TELETRONICS
A Curtiss-Wright Company

ACT-1000-1 Datasheet

Stand Alone Active Camera Target

Applications

- High-speed camera testing
- Ground checkout
- Laboratory use
- IRIG time source
- Industrial camera testing

Allows testing of High-Speed Cameras

- Camera frame time stamp accuracy
- Frame time stamp location verification (beginning, middle or end of frame)
- Exposure time accuracy
- Camera synchronization accuracy to an external time reference
- Multiple camera synchronization accuracy
- Trigger lag measurement

Features

- Fast, LED-based time display with a maximum time resolution of 1 usec
- Temperature compensated battery-backed internal Real Time Clock with a 2.0 ppm worst case drift
- Differential IRIG-B DC input time reference for operation as a time slave device to an external differential IRIG-DC time source
- Differential IRIG-B DC output time reference synchronized to internal time for operation as a time master to other devices
- One pulse-per-second output synchronized to internal time
- Programmable pulse generator output synchronized to internal time
- Serial console port for configuration
- Bench-top swivel base and tripod-mountable enclosure

Description

The ACT-1000 Active Camera Target is a standalone device intended for laboratory use and camera setup verification. The ACT-1000 time display consists of over 200 LEDs arranged as a 6-digit display, four 10 LED rows and a 10 x 10 LED array. This display serves as a visual target for high-speed camera development and verification and for third party camera testing. The display can be configured in a range of different time formats and resolutions. The LED array allows measuring camera exposure times from 1 sec down to 1 usec. The internal Real Time Clock (RTC) automatically sets itself and tracks an externally provided IRIG-DC signal. This allows the device to act as a time slave to other ACT-1000 devices or to any other IRIG-DC time master. The RTC drives a microsecond counter, the LED display and the IRIG-DC output time code generator and continues tracking time after the IRIG-DC input time source is no longer present or after the unit has been powered down. The RTC can also be manually set to any arbitrary time.

Independent brightness control of the different LED groups allows the ACT-1000 to compensate for different camera shutter speeds, providing a wide camera operating range. Several time reference outputs are provided, including a dedicated differential IRIG-DC, a dedicated one pulse-per-second (TTL) and two additional and independently configurable outputs. The outputs provide additional IRIG-DC, additional pulse-per-second, a 32.768 KHz clock, 10 MHz clock and a fully-programmable synchronized pulse generator for driving external devices such as camera triggers or strobe lights.

The ACT-1000 setup is stored in non-volatile RAM, permitting the last setup to persist after power-down. The display is enclosed in a sturdy, black anodized aluminum case with a removable swivel bench-top base. Standard 3/8” and 1/4” tripod mounts are available. A universal AC/DC external power supply brick with a 9 ft. modular AC power cord is included.

DEKRA Certified — Management System AS9100C ISO 9001:2008

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