# Roos Instruments

## RI8535 - Universal Digital Cassini Instrument Profile

#### **Applications**

- Device Control
- Parametric Measure
- Logic Analyzer
- Frequency Counter

### Overview

The RI8535 Universal Digital instrument provides a complete digital subsystem with configuration options of 40, 80, or 120 synchronous pins. The instrument architecture uses dedicated digital cores for native Vector, Scan, I<sup>2</sup>C, SPI and JTAG protocols. Every pin also incorporates parametric test capability for fundamental voltage and current measurement, continuity, and frequency counter. Comprehensive integration with Cassini's test development software brings protocol-aware programming and device interaction with register/data format support for WGL, CSV, TP, and Verilog files.

#### **Key Features**

- Device Control with Digital Protocol Engines
- Pattern Import and Logic Analysis Tools
- Pattern Generation on the Fly
- Native JTAG Support

### **Block Diagram**







#### Performance

Digital	
Clock Rate	1 kHz to 100 MHz ±0.1 Hz
Rise/Fall Times	2ns
Drive/Compare	0V to +30 mV (50Ω) ±0.25%
	0.03V to +4.0V (50Ω), ±1mV
Memory	
Depth	128Mb / 16Mb (optional/ standard)
Fail Memory	32k Vectors
Parametric	
V Force   Measure	-2.0V to +5.0V; -2.0V to +5.0V ±0.25%   ±5.0V ±0.1%
Force   Measure	± 20mA ± 0.25%   20mA to 20uA ±0.4%
Inputs/Outputs	



Digital Block: 40-pin, high-speed connector

#### **Cassini Test Systems**

A versatile, high-speed, automated test solution for analog, mixed-signal, RF, and millimeter-wave devices.

Cassini provides a modular base architecture that is fully configurable via Test Instrument Modules (TIMs) to meet the needs of any IC, wafer, or module test requirement.

Each TIM contains internally-cooled, RF-shielded measurement instrumentation, signal distribution, and blind mate interfacing to provide targeted test resources and integrate to build up a complete production test platform.

Combined with Roos Instruments' integrated test software, Cassini can be configured to any application for maximum performance, true low cost of test, and the industry's fastest test times.

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