

TRION-TIMING

- **Timing input:** GPS, PPS or IRIG code A or B; AC, DC
- **Timing output:** Isolated IRIG output
- **GPS position:** 1 Hz update rate (requires GPS antenna)
- **Additional features:** 8x DIO, 1x counter, 1x AUX

Timing and synchronization module



TRION-TIMING specifications	
IRIG input specifications	
Supported codes	IRIG code A or B; AC or DC
Compatibility (AC code)	0.5 V _{p-p} to 10 V _{p-p}
Ratio (AC)	3:1 ±10 %
Compatibility (DC code)	DC Level Shift TTL / CMOS compatible
Impedance	20 kΩ
IRIG output specifications	
Supported codes	IRIG code B, DC
Compatibility (DC code)	TTL, 20 mA
Adjustment range	±150 ppm
Clock accuracy IRIG locked	without drift
Clock accuracy IRIG unlocked	<1 ppm (opt. 5 ppb)
Max. cable length (IRIG)	1000 m, cable length delay compensation available
Isolation voltage	350 V _{DC}
Connector	BNC socket
GPS specifications	
General	12 channel, L1 frequency receiver
PPS accuracy	100 ns
Refreshrate	1 Hz
Position accuracy	Horizontal CEP
Autonomous	3.0 m
Differential	1.0 m
Trigger accuracy	1 μsec
Clock accuracy locked	without drift
Clock accuracy unlocked	<10 ppm
Input Connector GPS	SMA for GPS antenna, BNC for IRIG I/O
Digital I/O specifications	
Number of channels	8
Compatibility (input)	CMOS/TTL
Compatibility (output)	TTL, 20 mA
Overvoltage protection	±30 V
Connector	SUB-D-15 socket
Counter specifications	
Number of channels	1 advanced counter or 3 digital inputs
Counter modes	Event counting
	Waveform timing
	Sensor modes
Input signal compatibility	CMOS/TTL
Counter resolution	32-bit
Counter time base	80 MHz
Time base accuracy	typ. 10 ppm (defined by the backplane)
Maximum input frequency	10 MHz
Overvoltage protection	±30 V permanent, 50 V peak (for 100 msec)
Sensor power supply	5 V (600 mA) and 12 V (600 mA)
Connector	On same SUB-D-15 socket as Digital I/O
AUX specifications	
Functionality	Camera trigger, trigger input/output, acquisition clock and programmable clock output
Compatibility (input)	LVTTTL
Compatibility (output)	LVTTTL, 10 mA
Overvoltage protection	±20 V
Connector	SMB socket
General specifications	
Power consumption	5 W
Temperature Range	0 to 50 °C
Weight	Appr. 240 g

Cables for TRION-TIMING modules

TRION cables				
	Connector	Termination	Length	TRION modules
TRION-CBL-CAMTRG-03-00	SMB	To synchronize a DEWE-CAM-FW-70 via an AUX socket of TRION modules	3 m	TRION-BASE, TRION-TIMING TRION-VGPS-x

Options for TRION-TIMING modules

Options	
GPS-ANT-1	GPS antenna for TRION-TIMING or DEWE-CLOCK, for fixed installation
GPS-ANT-2	GPS antenna for TRION-TIMING or DEWE-CLOCK, for mobile applications



GPS-ANT-1
GPS antenna for
fixed installations



GPS-ANT-2
GPS antenna for
mobile installations