



MODEL 33010

KEY FEATURES

- Standard PXIe bus connector
- 100MHz maximum clock rate
- 32 channels per board
- Extendable up to 256 channels in one chassis
- Any pin to any site
- Per board sequencer architecture (multiple time domains supported)
- Per-pin timing with per-pin, per-cycle bidirectional control
- Per-pin time & frequency measurement
- Per-pin DC level & PMU
- 16 timing sets with on-the-fly timing changes
- 64M sequencer command memory per pin
- 64M vector memory per pin
- SCAN pattern function support
- Windows 7/10 operating system
- LabView and LabWindows support
- Proprietary CRAFT_PXI software tools option
- Master/Slave architecture for boards chaining
- Similar to pattern and timing structure as 3380D/3380P/3380 series ATE
- Additional power supply (option)

PROGRAMMABLE HIGH SPEED PXIE DIGITAL IO CARD MODEL 33010

Chroma 33010 is a high-density 100MHz PXIe digital IO card designed for characterizing, validating, and testing a variety of digital and mixed-signal ICs. Each IO card consists of a Sequencer Pattern Generator (SQPG) and 32 channels of full ATE-like features. The 33010 IO card is expandable up to 256 channels. Some unique features of the 33010 include an on-board SQPG, per pin timing/levels/PMU/TFMU, multiple time domains, and multi-threaded testing for complex IC testing. Each channel is also equipped with 64M vector memory, 16 timing sets with on-the-fly timing change, and per pin timing and frequency measurements up to 400 MHz.

Proprietary Software, CRAFT_PXI and other rich features of software support

In addition to LabView and LabWindows support, Chroma provides a proprietary software option, CRAFT_PXI, for Windows-based systems. CRAFT_PXI contains a full set of production tools and user debugging tools. The production tools include ease-of-use GUI

software with an Operator Interface, Test Data Output, Binning and Sequence Control, Wafer Map, Summary Tool, and rich sets of prober/handler drivers. The user debugging tools include a Data Logger, Debug Plan, TCM, Shmoo, Pattern Editor, Waveform, and more. A CAD to ATE pattern conversion tool is also supported to cover WGL/STIL/VCD/EVCD conversions.

Addressing the emerging market and test cost challenges

With a high-density per pin and per site architecture, full suite of ATE Pin Electronics (PE) card functions, expandable channel count, and a rich set of software support, the 33010 digital IO card will help users address the emerging market and test cost challenges. 33010 PXIe cards can be easily adopted with other PXI/PXIe solutions such as RF, SMUs, and Mixed-signal cards to address a variety of applications such as MCUs, Sensors, RF ICs, PMICs, or ICs with combined functions.

APPLICATIONS

- Semiconductor
- LED / Laser Diode
- Solar Cell
- Battery / BMS
- Transistor
- Automotive
- Avionics
- Power Electronics
- Sensor / IoT



SPECIFICATIONS

Model	33010
Clock Rate	100 MHz
Pin Channels per Card	32 pins (chained to max. 256 pins)
Pattern Memory	64M
Sequence Control Memory	64M
Parallel Testing Capability	Any pin to any site
Timing Generator per Pin	
Timing Generators	8 edges per pin (4 drive / 2 strobes / 2 IO markers)
No. of Timing Sets	16
Rate Setting Resolution	625 pS
Rate Setting Range	10ns to 5ms
Driver / Comparator / Load	
Pin Driver (Vil/Vih) Range	-1.5V to + 6V
Pin Driver(Vil/Vih) Accuracy	±(0.5% + 10mV)
Output Current Limit	75 mA
Output Impedance	50±5Ω
Pin Comparator (Voh/Vol) Range	-1.5V to + 6V
Pin Comparator (Voh/Vol) Accuracy	±(0.5% + 20mV)
Pin Load (Iol/Ioh) Range	± 25mA
Vref Setting Range	-1.5V to + 6V
Scan Chains	
Scan Chains Numbers	Flexible configuration chains per board
Scan Pattern Memory Size	Max. 3G
PPMU	
Channel	Per Pin (32 Chs FIMV / FVMI)
Voltage Force Range	-2.0V to +6V
Current Measured Range	± 2uA / ± 10uA / ± 100uA / ± 1mA / ± 40mA
Current Force Range	± 2uA / ± 10uA / ± 100uA / ± 1mA / ± 40mA
Voltage Measured Range	-2.0V to +6V
Time & Frequency Measurement	
Maximum Frequency Measurement	Per pin, 400MHz
Maximum Time Measurement	Per pin, 40 sec. (0.025Hz / resolution : 10ns)
Free-run Clock	Per Pin, Max. : 200MHz
Others	
System Environment	Windows 7/10
Programming Language	C \ C# \ Labview
Power Consumption	80W
Dimension	PXle 3U
Optional PXle Power Supply	
Input Voltage (VAC)	A330101 (AP15) 100 ~ 240 ± 10% V _{LN}
Source Line Frequency Range	47 ~ 63Hz
Input Current , Continuous (A)	0.1 ~ 2.7A
Output Range (Vdc)	17.75 ~ 18.15 VDC
Output Current, Continuous (A)	11.2A
Output Voltage Ripple Noise	100 ~ 180mV
Max. Support Watt	up to 200W (33010 x 4)
Occupy Slots	2 slots

All specifications are subject to change without notice.

ORDERING INFORMATION

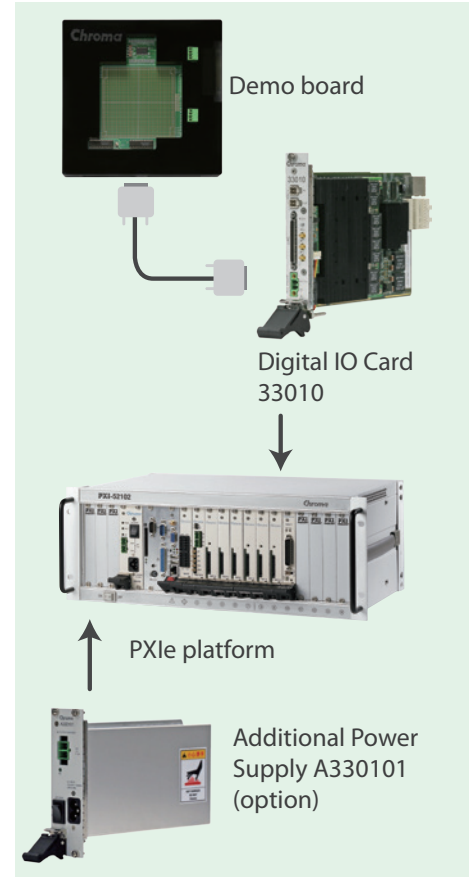
33010 : Programmable High Speed PXle Digital IO Card

A330101 : Additional Power Supply, 15V (option)

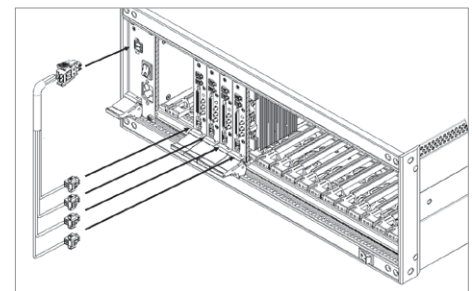
Demo Board

PXle Platform

ARCHITECTURE OVERVIEW



A330101 STRUCTURE DIAGRAM



One A330101 power supply supports up to 200W (4 pcs of 33010 digital IO cards)

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