PMC850 - Advanced PMC-X Bus Analyzer / Exerciser

PMC850

Analyzer
- Capture Bus Activity
- Event Recognition
- Complex Triggering and Filtering
- Time Stamping and Measurement
- State and Waveform Displays
- Power Zoom (533 Mhz)

Exerciser
- Memory, I/O, Config Transfers
- Generate Test Patterns
- Configuration Scanning
- Control Address / Data Width
- Read / Write to a File

Stimulus
- Fault Injection
- Control Bus Timing
- Hardware Simulation
- Pattern Generation
- Drive any Signal

Target Memory
- Windowed Bus Memory
- Split, Retry, Disconnect Response

Protocol Violation Checker
- Detects >50 Protocol Violations
- Listed in State/Waveform Display
- Used as Trigger / Filter

Timing Violation Checker
- Checks Unstable Signals
- Setup and Hold Verification
- Glitch Detection

Performance Analysis
- Bus Utilization
- Transfer Rate
- Latency
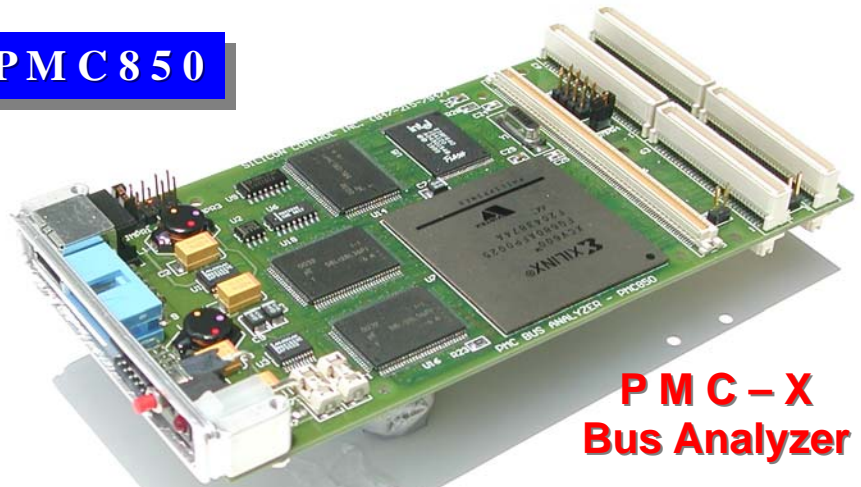- Burst Distribution
- Statistics

Compliance Testing
- PCISIG Checklist

Windows and API Interface
- Analyzelt Windows Software
- User programmable API

Expansion Connector

**P M C – X
Bus Analyzer**

The PMC850 Analyzer operates in 32 and 64 bit PMC and PMC-X systems running at 0 to 133 Mhz. Over 100 protocol and timing violations are automatically checked and correlated with captured bus activity. System performance measurements include Bus Utilization, Transfer Rates, Latency, and Statistics. Another PMC card can be plugged onto the PMC850.

Analyze It! Windows Software

Silicon Control introduces the ultimate analyzer and exerciser for PMC and PMC-X systems. This 3rd generation PMC analyzer combines high performance hardware with a sophisticated and intuitive software interface. The result is a powerful diagnostic tool for bus analysis all on a single plug-in card.

PMC850 SPECIFICATIONS

General Specifications

PCI Compliance:	PCI 2.2 , PCI-X 1.0 Compliant
Bus Size:	64 or 32 bit
Bus Signal Levels:	5V or 3.3V

Trace Specifications

Trace Memory:

PMC850-1	128K by 144 bits
PMC850-2	256K by 144 bits
PMC850-3	512K by 144 bits
PMC850-4	1M by 144 bits
PMC850-5	2M by 144 bits

Sampling Rate:	0 to 133 Mhz
High speed power zoom	533 Mhz

Sampling Modes:	System Clock
	System Clock w/ Address/Data
	System Clock w/ Transfers
	On board precision Oscillator
	(7.5ns to 15us)

Sampled Signals:	AD[63:0], C/BE[7:0], FRAME, DEVSEL, TRDY, IRDY, PAR, REQ, GNT, RST, LOCK, CLK, INTA, INTB, INTC, INTD, PAR64, PERR, SERR, REQ64, ACK64, TDO, TDI, TCK, TMS, TRST, SDONE, SBO, EXT[7:0]

External Inputs:	8 Front Panel Trace/Trigger
External Outputs:	1 Programmable Trigger Output
Triggers:	8 Trigger Conditions each Specifying 100 PMC Signals, 8 External Triggers and Anomaly
Trigger Types:	Single Condition
	Logical Combination
	16 Level Sequencer
Trigger Positions:	0%, 25%, 50%, 75%, 100%
Occurrence Counters:	16 hardware counters 20 bits
Event Counters:	16 hardware counters 20 bits
Time Tag:	7.5 ns to 60 sec.

Exerciser Specifications

Initiator Bandwidth:	1056 MB/s rate
Initiator Bus Width:	64 or 32 bit
Initiator Transfers:	Memory, I/O, Configuration

Target Specifications

Target Memory:

PMC850-1	1 MB
PMC850-2	2 MB
PMC850-3	4 MB
PMC850-4	8 MB
PMC850-5	16 MB

Target Bandwidth:	1056 MB/s burst rate
Target Bus Width:	64 or 32 bit

Front Panel Interfaces

RS232 Port:	DB9 connector, 110 to 115K Baud (cable included)
USB Port:	Series B connector, 12 MB/s (cable included)
Indicators:	GO LED, User LED
Pushbutton:	Reset Analyzer or System
External Power:	2 Conductor front panel (cable included)
Trigger:	10 pin socket (8 in, 1 out, 1 ground) (cable included)
Fuses:	Main power and External power

Power Requirements	Operating—5V at 3 Amps max Standby—5V at 1 Amp max
Dimensions	PMC850—Single Slot PMC Card

Ordering Information—*PMC Analyzers*

PMC850-1	128K Trace Buffer 1 MB Target Memory
PMC850-2	256K Trace Buffer 2 MB Target Memory
PMC850-3	512K Trace Buffer 4 MB Target Memory
PMC850-4	1M Trace Buffer 8 MB Target Memory
PMC850-5	2M Trace Buffer 16 MB Target Memory

/NC suffix designates no J1, J2, J3 and J4 test connectors on the back side of the PMC850.