

OpenATE PE16T

3U PXI High Performance Dynamic Digital PE Card

- 16 input / output channels, dynamically configurable on 256 IO sets
- 16 M of on-board vector memory per channel
- -1 ~ +5 VOH VOL VIH VIL VTT per 4 channel
- 1 PMU per board 16 Relay control
- 33 MHz data rate
- I2C Master on 400KHz CLK
- SPI Master on 20MHz CLK
- Supports 16 Timing Sets change On The Fly
- Dynamic controlled sequencer uses micro-instructions including Match, Loop, Repeat, FC/FM/FL/FE
- 16K log memory to capture real time data or 8K fail log
- 100MHz 32 bit counter for frequency measurement
- Operates as a stand-alone card or with up to 15 additional synchronous slave boards
- API & Pattern Editor



Description

The PE16T represents a new level of performance and capabilities for PXI-based digital instrumentation. Based on the proven architecture of the PE16T, the PE16T offers high performance pin electronics and an enhanced timing generator in a compact, 3U PXI form factor. Each card can function as a stand-alone digital subsystem or if required, multiple cards can be interconnected, supporting up to 256 bi-directional pins (16 boards). The PE16T also supports deep pattern memory by offering 16 M of on-board vector memory with dynamic per pin direction control and with test rates up to 33 MHz. With new 16K log memory, PE16T can capture 16 channels data concurrently when testing device or 8k log fail data. I2C/SPI master controllers for serial port device testing.

Features

The PE16T supports -1 ~ +5 VOH VOL VIH VIL VTT per 4 channel and 1 PMU per board. The PE16T offers 16 timing sets, 2 driver TG Edges, 2 strobe TG Edges. Drive data formats are supported: RTZ (Return To Zero),

RTO (Return To One), NRZ (Non Return To Zero), SBC (Surround By Complement) which can providing flexibility to create a variety of bus cycles and waveforms to test board and box level products. 100MHz 32 bit counter for frequency measurement.

On-Board Memory

The PE16T offers 16 M of vector memory per channel. Programmable pattern cycle times up to 2^{32} or infinite. There are pattern symbols including 0, 1, L, H, X, Z, J, Q.

Compatibility

All OpenATE Interfaces PXI cards comply with the PXI Specification 2.0 (issued Aug. 2000)

Software

The PE16T is supplied with API and Pattern Editor. Pattern Editor is a software tool that edits test patterns.

Application

- Automatic Test Equipment(ATE)
- Consumer Digital Functional Test
- Digital Pattern Generation
- Power Management Device Testing
- Hybrid and Digital IC Testing

OpenATE Inc.

The Open Solution for IC Tester

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OpenATE PE16T

Specifications

| | | | |
|-----------------------------|--|---|---|
| • Pin Electronics | | • Logic Sequencer | |
| I/O Channels | 16, per board resource | Micro-Instructions | MATCH; LOOP; REPEAT; FC/FM/FL/FE |
| Test rate | 33MHz | Pattern Symbols | 0, 1, L, H, X, Z, J, Q |
| Input Level (Vih/ Vil) | -1 ~ +5V per 4 channels | LMSYNC to PXI Trigger Bus | For Sync With other Instruments |
| Output Level (Voh/Vol) | -1 ~ +5V per 4 channels | Ignore Fail By LM Address | YES |
| VTT | -1 ~ +5V per 4 channels | Log Memory | 16K for capture /8K for log |
| • Timing | | Programmable pattern cycle times | 2 ³² or infinite |
| Period Resolution | 10nS | Pull up resistor to VTT | 2K/7.5K |
| Pin TG Edge Resolution | 10nS | • Trigger | |
| Minimum Pulse Width | 10nS | EXT TTL Trigger | 1 |
| Timing Sets | 16, Change On The Fly | • Physical Properties | |
| Driver TG Edges | 2, per pin resource | Bus Interface | PXI |
| Strobe TG Edges | 2, per pin resource | Dimensions | 3U |
| • Formatter | | Power Requirements | 3.3V@3A, 5V@3A 12V@0.5A |
| Format | | System Clock | 100MHz |
| RTZ, Return To Zero | | Bus & Signals | 8 PXI Trigger bus lines for parallel test |
| RTO, Return To One | | • Environmental | |
| NRZ, Non Return To Zero | | Operating Temperature | 0 ~ 50°C |
| SBC, Surround By Complement | | Storage Temperature | -20 ~ 70°C |
| • PMU/DPS | | • Software | API & Pattern Editor |
| Number of PMU/DPS | 1 PMU and 1 DPS | • Maximum boards in one system | 16 |
| PMU Accuracy | 1.00% | *One PMU is responsible to 16 I/O channels | |
| Number of IRange x 5 | I1: ±2uA/I2: ±20uA I3: ±200uA/I4: ±2mA /I5: ±50mA /I6 : ±0.5A(DPS only) | • PXI Compliance | |
| Number of VRange x 1 | E1: -1V ~ +7V | All OpenATE Interfaces PXI cards comply with the PXI Specification 2.0 (issued Aug, 2000) | |

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