

EPOCH

4K NEUTRON

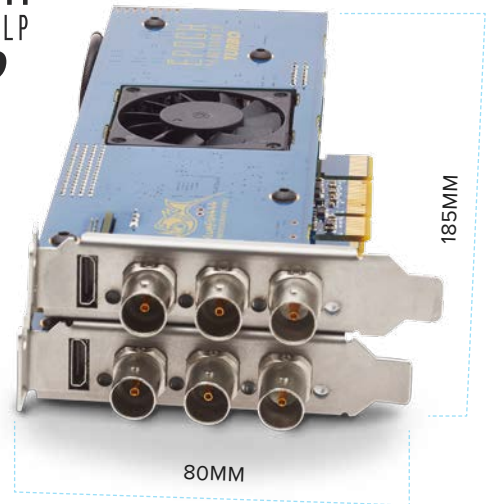
TURBO



EPOCH

4K NEUTRON LP

TURBO



ANALOGUE
AUDIO
AES AUDIO
RS-422



4K/2K HDMI



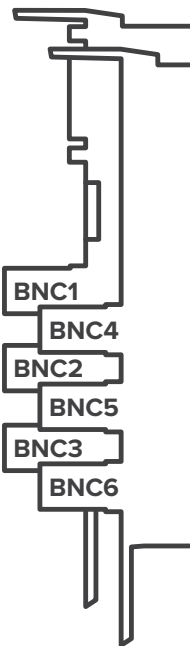
3G/HD/SD



3G/HD/SD



3G/HD/SD /
GENLOCK



FEATURE	EPOCH 4K NEUTRON TURBO
SD-SDI	4
1.5G HD-SDI	6
3G-SDI (Level A+B)	6
Dual Link 1.5G (4:2:2:4/4:4:4:4)	YES
Dual Link 3G (Level A+B)	YES
Quad Link 1.5G	YES
Quad Link 3G (Level A+B)	YES
2K/HD/SD HDMI (Output)	YES
4K HDMI (Output)	YES
Low-latency Hardware Keyer	YES
Multi-card Support	YES
Colour Space Converter	YES
Customisable Pixel Formats	YES
Dedicated Genlock	NO
Breakout Cable	YES*

*Additional shield available on request for low-profile model.

A HIGH BANDWIDTH SOLUTION FOR THOSE DEMANDING MORE ADVANCED 4K VIDEO WORKFLOWS FOR BROADCAST, FILM AND TELEVISION PRODUCTION.



SPECIFICATIONS	EPOCH 4K NEUTRON TURBO	EPOCH 4K NEUTRON LP TURBO
Width	120MM	80MM
Length	185MM	185MM
Internal Clearance (L)	169MM	169MM
Height	2 PCIE SLOTS	2 PCIE SLOTS
Weight	400G	400G

VIDEO I/O		
SDI VIDEO		
SD SMPTE 295M		4
HD 1.5G SMPTE 292M		6
3G (Level A+B) SMPTE 424M		6
Dual Link 1.5G SMPTE 372M		YES
Dual Link 3G		YES
Quad Link 1.5G SMPTE 2036-1		YES
Quad Link 3G SMPTE 2036-1		YES
Maximum Video Channels		8
12/10/8-bit 4:4:4 SDI		YES
12/10/8-bit 4:2:2 SDI		YES
HDMI OUTPUT		
2K/HD/SD		YES
4K DCI (4096 x 2160p) @ 24FPS		YES
UHD (3840 x 2160p) @ 24, 25, 29, 30FPS		YES
GENLOCK		
Bi-Level/Tri-Level Genlock		YES
Bi-Level/Tri-Level Genlock Auxillary (Dedicated BNC)		NO
Bi-Level/Tri-Level Genlock Auxillary (Via Breakout Cable)		YES*
Interlocking Genlock between Neutron cards		YES

ANCILLARY		
HANC		
RP 188 Timecode		YES
16 Channels of Embedded Audio per SDI		YES
Video Payload ID		YES
Custom Packets		YES
VANC		
Closed captioning		YES
3 Line VITC		YES
Custom Packets		YES

AUDIO I/O		
AUDIO SIGNALS		
16 channels of Embedded Audio Input per SDI		YES
8 Channels of AES ID3 Input(unbalanced, BNC)		YES*
16 channels of Embedded Audio Output per SDI		YES
8 Channels of AES ID3 Output(unbalanced, BNC)		YES*
2 channels -10DBU Analogue Output(unbalanced, RCA)		YES*
Dolby Digital Pass-through SDI		YES

*Additional shield available on request for low-profile model. ^Optional shield required.

HARDWARE	
MAJOR HARDWARE FEATURES	
High Performance, Bypass Relays	YES
Fully Programmable 4 x 4 x 33-bit Colour Matrix	YES
12-bit video signal path throughout	YES
Automatic Cross-Locking and intelligent output phasing across formats	YES
Audio sample-rate converters	YES
(MR ²) Master Routing Resource	YES
ISIM (Input Stream Integrity Management)	YES
4-lane PCI-Express (8 and 16 lane compatible)	YES
Full Duplex DMA data transfer bandwidth 1.1GB/s	YES
256MB On Board Memory	YES
Hardware Downstream Keyer	YES
LTC I/O BNC	NO^
RS-422 Serial Port (Via Breakout Cable)	YES*

VIDEO FORMATS	
SUPPORTED YUV SDI VIDEO MODES	
(2K) 2048 x 1080p/PsF @ 23.976, 24, 25, 29.97, 30FPS	YES
(2K) 2048 x 1080p/PsF @ 48, 50, 59.94, 60FPS	YES
(HD) 1920 x 1080p/PsF @ 23.976, 24, 25, 29.97, 30FPS	YES
(HD) 1920 x 1080p/PsF @ 48, 50, 59.94, 60FPS	YES
(HD) 1920 x 1080i @ 25, 29.97, 30FPS	YES
(HD) 1280 x 720p @ 23.976, 24, 25, 29.97, 30, 50, 59.94, 60FPS	YES
(SD) 720 x 576i @ 25FPS PAL	YES
(SD) 720 x 486i @ 29.97FPS NTSC	YES
SUPPORTED RGB SDI VIDEO MODES	
(2K) 2048 x 1080p/PsF @ 23.976, 24, 25, 29.97, 30FPS	YES
(HD) 1920 x 1080p/PsF @ 23.976, 24, 25, 29.97, 30FPS	YES
(HD) 1920 x 1080i @ 25, 29.97, 30FPS	YES
(SD) 720 x 576i @ 25FPS PAL	YES
(SD) 720 x 486i @ 29.97FPS NTSC	YES
SUPPORTED HSDL SDI VIDEO MODES	
(2K) 2048 x 1556PsF @ 14.98, 15FPS	YES
SUPPORTED 4K YUV SDI VIDEO MODES	
(4K) 4096 x 2160p @ 23.976, 24, 25, 29.97, 30FPS	YES
(4K) 4096 x 2160p @ 48, 50, 59.94, 60FPS	YES
(UHD) 3840 x 2160p @ 23.976, 24, 25, 29.97, 30FPS	YES
(UHD) 3840 x 2160p @ 48, 50, 59.94, 60FPS	YES
SUPPORTED 4K RGB SDI VIDEO MODES	
(4K) 4096 x 2160p @ 23.976, 24, 25, 29.97, 30FPS	YES
(UHD) 3840 x 2160p @ 23.976, 24, 25, 29.97, 30FPS	YES
SUPPORTED PIXEL FORMATS	
2VUY, YUVS, BV8, V210, AYUV _ 4224, AYUV _ 4444, YV12, I420	YES
ARGB, BGRA, RGB24, Cineon, DPX, RGB48	YES
Custom using flexible hardware pixel format engine	YES

CROSS PLATFORM SUPPORT WITH INDUSTRY LEADING 3RD PARTY SOFTWARE



For a comprehensive and up-to-date list of supported software, visit bluefish444.com/software

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