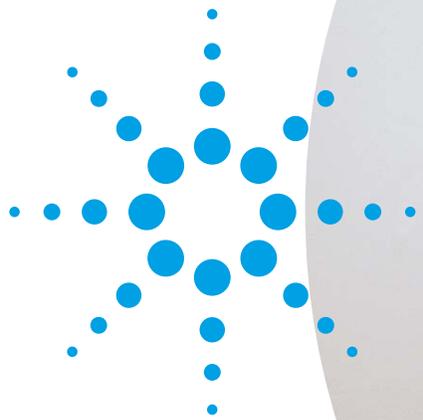# Agilent Medalist i1000
In-Circuit Test System

Data Sheet

The *Perfect Fit — With Just Enough Test*

The Agilent *Medalist* **i1000 In-Circuit Test (ICT) system is a revolutionary platform targeted for maximum cost effectiveness.**

It offers award winning state-of-the-art features with the answer to most test challenges faced by today's manufacturers. Advanced defects coverage features coupled with a simplified software model shortens the learning curve of new users, making this an ideal investment for manufacturers who need a cost-effective ICT solution.

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System Highlights

Ease of Use. It's back to the basics with the *Medalist* i1000 software to help new users get up to speed in the shortest time possible. Following the development model of a typical Manufacturing Defects Analyzer, the user can now get a fixture and program up and running in just a few days. Simplified graphical user interfaces allow the user to quickly make changes to individual tests during debug, with a comprehensive toolset of menus and buttons complete with AutoDebug features. This allows inexperienced users to start using the system quickly.

AutoDebug. With the *Medalist* i1000, unpowered passive analog components can be debugged with the click of a button, so even someone with limited ICT experience can perform a complete analog test debug in a matter of hours. AutoDebug fine-tunes tests so boards pass reliably in production. Statistical measures (CPK) are employed to determine the stability of the test. This automatic feature can reduce the normal debug process which takes days, to just a few hours.

VTEP v2.0 Test Suite. *Medalist* VTEP v2.0 is a suite of vectorless test solutions which encompasses the new Network Parameter Measurement technology as well as the original *Medalist* VTEP technology and the award-winning *Medalist* iVTEP. Bringing all these solutions together into VTEP v2.0 means having the best vectorless test in your hands. An industry first, Network Parameter Measurement technology detects defects on power and ground pins while iVTEP focuses on ultra low value measurement of signal pins (< 5fF) on Integrated Circuits (ICs). Furthermore, having the original *Medalist* VTEP as its core means enabling measurements which are 4X more sensitive and 5X better in standard deviation. As technology advances with shrinking packages and faster signaling speeds, VTEP v2.0 is a necessity to meet the challenges of today and beyond.

Automatic guard. The automatic guard feature is a tool for the production test engineer as well as test programmer. It automatically selects different guard points based on board topology for the user during the debug process. This eliminates the need for the user to manually check the schematics for each possible guard points and will significantly reduce the overall debug time.

Press-Down and Vacuum Fixture. The *Medalist* i1000 offers users two different fixture options. The first option uses a typical MDA-type fixture with cable connections. This provides users with affordable fixture options. The second option employs a vacuum-type fixture and a mechanical fixture lock-down system using electrical motors. This cable-less design provides fast fixture swapping time while maintaining high signal integrity.

Standard Software and Firmware Features

Open/short testing	Shorts Pin Groups Learning
Analog testing	Yes
Vectorless testing	VTEP v2.0
I2C programming capability	Yes
SPI programming capability	Yes
Boundary scan capablity	Yes (Customized solution)
Frequency measurement	Yes
AC/DC voltage testing	Yes
Number of analog guarding points	10
First pass yield report	Yes
Component-level coverage report	Yes
Yield enhancement test	Yes
Limited access tools	Agilent *Medalist* Bead Probe Technology
Panel test	Yes
Relay-level diagnostics tool	Built in
SPC quality tool	Yes

Software Product

VTEP v2.0 test suite	Test development software for vectorless test extended performance

Modules and Pin Cards

Pin cards	Un-multiplexed analog 64 channel
Analog stimulus card	Measurement board
Control card	System control board
Number of modules	Single module design which supports up to a total of 35 pin cards. This supports up to a total of 2240 node count.

Power Supplies

DUT power supplies	0V to +14V Max 20A 0V to -14V Max 5A	
High voltage DUT power supplies	10V to +100V Max 20A 0V to -14V Max 5A	
Number of supply channel	**Normal**	**High Voltage**
Programmable 0 – 5 V @ 20A	Two	One
Programmable 0 –14V @ 10A	One	One
Programmable 0 – -14V @ 5A	One	One
Programmable 10 –100V @ 10mA	None	One
Overvoltage protection	Yes	
Overcurrent protection	Yes	
System power supplies	AC 200V – 240V 10A	

Software Specifications

Operating system	Windows XP Home Edition
Support languages	English Simplified Chinese Traditional Chinese (Supports localization)
Vectorless test technology	VTEP v2.0 Test Suite (Includes VTEP, iVTEP and NPM)
Board/Fixture graphics display	Nails location graphic Pins location graphic Device location graphic
Probe pin locator	Pin locator with guided probed
Runtime yield display	Real time FPY (First Pass Yield) display at runtime

Yield enhancement tool	Auto retest Auto test cycle repeat
Debug Interface	Spreadsheet layout for easy test options selections
AutoDebug	AutoDebug on analog unpowered test and VTEP v2.0
Scalability	Single module design of up to 35 slots
Failure message printer	Uses parallel port (LPT1) interface (Printer not included)
Vacuum solenoids	Built-in (For U9402A vacuum-option only)
Input power connections	Included (Power cable)
Shipping and installation assistance	Included (Agilent authorized representative)
Capacitor discharge protection	Yes
Fixture types supported	Long-wire press-down type Long-wire vacuum type (Cable-less design)
Temperature compensation	Automatic internal adjustment

Hardware Specifications

Maximum nodes	2240
Pin Card	Un-multiplexed analog 64 channel

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applications you select.

Related Web Resources

For more information on Agilent *Medalist* i1000 In-Circuit
Test Platform, please visit: **www.agilent.com/see/ict**

Service and Support

For technical assistance with Agilent Printed Circuit
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Product specifications and descriptions in this
document subject to change without notice.

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