

VACUUM INTERFACE

FOR HIGH VOLUME, LOW MIX PCB PRODUCTION



## SIGMA

MTS 300



- > Up to 3,456 pins
- > Vacuum interface also available in cable
- > Short measurement paths
- > Analog and digital in-circuit test (low voltage technology), functional test, end-of-line test, Boundary Scan
- > 1:1 non multiplexed pin architecture
- > Emulation of existing fixtures and test programs
- > Available as Lambda Edition for real parallel testing



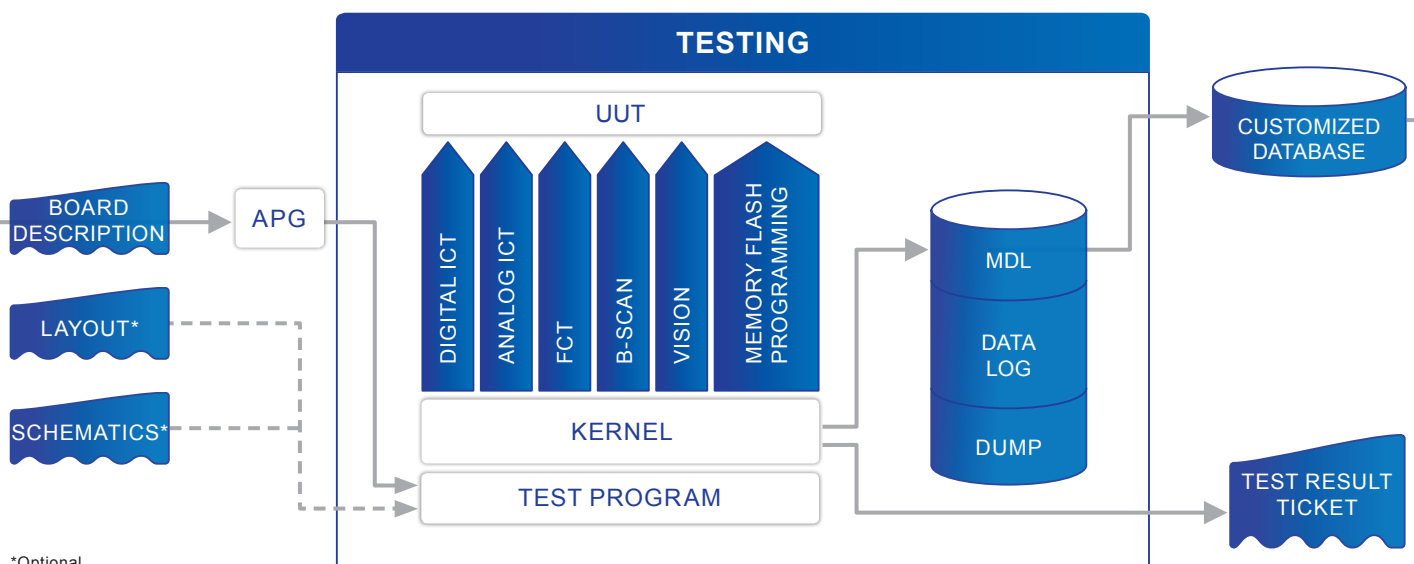
The Sigma is an extremely powerful system with a high throughput. With up to 1,000 measurements per second, it is one of the fastest test systems on the market.

TEST SYSTEM SOFTWARE



**CITE**

COMPUTER INTEGRATED  
TEST ENVIRONMENT





## SIGMA HARDWARE BASE SYSTEM

Footprint	
930 mm width x 830 mm height x 900 mm depth	
Controller	
Industrial standard PC	
ICT measurements (AMU)	
Quadrature measurement bridge	
Guard ratio	1:1000
3 voltage sources	(AC/DC) 0 - 100 V
Voltage frequency	DC to 100 kHz
Current	Up to 250 mA
Measurement	
Voltage	(AC/DC) up to 100 V
Current	(AC/DC) up to 100 mA
Resistors	0.1 Ohm - 100 MOhm
Capacitors	1 pF to 100 mF
Inductors	10 µH to 10 H
Kelvin measurement	
Diode and zener forward and backward direction up to 100 V	
Transistor, optocoupler etc. active test	
6-wire reed relay matrix (MUX)	

## ANALOG OR HYBRID SYSTEM

Analog ICT	
Up to 3456 channels in steps of 128	
Hybrid digital driver/sensors	
Up to 3456 in steps of 64/128	
Input/output	+5 V/±10 V in 20 mV resolution
Max. current	±500 mA (backdriving) or 50 mA for static D/S operation
Speed	Up to 10 MHz pattern rate
Tristate-capable	
Automatic driver-monitoring	
Logic levels programmable per pin	

## HARDWARE OPTIONS

Programmable power supplies (UPC)	
Voltage resolution	2.2 mV
Accuracy	20 mV
Current limit resolution	2.5 mA
Accuracy	±50 mA
Short-circuit monitoring via software and hardware	
Software-controlled on/off switching	
Separate force and sense lines	
Thermal shutdown	
UPC02-09	9 V / 10 A
UPC02-24	24 V / 5 A
UPC02-45	45 V / 3.5 A
Frequency/time measurement card (MTC)	
Up to 100 MHz	
DC/AC source and measurement card (MSM)	
Additional precise U/I signal sources (floating)	
Additional precise U/I measurement (floating)	
FailSim	
Verification of test program quality	
External modules	
For example IEEE, PXI, USB, RS232, CAN, LIN and much more	

## CITE TEST SYSTEM SOFTWARE (INCLUDED)

Program development	
Automatic Program Generator (APG) generates test programs using the board description (manual or automatical generation).	
Library for analog and digital IC's.	
Functional test enhancements using Menu Aided Programming (MAP).	
Test program code language based on Visual Basic (VB) 6, VB .NET and/or table based GenFast.	
Translation of test programs from common test systems and all MTS test systems.	
Recording test results (failing data and/or complete measurement results) to use for repair and traceability.	
Program debugging	
Powerful debugging using table based GenFast (mainly for analog ICT) and/or all functionality provided by Visual Basic 6 and VB .NET.	
Single step mode execution available.	
Debug window for displaying measurement results.	
Possibility to make changes to all command parameters and directly seeing their impact.	
Layout viewer, schematics viewer (optional), highlighting failing component to support debug work.	
Selftest	
Checks the hardware of test system and localizes faulty modules (diagnosis down to relay-level).	
QCAM (test stability report)	
Reports the stability and quality of a test program. Makes debugging easy and efficient.	

## SOFTWARE OPTIONS

C-LINK Design to Manufacturing Software	
Automatic generation of fixture-data, net lists, parts lists, layout data etc.	
QMAN Quality Management Software	
Paperless repair, statistics, quality data management, fault catalogue.	
Boundary Scan	
Boundary Scan software integration: development, execution and diagnostics.	
LabView and TestStand	
Link to National Instruments LabView or TestStand available.	

## Company

Digitaltest is a strong partner of the electronics industry and has more than 35 years of experience in development, implementation and support of automated test equipment (ATE) for printed circuit boards. The complete product portfolio of the global company includes hardware technology, software to automate the production and evaluate the production process with its quality management software.

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