

S790 Series2



Ultimate performance
for electronic test



An Unmatched Pedigree...

The S790VXI Series2 represents the ultimate high-performance, mixed signal ATE system. Its advanced hardware technology, coupled with CATE™ software for fast effective program production, makes the S790 Series2 the ideal solution for addressing today's major board test concerns - test program generation, and diagnostic speed and accuracy.



Protecting your investment

Fully compatible with all Schlumberger S700 test systems, the S790 Series2 provides a complete, risk-free migration path for all S700 series test programs.

Your investment is safe with the S790 Series2

Protecting large investments into earlier S700 test programs and fixtures is, for most users, a major concern. The S790 Series2 protects your investment; its compatible architecture allows existing test programs and fixtures to be loaded and run - simply and robustly - providing an assured, risk-free migration path. All diagnostic data is also ported, avoiding lengthy and costly revalidation of new or modified diagnostics.



Flexibility

The S790 Series2 is probably the most versatile tester on the market today. Its modular design and construction provides a system easily configured and expanded to meet customers' changing needs.

Providing for 'off the shelf' VXI and PXI instrumentation offers the ATE user many benefits: reduced instrument package sizes; short interface cable lengths; precise synchronisation facilities; real time processing; and a variety of programming capabilities providing maximum flexibility and insurance against instrument obsolescence.



Second generation

As well as the striking new colour scheme, you will notice significant improvements in the Series2 System, such as improved software tools for enhanced productivity; new features to accommodate recent component advances; and obsolescence-proof hardware upgrades.

To take advantage of latest hardware technology, the new S790 Series2 is available with a Linux operating system option for use on new generation PC workstations, providing enhanced speed, performance and test program generation productivity. The S790 Series2 meets the demands and test challenges of today's increasingly complex circuit boards and modules. The Diagnosys ethos is one of total commitment to continuous product improvement.



Diagnostics capability

At the core of any good test system are good diagnostics - the Series2's are outstanding.

Its highly sophisticated software intelligence combines inputs from numerous tools, including fault history logs, to isolate the root cause of faults with very high accuracy and speed. Advanced diagnostic intelligence provides efficient faultfinding without the need for operator knowledge and experience.

A major strength of the Series2 is its diagnostics' ability to save time and money on faulty board debugging - an unbeatable, winning formula.

Quality performance

The S790 Series2's unequalled blend of powerful digital electronics and instrumentation facilities outperforms rival machines where it matters most. Its high speed ability permits digital circuit testing at 40Mhz pattern rates.

Up to 1792 pins are available, each with individually-programmable voltage levels. These hybrid test channels also provide analog facilities for in-circuit tests, and functional testing up to 5MHz. A separate, high-performance 30MHz analog switching matrix with up to 1024 channels is also available.

- ▶ Speed
- ▶ Accuracy
- ▶ Scalability
- ▶ Flexibility
- ▶ Build quality



Multi-strategy test approach

Cluster test generation software - By utilising advanced clustering techniques, the Series 2's highly sophisticated software simplifies and facilitates the structure of complex test programs.

It permits multiple test strategies, as well as providing an interface to existing CAE data. Verification of electronic assemblies is simplified by segmenting the full design into more easily managed sub-circuits that can be worked on concurrently.

Powerful cluster test generation software produces complete diagnostic test programs for defined clusters, combining the advantages of the latest test techniques - functional; incircuit; boundary scan; mixed signal; bus emulation; etc.

Computer Aided Testing

CATE™ - totally integrated test software

The industry's first Computer Aided Test Engineering Software, CATE™ - a natural extension of CAE - provides the user with a powerful, object-oriented graphical environment. CATE™ incorporates an integrated, highly efficient and effective set of test program development and diagnostic tools. The test engineer's effectiveness in developing test programs is greatly improved by menus and HELP facilities providing the right tool - at the right time. Working throughout the system, the system's integral VALIDATOR software ensures that only valid tasks can be performed, thus avoiding programming errors. At the heart of CATE is PROCESS MANAGER; this advanced utility automatically manages all software management tasks.



Localised Global Support

Through direct communication with our customers, understanding their needs and exceeding expectations, **Diagnosys customer service delivers a first class solution to the worldwide ATE market.**

Customer satisfaction is provided through a highly trained and experienced team of support engineers. Backed up by a worldwide repair and logistical support network, customers around the globe are provided with the necessary parts and services, on a daily basis, to keep their operations running smoothly.

Along with our primary offices in the UK, North America, France, Germany and India we are represented by business partners in countries across the world; contact details can be found on our web site.

In this ever-changing market Diagnosys also understands the protection of customer investment - though the management of obsolescence we are committed to a long-term support strategy.

S790 Series2 - The leading ATE System

S790 Series 2 Specifications:

GENERAL FEATURES

- ▶ In-Circuit Test - Analog, Digital ,Mixed signal
- ▶ Functional Test
- ▶ Boundary Scan Test
- ▶ Memory Test

IN-CIRCUIT TESTS

- ▶ Capacitor discharge
- ▶ Pin Contact
- ▶ Continuity
- ▶ Shorts Test
- ▶ Diode
- ▶ Operational amplifier
- ▶ Opto Coupler
- ▶ Reactive and resistance measurement of impedance
- ▶ 2, 3, 4, and 6 wire measurements

SOFTWARE

Operating System:	Linux - For PC Workstation Systems
Test Software Environment:	CATE™
Management System:	Process Manager
Test strategy Manager:	Strategizer
Debug Environment:	Debug Workbench
Test Strategies:	In-Circuit, Functional, Emulation, Cluster, Boundary Scan
Rule Validation:	Validator
Schematic Display:	Schematic Manager
PCB Display:	Locator
Instrument Programming:	Instrument Workbench
In-circuit optimisation:	Digital Workbench
Digital Waveform editor & Display:	Digital Workbench
Simulation Links:	LASAR
Program Generation:	APG (automatic program generation) for in-Circuit Tests and Wiring

IEEE 1149.1 BOUNDARY

Scan Testing:	Scan APG, Scan Diagnostics & Debug
Libraries:	Component Descriptions, Component test routines, Instrument control routines, back drive protection
Diagnostics:	Analyst, statistical fault analysis, intelligent probe sample placement, context dependant probing, compression algorithms

ANALOG

Resistance Accuracy:	0.1Ω to 1Ω	3%
	1Ω to 1MΩ	1%
	1MΩ to 100MΩ	2%
Capacitance Accuracy:	10pF to 100F	2%
	100µF to 1mF	5%
	1mF to 10mF	10%
Inductance Accuracy:	10µH to 100µH	2%
	100µH to 100H	2%
Voltage:	100mV to 10V	
Current:	100nA to 100mA	
AC Measurements:	10hz to 10Khz	
Measurement rate:	1000 per second	

DIGITAL

Max Clock Rate:	50Mhz
Max trigger to pin response time:	150nS
Frequency measurement:	0.11Hz to 50Mhz
Time Measurement:	10nS to 10
Event Count:	up to 236
Max No of UUT Power supplies:	16
Max Pin count:	3840
Pin RAM:	16K x 4
Data mode Pattern:	40Mhz max
Interleave Pattern rate:	20Mhz max
Pin Skew:	within 3nS
Time unit resolution:	200pS
Voltage source range (norm):	-4.5 to +5.5v
High Voltage pin range:	-15v to +15v
Program Voltage increments:	40mV
Termination (pull up, pull down):	3.3k
Input Leakage (in sense mode):	<40µA
Input capacitance (with sensor):	200pF
Input capacitance (without Sensor):	50pF
Over voltage protection:	clamping at 100v
Over Current protection:	clamping at 1A

PHYSICAL

Characteristic	S790 Series 2	S790 Series 2 - DP
Dimensions	2.16m x 1.07m x 1.09m	2.66m x 1.07m x 1.09m
Floor weight	1200 Kg	1800 Kg
Power Requirements	380/415V 50Hz 20A or 208V 60Hz 60A	380/415V 50Hz 38A or 208V 60Hz 60A
Air Conditioning Load of System	7KW	15KW
Ambient Operating Temperature		Min 18C, Max 25C
Ambient Temperature control from calibration point		+ / - 2.5C
Ambient Operating Humidity		Min 20% to Max 70% non-condensing
Minimum Obstruction Clearance from Air Intake and Exhaust		2m
Vacuum		80m3/Hr @ 200mBar

Contact your local office: sales@diagnosys.com
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