OpenATE PEMU32

* Interface	3U PXI (V)	USB (V)
* 32 input / output channels, dynamically configurable		
* 10 MHz data rate		
* -1V ~ +10V VOH VOL VIH VIL per channel		
* 32 PMU per board or 4 DPS		
* 32 M of on-board vector memory per channel		
* Supports 4 Timing Sets change on the fly		
* Dynamic controlled sequencer uses micro-instructions including Match, Loop, Repeat, FC / FM / FL / FE		
* 32M fail log / Capture		
* Quad Sites Pattern Mode		
* 100MHz 32bit frequency counter TMU		
* API & Pattern Editor		

3U PXI

USB

Description

The PEMU32 represents a new level of MULTI-FUNCTION for PXI-based instrumentation. Based on the proven architecture of the PE32, the PEMU32 offers high voltage PMU/DPS and pin electronics 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 (8 boards). The PEMU32 also supports deep pattern memory by offering 32 M of on-board vector memory with dynamic per pin direction control and with test rates up to 10 MHz.

Features

The PEMU32 supports -1 ~ +10 VOH VOL VIH VIL per channel and 32 PMU/4 DPS per board. The PEMU32 offers 4 timing sets, 2 driver TG Edges, 2 strobe TG Edges. 1 Format set with six drive data formats are supported: RTZ (Return To Zero), RTO (Return To One), NRZ (Non Return To Zero) NRO (Non Return To One), SBC (Surround By Complement) ,NF(no format) which can providing flexibility to create a variety of bus cycles and waveforms to test board and box level products.8 PMU can be ganged to high current DPS. 100MHz 32 bit counter for frequency measurement.

On-Board Memory

The PEMU32 offers 32 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. 32 M failure log or capture for each channel.

Compatibility

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

Software

The PEMU32 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 / Capture
- Analog /MEMS Device Testing
- Open/Short Tester

OpenATE PEMU32

Specifications

● Pin Electronics	
I/O Channels	32, per board resource
Test rate	10MHz
Input Level (Vih/ Vil)	-1V ~ +10V per channel
Output Level (Voh/Vol)	-1V ~ +10V per channel
Driver Swing	3V ~10V
● Timing	
Period Resolution	10nS
Pin TG Edge Resolution	10nS
Minimum Pulse Width	50nS
Timing Sets	4, Change on the fly
Driver TG Edges	2, per pin resource
Strobe TG Edges	2, per pin resource
● Formatter	
Format Sets	1
	RTZ, Return To Zero
	RTO, Return To One
	NRZ, Non Return To Zero
	NRO, Non Return To One
	NF, Non Format
	SBC, Surround By Complement
● PMU	
Number of PMU	32
PMU Accuracy	MI: ±10nA±1.5% FVMV: 30mV
Number of IRange x 8	I1: ±2uA / I2: ±8uA
	I3: ±32uA / I4: ±128uA
	I5: ±512uA / I6: ±2mA
	I7: ±8mA / I8: ±32mA
	IH:±64mA
Number of VRange x 1	E1: -1V ~ +10V
● Logic Sequencer	
Micro-Instructions	MATCH; LOOP; REPEAT; FC / FM / FL / FE
Pattern Symbols	0, 1, L, H, X, Z, J, Q
LMSYNC to PXI Trigger Bus	For Sync with other Instruments
Ignore Fail By LM Address	YES
Vector Memory	32M (length) × 32 (channels)
Log Memory	32M for failure log / Capture
Programmable pattern cycle times	2^{32} or infinite
● Trigger	EXT TTL Trigger

OpenATE PEMU32

● Physical Properties	
Bus Interface	PXI
Dimensions	3U
Power Requirements	3.3V@3A, 5V@3A 12V@0.5A
System Clock	100MHz
Bus & Signals	8 PXI Trigger bus lines for parallel test
● Environmental	
Operating Temperature	0 ~ 50℃
Storage Temperature	-20℃ ~ 70℃
● Software	PXI : API & Pattern Editor
● Maximum boards in one system	16
● One DPS can offer 512mA current	
● PXI Compliance	All OpenATE Interfaces PXI cards comply with the PXI Specification 2.0 (issued Aug, 2000)

OpenATE Inc.

The Open Solution for IC Tester