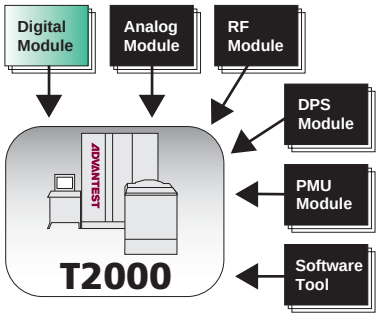
ADVANTEST

Digital Module

128ch 800Mbps Digital Module
128ch 250Mbps Capable Digital Module

A Complete 128 Channel 250/500/800 Mbps Digital Test Module for the T2000 Test System



T2000 Digital Module

- Multiple-device parallel testing is achieved with 128 I/O channels per module using high-density packaging technology.
- An optimal pattern and clock frequency that meets customer's needs can be selected by the software license.
- Each channel is equipped with a driver, comparator, DC and frequency testing functionality, as well as large capacity memory to store patterns of large size to support the ever-increasing quantity of test patterns.
- In addition to functional and DC testing, the module is equipped with standard features that allows the flexibility to test various functions such as scan pattern generator, algorithmic pattern generator, high voltage pin, multi-time domain, etc.

800Mbps Digital Module

- Supports source synchronous mode and measurement of DDR interface used by SoC devices, etc.
- A license can be selected from four frequencies, namely, 800M, 500M, 250M and 125Mbps.

250Mbps Capable Digital Module

- One histogram counter is provided per 32 channels that allows digital output data from an AD converter to accumulate in a real-time histogram for precise and efficient analysis.
- Supports multiple small-pin device simultaneous measurement to provide simultaneous measurement of up to 8 devices of 16 channels per module.
- A license can be selected from two frequencies, namely, 250M and 125Mbps.

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T2000 Digital Module Specifications

	128ch 250Mbps Digital Module Specifications	128ch 800Mbps Digital Module Specifications
Digital IO Channels	128 IO channels, 8 high voltage VPP channels	128 bidirectional channels, 2 unidirectional Vpp channels
Functional Test Speed	Up to 125MHz in Normal Mode	with 800Mbps license:
	Up to 250Mbps in Double Mode	Up to 200Mbps/200MHz in Normal Mode
		Up to 400Mbps/400MHz in Double Mode
		Up to 800Mbps in Quad Mode (Driver only)
		with 500Mbps license:
		Up to 125Mbps/125MHz in Normal Mode
		Up to 250Mbps /250MHz in Double Mode
		Up to 500Mbps in Quad Mode (Driver only)
Timing	6 Timing Edges per Channel	
	Timesets: 32 Local, 1024 Global	
	7.8125ps period and edge resolution	
	Change timing on-the-fly capability	
	±200ps Edge Placement Accuracy	±150ps Edge Placement Accuracy
Multiple Time Domains	2 independent time domains per module	
	Change period on-the-fly capability	
Pattern Generators	256K Pattern List Memory	
	64M x 3-bits Pattern Memory per channel	128M x 3-bits Pattern per channel
	4K Subroutine Memory per channel	4K x 3-bits reloadable subroutine memory per channel
	Scan Pattern Generator, up to 128M x 2-bits per channel	Scan Pattern Generator, per channel
	16 Channel Linkable mode (2Gbit x 2-bits)	16 Channel Linkable Scan Memory mode (4Gbit x 2-bits)
	Algorithmic Pattern Generator, per channel	
Fail and Capture Memories	Data Fail Memory: 16M per pin	Internal Memory (all modes always available)
	Digital Capture Memory: 32M x 2 banks	Fail Capture: 8K per pin
	ALPG Pattern Capture: 4M per channel	ALPG Pattern Capture: 4K x 3 bits per pin
	Pattern Result Memory: 256K	Central Capture Memory: 4K x 512
		External Memory (one mode at a time only)
		Digital Acquisition/Capture Memory: 32M x 2 banks
		Fail Capture: 32M per pin
		ALPG Pattern Capture: 16M x 3 bits per pin
		ALPG Memory Map: 20M
		Central Capture Memory: 16M x 512
Pin Electronics	-1.25V to +7V Drive and Compare Range	-2V to +6V Drive and Compare Range
	2mV Resolution	
	Termination, Load, Clamp, frequency counter per channel	
VPP Pins	8 per module, 13.5V maximum VIHH	2 per module, 13V maximum programmable VIHH
DC Measurement		
Per Pin PMU	-1.25V to +6V, 32mA Maximum	6V, 25mA Maximum
Central DC PMU one per Module	-4V to +8V, 60mA Maximum	8V, 60mA Maximum
Other Feature	Histogram Engine: per each 32 channels	Sequencer initiatied: source-sync margin testing
	Maximum ADC sample width:	
	Single ADC: 24 bits	
	Dual ADC: 14 bits	
	Triple ADC: 10 bits	
	Maximum ADC Sample rate for histogram	
	16 bits or less: 250Msps	
	Greater than 16 bits: 25Msps	

- OPENSTAR is a registered trademark in the United States, Japan and other countries.
- Please refer to product manual for complete system specifications.
- Specifications may change without notification.

ADVANTEST®

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