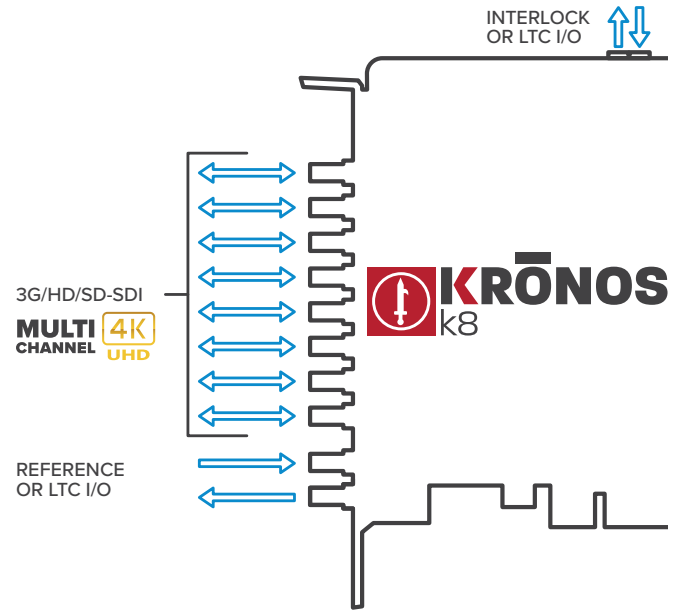
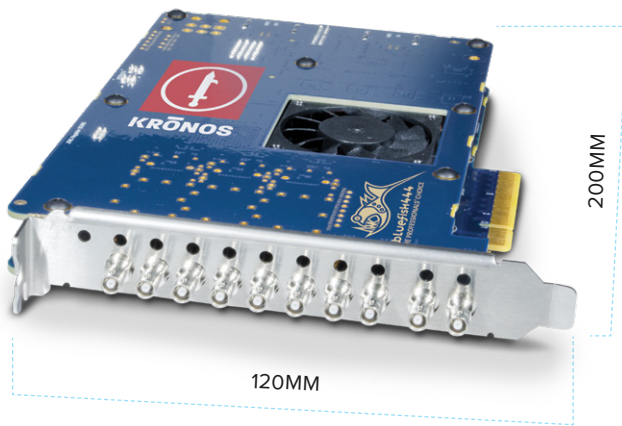




DATA SHEET

A 4K-CAPABLE SDI VIDEO CARD WITH BI-DIRECTIONAL HD-BNC'S PROVIDING 4K 60P CAPTURE AND PLAYBACK



MAJOR FEATURES FOR KRONOS K8 & K8[R]

	K8	K8[R]		K8	K8[R]
Bi-directional SDI (HD-BNC)	8	8	Interlocking I/O	YES	YES
1.5G HD/SD-SDI	8	8	Embedded audio	YES	YES
3G-SDI (Level A+B)	8	4	Low-latency hardware keys	4	4
Maximum UHD Channels	2	1	Bypass relays	4	4
Dual Link 1.5G (4:2:2/4:4:4:4)	YES	YES	Colour space converter	YES	YES
Dual Link 3G (Level A+B)	YES	YES	Customisable pixel formats and rasters	YES	YES
Quad Link 1.5G	YES	YES	Multi-card support	YES	YES
Quad Link 3G (Level A+B)	YES	YES	Thunderbolt compatible	YES	YES
4K/UHD HDR	YES	YES	16-bit half float pixel format	YES	YES
LTC I/O	YES	YES	Full-duplex DMA	YES	YES
Reference I/O	YES	YES	VBI, HANC & VANC	YES	YES
Optional AUX I/O via STEM port	YES	YES	NVIDIA GPUDirect	YES	YES
LTC I/O (HD-BNC), RS-422 (RJ45), AES Audio I/O (DB25)	EX-1	EX-1	AMD DirectGMA	YES	YES
Analogue Audio I/O (2 x 3.5mm TRS), RS-422 (RJ45), AES Audio I/O (DB25)	EX-2	EX-2	Stereoscopic/3D imaging	YES	YES

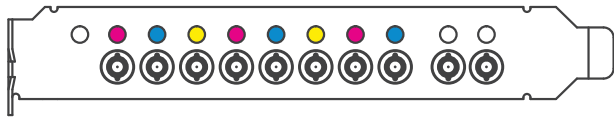


ORDERING INFORMATION



K4001

\$3,495

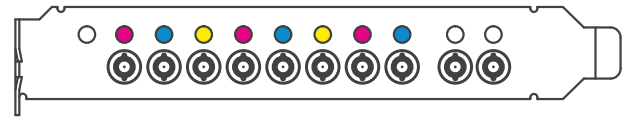


8x 1.5G 4x 3G 1x 4K UHD

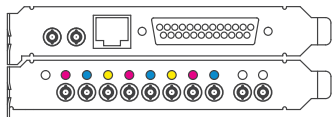


K4002

\$4,005



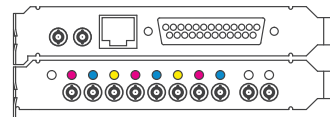
8x 1.5G 8x 3G MULTI CHANNEL 4K UHD



k8R EX-1

Part No. K4001EX1

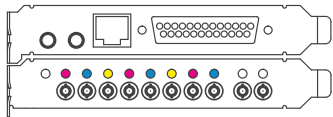
KRONOS K8R + EX-1 AUXILIARY I/O



k8 EX-1

Part No. K4002EX1

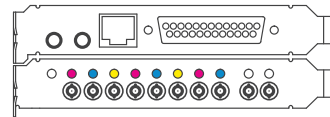
KRONOS K8 + EX-1 AUXILIARY I/O



k8R EX-2

Part No. K4001EX2

KRONOS K8R + EX-2 AUXILIARY I/O



k8 EX-2

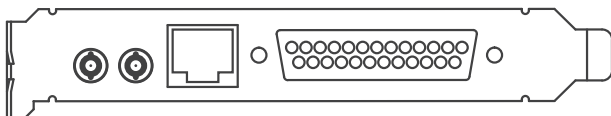
Part No. K4002EX2

KRONOS K8 + EX-2 AUXILIARY I/O

KRONOS OPTIONS

EX-1
Part No. EX1

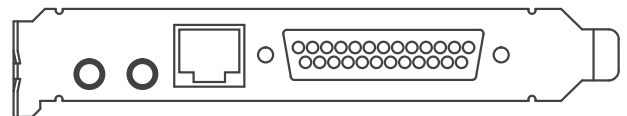
COMING SOON



LTC IN/OUT **RS422 CONTROL** **AES 16 CH**

EX-2
Part No. EX2

COMING SOON



STEREO ANALOGUE SOUND **RS422 CONTROL** **AES 16 CH**



Part No. K83GUP

Upgrade any **KRONOS K8R** SKU to **8x3G** for **multi-channel 4K** via a licence

SPECIFICATIONS	KRONOS K8
Width	PCIE SINGLE SLOT
Length	200MM (HALF LENGTH PCIE)
Internal clearance (L)	184MM
Height	FULL HEIGHT PCIE
Weight	300G
Power requirement	PCI & AUX 6-PIN

VIDEO I/O	
SDI VIDEO	
SD SMPTE 295M	8
HD 1.5G SMPTE 292M	8
3G (Level A+B) SMPTE 424M	8*
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 HD video channels	8
Maximum UHD video channels	2*
12/10/8-bit 4:4:4 SDI	YES
12/10/8-bit 4:2:2 SDI	YES
REFERENCE	
Reference IN/OUT (Dedicated HD-BNC)	YES
Interlocking I/O supporting KRONOS and Epoch 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

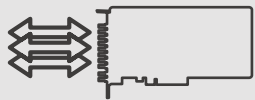
AUDIO I/O	
AUDIO SIGNALS	
16 channels of embedded audio IN per SDI	YES
16 channels of embedded audio OUT per SDI	YES
Dolby digital pass-through SDI	YES

OPTIONAL AUX I/O VIA STEM PORT	
LTC I/O (HD-BNC), RS-422 (RJ45), AES audio I/O (DB25)	EX1
Analogue audio I/O (2 x 3.5mm TRS), RS-422 (RJ45), AES audio I/O (DB25)	EX2

HARDWARE	
MAJOR HARDWARE FEATURES	
High-performance, 3G bypass relays	4
Low-latency hardware keyers	4
Fully programmable 4 x 4 x 33-bit colour matrix	YES
12-bit video signal path throughout	YES
Automatic cross-locking and phasing across formats	YES
Audio sample-rate converters	YES
(MR ²) Master Routing Resource	YES
ISIM (Input Stream Integrity Management)	YES
4K/UHD HDR modes	YES
Stereoscopic/3D modes	YES
8-lane PCI-Express Gen3 (16-lane compatible)	YES
Full-duplex DMA data transfer bandwidth	YES
LTC I/O (Via reference or interlock connectors)	YES
STEM Port	YES

VIDEO FORMATS	
SUPPORTED YUV SDI VIDEO MODES	
(2K) 2048 x 1080p/PsF @ 23.98, 24, 25, 29.97, 30 FPS	YES
(2K) 2048 x 1080P/PsF @ 48, 50, 59.94, 60 FPS	YES
(HD) 1920 x 1080p/PsF @ 23.98, 24, 25, 29.97, 30 FPS	YES
(HD) 1920 x 1080p/PsF @ 48, 50, 59.94, 60 FPS	YES
(HD) 1920 x 1080i @ 25, 29.97, 30 FPS	YES
(HD) 1280 x 720p @ 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 FPS	YES
(SD) 720 x 576i @ 25 FPS PAL	YES
(SD) 720 x 486i @ 29.97 FPS NTSC	YES
SUPPORTED RGB SDI VIDEO MODES	
(2K) 2048 x 1080p/PsF @ 23.98, 24, 25, 29.97, 30 FPS	YES
(HD) 1920 x 1080p/PsF @ 23.98, 24, 25, 29.97, 30 FPS	YES
(HD) 1920 x 1080i @ 25, 29.97, 30 FPS	YES
(SD) 720 x 576i @ 25 FPS PAL	YES
(SD) 720 x 486i @ 29.97 FPS NTSC	YES
SUPPORTED HSDL SDI VIDEO MODES	
(2K) 2048 x 1556PsF @ 14.98, 15 FPS	YES
SUPPORTED UHD YUV SDI VIDEO MODES	
(4K) 4096 x 2160p @ 23.98, 24, 25, 29.97, 30 FPS	YES
(4K) 4096 x 2160p @ 48, 50, 59.94, 60 FPS	YES
(UHD) 3840 x 2160p @ 23.98, 24, 25, 29.97, 30 FPS	YES
(UHD) 3840 x 2160p @ 48, 50, 59.94, 60 FPS	YES
SUPPORTED UHD RGB SDI VIDEO MODES	
(4K) 4096 x 2160p @ 23.98, 24, 25, 29.97, 30 FPS	YES
(UHD) 3840 x 2160p @ 23.98, 24, 25, 29.97, 30 FPS	YES
SUPPORTED PIXEL FORMATS	
2VUY, YUVS, BV8, V210, AYUV _ 4224, AYUV _ 4444, YV12, I420	YES
ARGB, BGRA, RGB24, Cineon, DPX, RGB48	YES
Customisable hardware pixel or video format engine	YES

*KRONOS K8 [R] includes 4 channels of 3G-SDI (1 Channel of UHD) as standard. KRONOS K8 [R] can be upgraded via the 8x3G Upgrade Licence to 8 channels of 3G-SDI (2 Channels of UHD) within the card's free warranty period.



Bi-directional I/O's provide unrivalled flexibility with eight industry-standard HD-BNC video connectors, each allowing 3G/HD/SD-SDI inputs or outputs.



Maintaining a 12-bit processing pipeline means maximum quality, and is 4 times the colour precision of traditional 10-bit processing!



Maximum Connectivity with reference and LTC I/O as standard, with options for RS-422, AES audio, or stereo analogue sound.



Low-latency + full control over framestores supporting frame, field and sub-field interrupts enables access to the video at sub-frame latency.



Full-duplex asynchronous DMA to independently transfer video, audio and ancillary data.



Popular 3rd-party API support for DirectShow, V4L2, MediaLooks, CUDA and more supporting accessible video, audio and ancillary I/O.



IPConnect API supporting video over IP workflows for SMPTE IP and NDI protocols.



VR/AR/Stereoscopic workflows synchronise multiple SDI inputs into various formats for VR/AR/3D imaging.



MR² Routing Resources enables a user to flexibly configure main and preview outputs to suit individual workflows.



4K/UHD 60p plus HDR/SDR Support for capture and playout of 4K/UHD or HD high frame-rate or High Dynamic Range content.



Low-latency HD/UHD hardware keys allowing video layers to be combined in hardware with microseconds of delay.



High-quality 3G/HD/SD Bypass Relays, hardware and software watchdog timer for disaster recovery during live broadcasts.



Bluefish444 SDK

- Allows developers to integrate Bluefish444 hardware
- Available across Windows, macOS and Linux systems
- Easy-to-follow sample apps with C interface

BUNDLED

FREE



IngeStore

- 4 channels 3G/HD/SD capture
- Free Uncompressed, DVCPro, DVHD codecs
- Optional codecs are available
- Optional Edit-While-Record workflows
- Optional REST API and HTTP client

BUNDLED

FREE

COMING SOON

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



For a comprehensive and up-to-date list of supported software, contact sales@jbanda.com

JB&A Distribution | Telephone: +415 256 2800 | Fax: +415 256 2811 | sales@jbanda.com

