

24 channel Analogue IC Tester Module

V-I test capability

Number of test channels:	24 + 2 probes and references
Test voltage:	2 V to 50 V peak to peak
Voltage resolution:	8 to 12 bits
Test frequency:	37.5 Hz to 12 kHz
Test current:	1 μ A to 150 mA
Source impedance:	100 Ohm to 1 M
Test waveforms:	Sine, square, triangle, ramp, pulse
Waveform modes:	V-I, V-T, I-T
Waveform display:	Multi-plot with single waveform zoom
Waveform comparison:	Automatic comparison algorithm for good and bad boards using live probes or disk
V-I comparison tolerance:	50 mV to 500 mV with 50 mV resolution
Package support:	DIL, SOIC, PLCC, QFP and variants with MultiProbes
Pulse output:	Positive, negative or bipolar for thyristors/triacs
Pulse amplitude:	Adjustable to +/-10 V
Calibration:	Can be calibrated by user

Analogue functional test capability

Number of I/O channels:	24 independent + 3 special discrete channels
Driver voltage:	-12 V to +12 V
Driver voltage resolution:	10 bit
Driver output current:	200 mA max sink or source
Driver states:	Voltage source, current source, off
Discrete source current:	10 μ A - 150 mA. (driving a load returned to 0 V)
Driver source impedance:	34 Ohm (34 Ohm, 1 k or 10 k on discrete channels)
Sensor input voltage:	+/- 24 V
Sensor voltage protection:	+/- 50 V
Sensor input impedance:	2 M
Sensor voltage resolution:	12 bit
Restrict voltage:	-10 V to +10 V
Restrict voltage resolution:	8 bit
Sensor current measurement:	1 mA to 150 mA (10 nA to 150 mA on discrete channels)
Sensor current resolution:	12 bit
Sensor current input impedance:	50 Ohm (50 Ohm, 1 k, 10 k or 1 M on discrete channels)
Short detection threshold:	<4 Ohm
Link detection threshold:	<10 Ohm
Test modes:	Single, unconditional loop, pass loop, fail loop
Test clip positioning:	Automatically adjusts for clip orientation
Circuit compensation:	Automatically modifies test for IC/PCB connections
Test trace:	Test waveforms and voltages displayed
Test analysis:	Displays test parameters such as gain, hfe, feedback
IC test capability:	Op-amps, comparators, DACs, ADCs, switches and special function analogue ICs in-circuit.
Discrete test capability:	Transistors, FETs, thyristors, triacs in- or out-of-circuit
IC test libraries:	Analogue, discrete, package, user
Result comparison:	Results can be saved for good/bad board comparison
Package support:	DIL, SOIC, PLCC and variants with MultiProbe kits
SLIM test programming:	Structured programming language for library additions

Other specifications

Electrical input:	(typical) +12 V, 1 A(max) (typical) -5 V, 750 mA (typical) -12 V, 100 mA
Dimensions:	147 x 202 x 42 mm
Weight:	1 kg

Accessories

Standard	1 x SMD test tweezer set and adapters 1 x 24 way test clip and cable assembly 1 x Blue V-I probes and adapter 1 x Yellow V-I probes and adapter 2 x Pulse leads 2 x Ground leads 3 x Discrete leads
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Options

Internal fitting	PCI interface
External fitting	MultiLink case (cost option) with serial or parallel connection External case (cost option) which can hold up to 4 SYSTEM 8 modules.

The ABI development team strive continually to improve their products for the benefit of the customer. The specification of current products may therefore vary from that described in this brochure.



ABI Electronics Ltd

Dodworth Business Park
Barnsley S75 3SP
South Yorkshire
United Kingdom

Tel: +44 (0) 1226 207420
Fax: +44 (0) 1226 207620
www.abielectronics.co.uk

64 channel Board Fault Locator Module

Digital IC test capability

Number of I/O channels:	64-256
Number of guard outputs:	4 or 8
Live comparison:	64 x 2, 128 x 2 with additional modules
Drive output voltage:	TTL/CMOS compatible
Drive output current:	Device dependent Typical H-L 80mA @ 0.6V Typical L-H 200mA @ 2V Max. 400mA
Drive slew rate:	>100V/ μ s
Receive input:	+/-10V
Input impedance:	10k
Termination:	Programmable for tri-state/open collector
Drive states:	Low, high, tri-state
Over voltage protection:	<0.5V, >5.5V
Test time:	Dependent on device
Circuit modes:	In-circuit. Out-of-circuit (with adapter)

Power supply for board under test

Automatic power supply:	1 x 5V @ 5A fixed (2 x 5V @ 5A fixed for 128 channels)
Over voltage protection:	7V
Short circuit current:	7A

Test modes

Single:	Single test
Loop:	Unconditional, loop while good, loop while bad
Auto:	Find tightest valid thresholds

Test thresholds

Resolution:	100mV
Low levels:	TTL 0.1V to 1.1V CMOS 0.1V to 1.5V
Switching levels:	TTL 1.0V to 2.3V CMOS 1.0V to 3.0V
High levels:	TTL 1.9V to 4.9V CMOS 1.9V to 4.9V
Swept low levels:	TTL 0.1V to 1.1V CMOS 0.1V to 1.5V
Swept switching levels:	TTL 1.2V CMOS 2.5V
Swept high levels:	TTL 1.9V to 4.9V CMOS 1.9V to 4.9V

Test types

Truth table (functional):	Library based functional test
Connections (MDA):	Short circuit detection Floating input detection Open circuit detection Linked pin detection
Voltage:	Resolution 10mV Range +/-10V Logic state detection
VI:	Number of channels 64 - 256 Sweep ranges -10V to +10V (programmable) Maximum test current 1mA Multi-plot with single waveform zoom
Thermal:	Indication of pin temperature

Test libraries

Library classes:	TTL 54/74 logic, CMOS, Memory, Interface, LSI, Microprocessor, PAL/EPLD, Linear, Package, Special and user defined
Package types:	DIL, SOIC, PLCC, QFP

Accessories

Standard	Automatic out-of-circuit adapter 1 x 64 way test cable 1 x 64 way split test cable 1 x V-I probe assembly 1 x BDO cable 1 x Short locator cable 1 x Ground clip 1 x PSU lead set
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Options

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External fitting	MultiLink case (cost option) with serial or parallel connection External case (cost option) which can hold up to 4 SYSTEM 8 modules.

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Variable Power Supply Module

Logic Supply

Low voltage output for digital circuits

Voltage	2.5V to 6V programmable
Resolution	0.01V
Over voltage	3V to 7V programmable threshold
Resolution	0.1V
Current	5A
Short circuit current	7A
Short circuit duration	indefinite (auto recovery)
Load regulation	0.5% (20% to 80% load change)
Ripple voltage	80mV pk-pk max

Variable Positive Supply

Positive voltage output for analogue circuits

Voltage	0 to +24V programmable
Resolution	0.01V
Current	1.5A max
Over current limit	50mA to 1.5A programmable threshold
Short circuit current	1.5A
Short circuit duration	indefinite (auto recovery)
Load regulation	0.1% (20% to 80% load change)
Ripple voltage	50mV pk-pk max

Variable Negative Supply

Negative voltage output for analogue circuits

Voltage	0 to -24V programmable
Resolution	0.01V
Current	1.5A max
Over current limit	50mA to 1.5A programmable threshold
Short circuit current	1.5A
Short circuit duration	indefinite (auto recovery)
Load regulation	0.1% (20% to 80% load change)
Ripple voltage	50mV pk-pk max

Physical data

Weight	5kg
Size	295 x 247 x 65mm
Power rating	150W max
Connectors and cables	power cable, parallel interface cable, logic and ground cables, +V and -V cables
PC requirements	(Minimum) System capable of running Windows 95/98 with at least 32MB of RAM and 20MB of free hard disk space ECP/EPP capable parallel port or 16550 serial port

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