

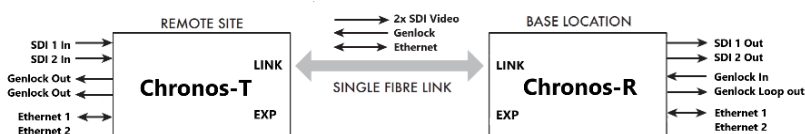
Chronos: Dual 12G, Sync and Ethernet to Optical Interface



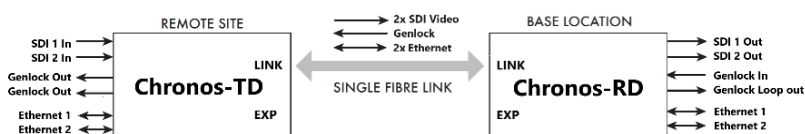
Description:

- Supports two independent SDI video signals across 12G, 6G, 3G, HD and SD formats, with integrated signal reclocking
- Dual genlock outputs on transmitters; Genlock input with loop-through output on receivers
- Single or dual Gigabit Ethernet ports for flexible network connectivity
- Dedicated "EXP" expansion port enables cascading with additional Chronos units, allowing control of up to 8x 4K cameras over a single fibre link
- 12V DC input with a robust 4-pin XLR power connection.
- Compact, robust and rugged weatherproof enclosure optimised for demanding Outside Broadcast (OB) applications.
- 5-year warranty ensuring long-term reliability and peace of mind.

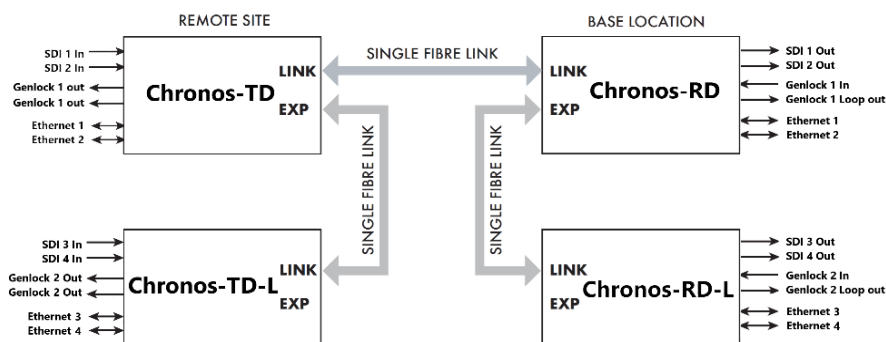
Chronos-T and Chronos-R - Dual 12G-SDI, Sync and single Ethernet variant



Chronos-TD and Chronos-RD - Dual 12G-SDI, Sync and dual Ethernet variant



Example using the Expansion Port



The Chronos Series is an advanced remote connection system designed to transport 12G-SDI, genlock, and multi-rate Ethernet signals over a single fibre link. This versatile transmitter and receiver pair is specifically tailored to meet the needs of modern broadcasting, providing seamless connections between remote 4K cameras, control signals, and synchronisation signals at base stations.

In addition to supporting SDI, Genlock Sync and Ethernet signals, Chronos features an LC fibre optical input, allowing an additional singlemode optical signal to be transmitted over the same fibre. This capability enhances flexibility, making Chronos an ideal solution for complex setups, particularly in demanding Outside Broadcast (OB) environments due to its compact and weatherproof housing.

Specifications

SDI Electrical Input	
Connector	75 Ohm BNC per IEC 60169-8 Amendment 2
Return Loss	> 15 dB @ 1.485 GHz <-10dB to 3GHz <-7dB to 6GHz <-4dB to 12GHz
Standards	SMPTE ST 2082, SMPTE ST 2081, SMPTE ST 424, SMPTE ST 292, SMPTE ST 259, DVB-ASI
Polarity	Non - Inverting
Equalisation	Automatic rate detection and cable equalisation 70m @ 11.88Gbps 90m @ 5.94Gbps 170m @ 2.97Gbps 240m @ 1.485Gbps 400m @ 270Mbps

SDI Electrical Output	
Connector	75 Ohm BNC per IEC 60169-8 Amendment 2
Return loss	<-15dB to 1.485GHz <-10dB to 3GHz <-7dB to 6GHz <-4dB to 12GHz
Standards	SMPTE ST 2082, SMPTE ST 2081, SMPTE ST 424, SMPTE ST 292, SMPTE ST 259, DVB-ASI
Polarity	Non-Inverting
Signal level	800 mV +/- 10%
DC Offset	0 +/- 0.5 V

Sync Electrical Input/Output	
Standards	Composite 1V pk-pk PAL, NTSC, SECAM
Connector	75 Ohm BNC
Diff. Phase	< 1°
Diff. Gain	< 1% (at sub-carrier 3.58/4.43 MHz)

Ethernet Input/Output	
Connector	RJ45
Number	Chronos-T & Chronos-R: 1 Chronos-TD & Chronos-RD: 2
Format	Copper Port (electrical): 10/100/1000BASE-T, half/full duplex, auto-negotiation Fibre Port (optical): 100/1000BASE-FX
Standard	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T

Optical Input	
Connector	LC/PC
Wavelength	High Band Variant: 1470–1610 nm Low Band Variants: 1270–1410 nm
Standards	SMPTE ST 297
Sensitivity @12G	-13dBm (max)
Sensitivity @<=6G	-14dBm (max)
Receiver Overload	-2dBm (min)

Optical Output	
Connector	LC/PC
Standards	SMPTE ST 297
Power	1 to -5dBm

Power	
Connector	XLR4
Voltage	5-17VDC
Power	Chronos-T & Chronos-R: 7.5W typ Chronos-TD & Chronos-RD: 9W typ

General	
Dimensions (HxWxD)	112 x 46 x 165mm excluding connectors 112 x 46 x 178mm including connectors
Weight	500g
Operating Temp	0 to +70°C
Warranty	5 Years

Ordering Information

High Band optical wavelengths in the range 1470 to 1610 nm

Chronos-T (Transmitter)	Dual 12G/6G/3G/HD/SD-SDI Inputs, 2x Sync output, Single Ethernet to LC fibre with expansion port. Power Supply (PS12) included.
Chronos-R (Receiver)	Dual 12G/6G/3G/HD/SD-SDI Inputs, 1x Sync in plus loop-out, Single Ethernet to LC fibre with expansion port. Power Supply (PS12) included.
Chronos-TD (Transmitter)	Dual 12G/6G/3G/HD/SD-SDI Inputs, 2x Sync output, Dual Ethernet to LC fibre with expansion port. Power Supply (PS12) included.
Chronos-RD (Receiver)	Dual 12G/6G/3G/HD/SD-SDI Inputs, 1x Sync in plus loop-out, Dual Ethernet to LC fibre with expansion port. Power Supply (PS12) included.

Low Band optical wavelengths in the range 1270 to 1410 nm.

Chronos-T-L (Transmitter)	Dual 12G/6G/3G/HD/SD-SDI Inputs, 2x Sync output, Single Ethernet to LC fibre with expansion port. Power Supply (PS12) included.
Chronos-R-L (Receiver)	Dual 12G/6G/3G/HD/SD-SDI Inputs, 1x Sync in plus loop-out, Single Ethernet to LC fibre with expansion port. Power Supply (PS12) included.
Chronos-TD-L Transmitter	Dual 12G/6G/3G/HD/SD-SDI Inputs, 2x Sync output, Dual Ethernet to LC fibre with expansion port. Power Supply (PS12) included.
Chronos-RD-L Receiver	Dual 12G/6G/3G/HD/SD-SDI Inputs, 1x Sync in plus loop-out, Dual Ethernet to LC fibre with expansion port. Power Supply (PS12) included.



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