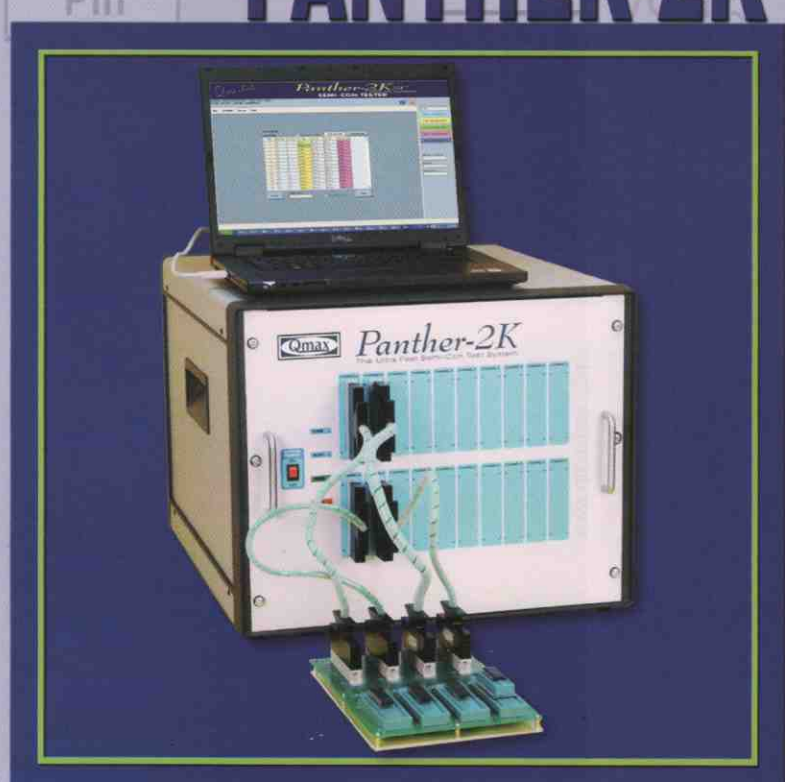


# PANTHER-2K SC



## ULTRA FAST SEMI-CON TESTER

### Panther-2K SC Applications

Detection of all misalignment, disorientation faults in wire bonding industry.

OQA check in semi-conductor manufacturing industry.

QA check in BGA re-balling / rework industry.

Counterfeit IC detector (electronic sentry) and IQA check in all semi-conductor IC assembly industry.

### Panther-2K SC Key Features

- Test open / short / leaks / diode drops for various Semi-conductor IC in one single test
- High pin test rate
- 4 independently programmable compare thresholds providing 5 band results
- Automatic new program generation using "Learn from known unit" mode
- Real time hardware compare for PASS/FAIL results, enables ultra fast testing
- State-of-the-art hardware, field expandable from 256 channels up to 2048 channels
- Optional Multi site testing enables multi device testing
- Can be interfaced to any kind of test fixtures and IC packages
- 16 opto isolated digital i/os for handler interface enables physical binning and adds to the benefits of automated testing
- Windows based GUI programming
- USB2.0 interface to host PC enables quick installation, setup and testing
- Password protection for Engineers, Supervisors and Operator level

# Panther-2K SC

## Ultra Fast Semi-Con Test System

The Qmax **Panther-2K SC** Test System is mainly designed to test high volume, low to high pin count consumer semiconductor ICs for its assembly line wire bonding faults. The system contains analog instrumentation along with Mux cards integrated into a test station.

**Panther-2K SC** force current measure voltage (FCMV) mode combined with various testing techniques enables testing semicon IC for its open, short, leak and diode drops with a min test time of 1 $\mu$ s per pin combination. Typical test time for a 500 pin BGA device in both forward and reverse bias conditions with 5 band comparator is estimated to be about 0.25sec.

Each Mux card hold 256 channels with 4-wire measurement capabilities and a max of 8 Mux cards can be used, expanding to

2048 channels. The 4-wire measurement using fast analog switches provide accurate voltage measurements.

**Panther-2K SC's** learn from known good device and test against target device technique drastically reduces time required to develop test program.

**Panther-2K SC** is interfaced to the host PC through 32-Bit PCI interface card or USB2.0 interface. The operating system is WindowsXP or Vista. Software is fully user friendly with GUI programming.

An optional hardware can be integrated to expand **Panther-2K SC** to perform VI-Curve trace, RLC measurement, RAM based PMU for FVMC or FCMV, 4 quadrant operations.

## S P E C I F I C A T I O N S

### System configuration

Operating System	Windows XP, Vista
Test Programming	GUI Environment
Mux Slots	8
Mother Board and Sequencer	1
Channels per Mux Card	256
Max Channels	2048
Standard Interface	USB2.0 or 32 bit PCI

### Instrumentations Details

Clamp Voltage	-2V to 7.5V with 14 bit resolution of FSR. Optional -10V to +10V
Current Source	$\pm 5$ mA in 0.6 $\mu$ A step $\pm 16$ mA in 1.9 $\mu$ A step $\pm 50$ mA in 6 $\mu$ A step
Measurement Method	4 wire Kelvin
Number of Comparators	4
Compare Threshold	4 Independent Thresholds. Each thresholds can be set between 0 to 7.5V with 14bit resolution of FSR. Optional -10V to +10V
Test Modes	Five Modes (SSM, FQSM, 1/2 QSM, Fref, RAM)
Programmable Test time	From 1 $\mu$ s to 256 $\mu$ s in 1 $\mu$ s Steps
Wait States	From 0 to 255 wait states programmable for each test combination independently.
Drive Ram	24 bits X 1 Meg – used only in RAM Sequence Test. 8 bits X 1 Meg for 8 bit wait states
Compare RAM	4 bits X 1 Meg Compare RAM 4 bits X 1 Meg Compare Mask Bit
Acquisition RAM	8 bits X 4 Meg acquisition RAM
Test Results RAM	1024 X 28 bits (24 bit Address and 4 bit fail code)

### Optional

Handler Interface	TTL parallel 16 i/o, freely programmable
PMU	1 Channel 4 quadrant operation with VI Curve tracer and RLC measurement

### General

Power Requirements	110V 60Hz / 230V 50Hz 500VA Max
Operating temperature	25°C $\pm$ 3°C
Weight	35 Kg (Appox )
Dimension	430mm (H) X 510mm (W) X 600mm (D)

Qmax reserves the right to change the system specifications without prior notice. Qmax is the registered trademark of Qmax group. QSM is the innovative VI Signature method developed by Qmax. All trademarks are acknowledged.



— where standards are set; not matched.

For more information

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