

OpenATE PE16

3U PXI High Performance Dynamic Digital PE Card

- 16 input / output channels, dynamically configurable on 256 I/O sets
- 64 M of on-board vector memory per channel
- -1 ~ +6V VOH VOL VIH VIL per channel
- Per-channel PMU, Active load
- 66 MHz data rate
- Supports 16 Timing Sets & 16 Formatter Sets change On The Fly
- Dynamic controlled sequencer uses micro-instructions including Match, Loop, Repeat, FC/FM/FL/FE
- Operates as a stand-alone card or with up to 7 additional synchronous slave boards
- Dual site mode can split one PE16 to two 8 channels sites.
- API & Pattern Editor



Description

The PE16 represents a new level of performance and capabilities for PXI-based digital instrumentation. Based on the proven architecture of the PE16, the PE16 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 128 bi-directional pins (8 boards). The PE16 offers 16 programmable level input or output channels with per-pin PMU. The PE16 also supports deep pattern memory by offering 64 M of on-board vector memory with per channel and dynamic 256 sets direction control and with test rates up to 66 Mhz..Dual site mode can split one PE16 to two 8 channels sites.

Features

The PE16 supports programmable I/O levels from -1V ~ +6V per channel. The PE16 offers 16 timing sets, 2 driver TG Edges, 2 strobe TG Edges. 16 Formatter sets, change on the fly, and four drive data formatters 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.

On-Board Memory

The PE16 offers 64 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 PE16 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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Specifications

• Pin Electronics		• Programmable Load	
I/O Channels	16, per board with 256 I/O sets	IOL/IOH Range	±32mA
Test rate	66MHz	VREF Setting Range	-1V ~ +6V
Input Level (Vih/ Vil)	-1 ~ +6V per channel	• Logic Sequencer	
Output Level (Voh/Vol)	-1 ~ +6V per channel	Micro-Instructions	MATCH; LOOP; REPEAT; FC/FM/FL/FE
• Timing		Pattern Symbols	0, 1, L, H, X, Z, J, Q
Period Resolution	5nS	LMSYNC to PXI Trigger Bus	For Sync With other Instruments
Pin TG Edge Resolution	5nS	Ignore Fail By LM Address	YES
Driver Skew Resolution	312.5pS	Dual Site Mode	YES 8 pin per site
Minimum Pulse Width	5nS	Vector Memory	64M(length) × 16(channels)
Timing Sets	16, Change On The Fly	Programmable pattern cycle times	2 ³² or infinite
Driver TG Edges	2, per pin resource	• Trigger	
Strobe TG Edges	2, per pin resource	Ext TTL Trigger	1
• Formatter		• Physical Properties	
Formatter Sets	16	Bus Interface	PXI
RTZ, Return To Zero RTO, Return To One NRZ, Non Return To Zero SBC, Surround By Complement		Dimensions	3U
• PMU		Power Requirements	3.3V@3A, 5V@3A 12V@0.5A
Number of PMU	16 (per-pin)	System Clock	200MHz
PMU Accuracy	1.00%	Bus & Signals	8 PXI Trigger bus lines for parallel test
Number of IRange x 8	I1: ±2uA / I2: ±8uA I3: ±32uA / I4: ±128uA I5: ±512uA / I6: ±2mA I7: ±8mA / I8: ±32mA	• Environmental	
Number of VRange x 1	E1: -1V ~ +6V	Operating Temperature	0 ~ 50°C
• Software		Storage Temperature	-20 ~ 70°C
API & Pattern Editor		• Maximum boards in one system	
• PXI Compliance		8	
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