). Check with SI for fit.
 - Adding an HDSP TCO Timecode Option Module, an RME HDSPe MADI FX OPTO-X ; or an RME Word Clock Module (WCM) requires a 3-slot chassis.
 - On June 8, 2023, Avid released version 2023.06 of ProTools which reportedly fixes Avid Native issue with Mac Studio and MacBook Pro 2021.
 - Avid's latest ProTools Thunderbolt Chassis Compatibility linked here
 - macOS Sonoma or later
Sonnet provides this table as a courtesy based on the information made available to Sonnet by the card manufacturers.
Sonnet has tested Sonnet cards; but has not tested every 3rd-party card, and we cannot guarantee their compatibility.
For most current information, contact the PCIe card manufacturer. Specifications are subject to change without notice.