An Integrated Stimulus and Response Instrument for Functional Board Test

The TS-4024 is the third generation of the RS-4000 Series Pattern Generator/Analyzer family. It carries forward the same dual-processor architecture, which allows real-time decision making based on expected data values. Key to effective UUT management are multiple handshade and control lines, multiple clock sources and status flags. As with all RS-4000 Series mainframes, these flexible control signals are standard.

The TS-4024 provides twice the channel density of previous test subsystems, and it also includes programmable skew control of the output channels for aligning signals at the interface test adapter. Since overall test throughput depends on efficiently transferring test vectors from the host to the digital subsystem, the remote transfer rate for the TS-4024 was maximized. This was accomplished with binary data modes and a high speed parallel interface.

TS-4024 I/O Memory Card Options

32-Channel I/O		64-Channel Input		64-Channel Output	
	Delay				
4K	Output			4K	Output
4K	Tristate			4K	Tristate
4K	Expect				
4K	Mask				
4K	Record	4K	Record		

The 32-Channel Unversal I/O Card provides real-time digital compare capability, the same as the 16-Channel Universal I/O Card described in the RS-4004 Technical Guide. Delay control can be programmed across all output channels, as a single group over the range of 0-63 nanoseconds, in one nanosecond steps. All other capabilities are the same as the 16-Channel version.

The increased channel count does affect two functional areas of the TS-4024. In the Logic Recorder mode of operation, the trigger equation, which defines the specific trap condition for acquiring data, has been expanded to accommodate a unique 96-bit wide word. Data is then recorded across all channels, up to 1023, and can be positioned pre-trap or post-trap. The most significant change from previous generations is a new one-to-one binary pin mapping

algorithm that creates a single "super-field" across every channel in the system. This provides total flexibility with how UUT interconnect cabling is routed, allows any pin on any I/O card to be grouped together, and reduces the overhead of downloading ASCII characters that may have included padding bits. Since pin mapping can now take place across all the channels in the system, there is no longer a menu for defining "fields" associated with each I/O card, and instead, remote control commands are used for this function.

Specifications

Please see the RS-4004 Series Technical Guide for complete system clocking, timing, and electrical specifications.

Mechanical

Main Chassis:	17"W x 8.75"H x 22"D, 75 lbs. max.
Expansion Chassis:	17"W x 8.75"H x 22"D, 65 lbs. max.

Power:

Main Chassis:	110 Vac ±20%, 7A max., 50/60 Hz
	220 Vac ±20%, 3.5A max, 50/60 Hz
Expansion Chassis:	110 Vac ±20%, 5A max., 50/60 Hz
	220 Vac ±20%, 2.5A max, 50/60 Hz

Environmental:

Temperature:	0º to 40º C, all specifications valid at 25º C
Humidity:	80% relative humidity, noncondensing

Remote Interfaces:

IEEE 488:	SH1, AH1, T6, TE0, L4, LE0, SR1, RL1, PPO, DC1, DT1, C0, E2
RS-232C:	Half duplex, 110, 150, 300, 600, 1200, 2400, 4800, 9600 bps

Signal Terminations:

Output	100 ohm series termination, user removable
Input:	10k ohm pull-up termination, user config-urable, 180 ohm/390 ohm pull-up/pull-down termination.

Ordering Information

Please contact the factor for application, configuration and pricing information.

Interface Technology reserves the right to make changes to product and specifications without notice.