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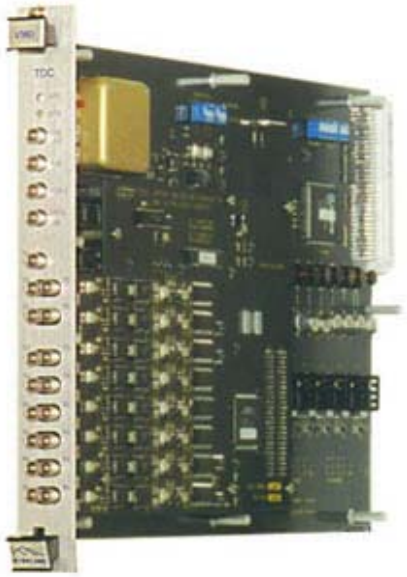
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Find the *Highland Technology V980* at our website: *Click HERE*

HIGHLAND TECHNOLOGY

MODEL V980
16-CHANNEL
TIME-TO-DIGITAL CONVERTER
VXI MODULE



FEATURES

- 16-channel, 48-bit, 48-picosecond resolution TDC.
- Measures events up to 6800 seconds before or after common trigger, or 0 to +13,700 seconds after trigger.
- Adjustable trigger levels and edge polarity.

  Usable as a 17-channel independent time-stamper.
- Fast readout available 200 ns after events.
- Jitter typically below 40ps RMS.
- Ultrastable, ovenized quartz crystal timebase may be locked to an external source.
- Optional custom internal microengine can qualify and analyze complex timing events.

The V980 is a 16-channel time-to-digital converter used to record the time of occurrence of sixteen independent electrical pulse inputs, each measured relative to a single, common reference input. Each TDC input channel can time its event "hit" with 48.82-picosecond resolution and 48-bit dynamic range.

The module has provisions for adjustable input logic levels and selectable input edge polarity.

The V980 employs a highly linear interpolation technique, which requires a minimum of adjustments. Data is available within 200 ns of the completion of the measured time intervals, and the modules may be cleared and rearmed in less than one microsecond. All features are switch selectable.

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V980 VXI Time-to-Digital Converter Specifications

CONFORMANCE	ANSI/IEEE 1014-1987 VMEbus specification. VXIC specification, Rev1.4.
DEVICE TYPE	Register-based slave: A16:D16:D08(EO).
PACKAGING	Single-width, C-size VXI module.
INPUTS	One common reference input (T16). Sixteen individual event inputs (T0-T15). One external input (GATE) enables event channels. Two inputs (AUX) support custom control logic. One clock I/O (CLK).
INPUT LEVELS	The thresholds of the event inputs are adjustable as a group in the range +-2.5 V. Their impedance (high-Z or 50 ohms) and polarity (rising or falling edge) can also be selected individually. The GATE input has a separate threshold level adjustment. Its impedance (high-Z or 50 ohms) and polarity (high or low) are also selectable. The AUX inputs are TTL-compatible.
OUTPUTS	AUX1 normally indicates module armed and ready to accept an event.
RESOLUTION	48.828125ps, equivalent to 20.48 GHz clock.
RANGE	48 bits (+-6871 seconds) for bipolar mode.
JITTER	Less than (75ps + 2 E-9 x measured time) RMS.
LINEARITY	+-0.25 LSB.
TIMEBASE	Internal ovenized oscillator. Accuracy is 0.01ppm/deg C; aging less than 1ppm/year. Internal phase-lock loop allows utilization of an external 10 MHz timebase.
INDICATORS	LEDs indicate VME access and acquisition/readout mode status.
CONNECTORS	Standard: SMB; Optional: LEMO.

Highland Technology Model V980 Time-to-Digital Converter Data Sheet

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