



ÈPOCH
4K NEUTRON
VARIANT **A**



ÈPOCH
4K NEUTRON
VARIANT **B**



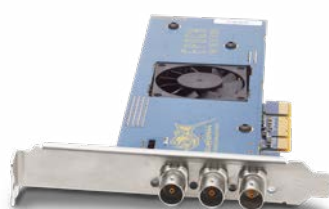
ÈPOCH
4K NEUTRON
VARIANT **C**



ÈPOCH
4K NEUTRON
VARIANT **D**



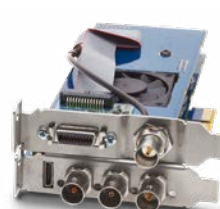
ÈPOCH
4K NEUTRON
VARIANT **E**



ÈPOCH
4K NEUTRON
VARIANT **X**



ÈPOCH
4K NEUTRON LP
VARIANT **F**



ÈPOCH
4K NEUTRON LP
VARIANT **G**

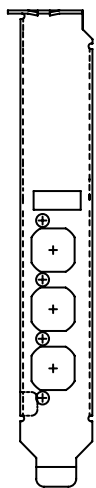
MAJOR FEATURES FOR ALL EPOCH | 4K NEUTRON VARIANTS

SD-SDI	2	Customisable Pixel Formats	YES
1.5G HD-SDI	3	Breakout Cable	YES*
3G-SDI (Level A+B)	NO	16-bit Half Float Pixel Format	YES
Dual Link 1.5G (4:2:2/4:4:4:4)	YES	Interlocking Genlock with CAB_ILOK Cable	YES
Dual Link 3G (Level A+B)	YES	Bypass Relays	YES
Quad Link 1.5G	NO	Full Duplex DMA	YES
Quad Link 3G (Level A+B)	NO	VBI, HANC & VANC	YES
2K/HD/SD HDMI (Output)	YES	Embedded Audio	YES
4K HDMI (Output)	YES	NVIDIA GPU Direct	YES
Low-latency Hardware Keyer	YES	AMD Direct GMA	YES
Multi-card Support	YES	SDI <=> ASI switching	YES
Colour Space Converter	YES	Range of Firmware Options	YES

*Refer to optional connectivity table on page 2 for more information.

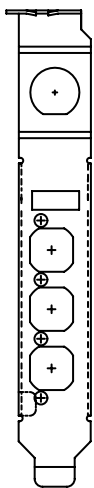
DELIVER CUTTING EDGE VIDEO WORKFLOWS WITH EPOCH | 4K NEUTRON





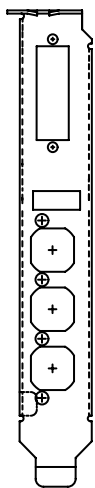
EPOCH
4K NEUTRON

Part No. EB3006A



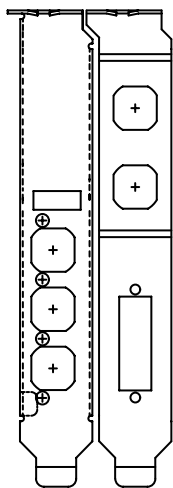
EPOCH
4K NEUTRON

Part No. EB3006B



EPOCH
4K NEUTRON

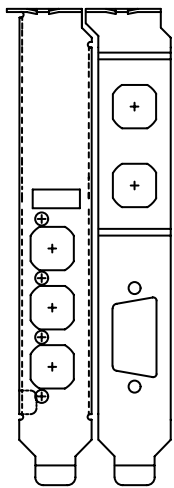
Part No. EB3006C



EPOCH
4K NEUTRON

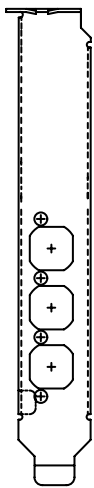
Part No. EB3006D

PART NUMBER	PRODUCT	DESCRIPTION
EB3006A	Epoch 4K Neutron	Full-height - HDMI Only
EB3006B	Epoch 4K Neutron	Full-height - Aux Genlock
EB3006C	Epoch 4K Neutron	Full-height - AES Audio I/O / Analogue Audio Out / RS-422 / Aux Genlock
EB3006D	Epoch 4K Neutron	Full-height - AES Audio I/O / Analogue Audio Out / RS-422 / LTC I/O
CAB_ILOK	Optional Interlock Cable	Locks multiple cards to a single sync source



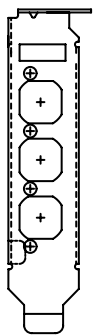
EPOCH
4K NEUTRON

Part No. EB3006E



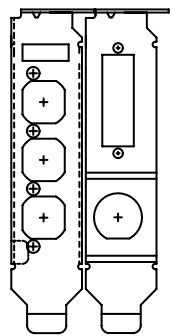
EPOCH
4K NEUTRON

Part No. EB3006X



EPOCH
4K NEUTRON LP

Part No. EB3006F



EPOCH
4K NEUTRON LP

Part No. EB3006G

PART NUMBER	PRODUCT	DESCRIPTION
EB3006E	Epoch 4K Neutron	Full-height - LTC I/O / RS-422
EB3006X	Epoch 4K Neutron	Full-height - Non HDMI
EB3006F	Epoch 4K Neutron LP	Low-profile - HDMI
EB3006G	Epoch 4K Neutron LP	Low-profile - AES audio I/O / Analogue Audio Out / RS-422 / Aux Genlock
CAB_ILOK	Optional Interlock Cable	Locks multiple cards to a single sync source

SPECIFICATIONS	EPOCH 4K NEUTRON	EPOCH 4K NEUTRON LP
Width	120MM	80MM
Length	185MM	185MM
Internal Clearance (L)	169MM	169MM
Height	1 PCIE SLOT	1 PCIE SLOT
Weight	220G	180G

VIDEO I/O		
SDI VIDEO		
SD SMPTE 295M		2
HD 1.5G SMPTE 292M		3
3G (Level A+B) SMPTE 424M		3
Dual Link 1.5G SMPTE 372M	YES	
Dual Link 3G	YES	
Quad Link 1.5G SMPTE 2036-1	NO	
Quad Link 3G SMPTE 2036-1	NO	
Maximum Video Channels		4
12/10/8-bit 4:4:4:4 SDI	YES	
12/10/8-bit 4:2:2:4 SDI	YES	
ASI		
ASI EN50083-9	YES	
ASI/SDI input auto-detection	YES	
Burst and non-burst packet auto-detection	YES	
Inverted bitstream auto-detection & correction	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)	YES*	
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	

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		
MAJOR HARDWARE FEATURES		
Hardware Downstream Keyer	YES	
LTC I/O BNC	YES*	
RS-422 Serial Port (Via Breakout Cable)	YES*	
DVB ASI	YES	
ASI-SPECIFIC CAPABILITIES		
Full DVB/ASI support as per EN50083-9	YES	
Ideal performance as per ETSITR101891 V1.1.1 (2001-02)	YES	
Bypass relays operate on power failure	YES	
Programmable interrupt latency	YES	
ASI INPUT CAPABILITIES		
188 & 204 byte packet auto-detection	YES	
Burst & non-burst packet auto-detection	YES	
Inverted bit-stream auto-detection & correction	YES	
Time-stamping of packets with genlockable clock	YES	
Bit-rate reporting	YES	
Automatic ASI/SDI detection	YES	
Huge receive packet buffer	YES	
ASI OUTPUT CAPABILITIES		
188 & 204 byte packet generation	YES	
Burst & non-burst packet generation	YES	
Very high resolution output bit-rate generator	YES	
Switchable low-latency loop-through path from input	YES	
Automatic time-stamp removal	YES	
Automatic packet underflow tracking and recovery	YES	
Ideal (zero) aperiodicity of output packets	YES	
ASI carrier can be genlocked or manually tuned	YES	
Huge transmit packet buffer	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 ¹	
(4K) 4096 x 2160p @ 48, 50, 59.94, 60FPS	NO	
(UHD) 3840 x 2160p @ 23.976, 24, 25, 29.97, 30FPS	YES ¹	
(UHD) 3840 x 2160p @ 48, 50, 59.94, 60FPS	NO	
SUPPORTED 4K RGB SDI VIDEO MODES		
(4K) 4096 x 2160p @ 23.976, 24, 25, 29.97, 30FPS	NO	
(UHD) 3840 x 2160p @ 23.976, 24, 25, 29.97, 30FPS	NO	
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	

¹Available on all models except EB3006X. ^{*}Refer to optional connectivity table on page 2 for more information. ¹4K SDI support provided by Dual Link 3G level B (2 BNC).

BUNDLED SOFTWARE



Bluefish444 Symmetry is a proprietary integrated DI acquisition, review and play out software for Windows and is bundled FREE with all Bluefish444 video I/O cards.

BUNDLED

FREE



Bluefish444 IngeStore is a multi-channel ingest tool capable of up to four independent streams of SD or HD video from separate SDI sources. Bundled FREE with all Bluefish444 video I/O cards.

BUNDLED

FREE



Bluefish444 SDK is designed for developers who wish to integrate Bluefish444 video products into their own solutions, across Windows, macOS and Linux systems.

BUNDLED

FREE

CROSS-PLATFORM SUPPORT WITH INDUSTRY-LEADING 3RD PARTY SOFTWARE



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

Bluefish444 | Telephone: +61 3 9682 9477 | **Facsimile:** +61 3 9682 9466 | info@bluefish444.com
For worldwide reseller and distributor contact information, please go to bluefish444.com/contacts