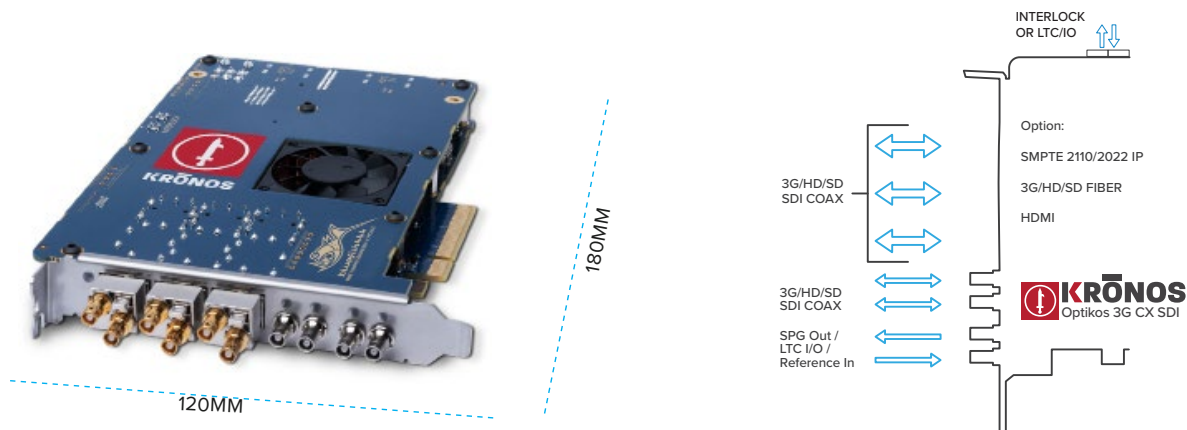


A HYBRID SDI VIDEO CARD FEATURING INTERCHANGEABLE SFP+ INTERFACES FOR SDI VIA FIBER, SMPTE 2110/2022 & HDMI



MAJOR FEATURES FOR KRONOS OPTIKOS 3G CX SDI	K4202		K4202
Bi-directional SDI (HD-BNC)	2	Optional AUX I/O via STEM port	YES
Dual Channel SDI COAXIAL SFP+ Modules (HD-BNC)	3	LTC I/O (HD-BNC), RS-422 (RJ45), AES Audio I/O (DB25)	EX-1
1.5G HD/SD-SDI / 3G-SDI (Level A+B)	8	Analogue Audio I/O (2 x 3.5mm TRS), RS-422 (RJ45), AES Audio I/O (DB25)	EX-2
Maximum UHD Channels (SDI)	2	Interlocking I/O	YES
Dual Link 1.5G (4:2:2/4:4:4:4)	2	Low-latency hardware keys	4
Dual Link 3G (Level A+B)	YES	Bundled Software BlueToolbox and BlueSigGen	YES
Quad Link 1.5G	YES	Colour space converter	YES
Quad Link 3G (Level A+B)	YES	Customisable pixel formats and rasters	YES
Interchangeable SFP+ Interfaces (SDI COAX/SDI FIBER/HDMI SFP+ Modules)	3	Multi-card support	YES
Bypass relays	1	Thunderbolt compatible	YES
Embedded audio	YES	Full-duplex DMA	YES
4K/UHD HDR HFR	YES	VBI, HANC & VANC	YES
LTC In / Out	YES	NVIDIA GPU Direct	YES
Reference In / SPG Out	YES	Stereoscopic/3D Imaging	YES

OPTIKOS3G ONLINE CONFIGURATOR

WWW.BLUEFISH444.COM/KRONOS-OPTIKOS3G-SFP-CONFIGURATOR.HTML

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



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

KRONOS OPTIKOS 3G CXSDI FEATURES

SPECIFICATIONS		KRONOS OPTIKOS3G CX SDI	
Width		18.4MM (SINGLE SLOT PCIE)	
Internal Length		167MM (HALF LENGTH PCIE)	
Total Length		180MM	
Height		111MM (FULL HEIGHT PCIE)	
Total Height		120MM	
Weight		300G	
Power requirement		PCI 12V 2A	
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		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/ SPG Out(Dedicated HD-BNC)		YES	
Interlocking I/O supporting KRONOS and Epoch I Neutron cards		YES	
INTERCHANGEABLE SFP+ MODULES		MODULE	STREAM
SMPTE IP			
ST 2110- 20/30/40 10Gb Multimode Fiber		3*	6*
ST 2022 - 6/7 10Gb Multimode Fiber		3*	6*
NMOS, EMBER+, REST API		YES*	
Clean Switch and Frame Sync option		YES*	
HDMI			
HD/SD HDMI 1.4a Type D (Micro-HDMI)		3*	3*
ANCILLARY			
HANC			
RP-188 timecode		YES	
16 channels of embedded audio per Memory Channel		YES	
Video payload ID		YES	
Custom packets		YES	
VANC			
Closed Captioning		YES	
3 Line VITC		YES	
Custom packets		YES	
AUDIO I/O			
16 channels of embedded audio IN per Memory Channel		YES	
16 channels of embedded audio OUT per Memory Channel		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	

OPTIONAL AUX LTC I/O VIA INTERLOCK	
LTC I/O (BNC) Aux shield	EX3
MAJOR HARDWARE FEATURES	
Interchangeable SFP+ Interfaces (SDI COAX/SDI FIBER/HDMI SFP+ Modules)	3
High-performance, 3G bypass relays	1
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
(MR2) MASTER ROUTING RESOURCE	YES
ISIM (Input Stream Integrity Management)	YES
4K/UHD HDR HFR modes	YES
8-lane PCI-Express Gen3 (16-lane compatible)	YES
Full-duplex DMA data transfer bandwidth	YES
LTC I/O (Via reference BNC)	YES
LTC I/O (Via Interlock) *requires EX3	YES
STEM Port	YES
VIDEO FORMATS	
SUPPORTED YUV SDI & IP 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
SUPPORTED SD SDI VIDEO MODES	
(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

* Supported by the exchanging of interchangeable SFP+ modules

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