

Meet the “K-Series” Family

Your Burn-In & Test Solution for Low to Mid-Power Devices



KES systems Inc, “KESI” is a global Company with almost 40 years of experience offering burn-in & test systems and services to the semiconductor industry. Our newly introduced system is aptly named “KXtreme” or “KX” in short. These are offered in two models,

KX5 and KX10 which meet requirements of low to mid-power ICs with active thermal control in each device to ensure proper stress is applied during the burn-in process.

Our advanced electronics hardware is common in both models of the KX family, which has self-contained PC in each individual slot.

The key difference of the two models is in the configuration of the chambers.

The KX5 has exceptional temperature uniformity with 12.5kW of chamber heat dissipation. The KX10 has cooled air capability to provide a wide variation in heat dissipation of 25kW limit. Each model has two separate chambers to adapt to different specifications and sizes of burn in boards. This versatility with combined innovative features in the system offer extreme flexibility for product changes and high volume production of memory and logic ICs.

KES Systems, Inc.

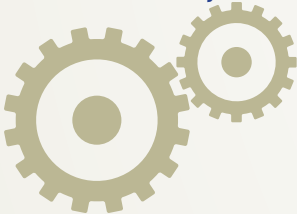


.....
founded in

1987



.....
a subsidiary of



Sunright Limited

.....
6 countries
9



manufacturing sites

.....
2,500 employees



worldwide
.....

KES Systems, Inc. "KESI", located in Tempe, is a worldwide manufacturer of burn-in and test systems. KESI designs and develops innovative systems such as GEN, parallel burn-in and test systems. The K-series is the company's newest range of systems for burn-in and test of low to mid-power devices catering largely to the automotive industry.

"GEN" A Massively Parallel Test System. KESI successfully developed and delivered the first new generation of parallel test and burn-in system known as "GEN" for functional testing of memories in 1996. This marked a significant milestone in our ambitious plan to become the market leader in parallel testing.

This system is linked to our customized network systems known as "KBAS". The "KBAS" is designed as a client-server network and SQL database managing loading/unloading, burn-in, parallel-testing and automation processes which allow customers' tracking from their sites remotely.

The New "K-Series" is a family of burn-in and test system, namely, KX5 and KX10 which are fully adaptable, scalable and configurable to meet highly customized requirements. These systems perform burn-in and functional test of complex devices such as microcontrollers, microprocessors, synchronous SRAM, synchronous DRAM, digital signal processors, flash memory with individual device temperature control.

KESI also provides a wide range of engineered burn-in and test boards, Fastrack™ automatic loaders and unloaders with sorting and lazer inspection capabilities as well as handling systems for burn-in and test applications.

KESI adheres to the prescribed codes of international quality standards to meet the highest level of satisfaction for our world-class customers.

K-Series

KX5

Upgrade burn-in capability without wasting your burn-in board investment

ADAPTABLE

Fits different burn-in board sizes.

SCALABLE

A "PC" is built into every slot providing extreme flexibility in programming.

CONFIGURABLE

Offers a wide range of voltage



KX5 is a burn-in and test system designed for microcontroller with embeded memories. It is the most cost effective solution for 5W devices in high volume production. It addresses burn-in up to 20W for diverse customer requirements. It can be configured to provide 2 independent temperature zones with individual device temperature control option for engineering applications. A "PC" is built into every slot and offers 6 programmable 48V power supplies and an optional higher power programmable 5V supplies up to 60Amp. The system is designed with 16 unique clock channels and 304 unique I/O.

The system with an easy GEN Test Development kit, offers a wide range of voltages exclusively designed for burn-in of automotive devices. It also provides the choice of an advanced centralized software management system to ensure high process quality and device reliability.

- Microcontrollers
- Hybrid Digital/Mixed Signal
- Microprocessor
- Synchronous SRAM
- Digital Signal Processors
- Graphics Controllers
- Flash Memory
- Synchronous DRAM

SYSTEM SPECIFICATIONS

SYSTEM SUMMARY

Overall Dimensions	2.3 m (L) x 1.4 m (W) x 2.4 m (H)
Number of Zones	2 independent zones
Number of Slots	48 (24 per zone)
Slot Pitch	50 mm

THERMAL PERFORMANCE

Chamber Setpoint Temperature	Ambient to 125°C
Power Dissipation	12.5 kW @ 125°C
Setpoint Resolution	1°C
Temperature Gradient	-0/+10°C @ maximum heat dissipation
Airflow velocity	2.5 M/S
Heater	13.5 kW
Chamber Temperature Monitoring	8 Thermocouples per zone

TEST ELECTRONICS PER SLOT (56 SLOTS TOTAL)

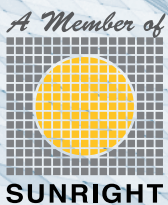
Maximum Vector Depth	512 Mb per channel
Number of Channels	304 channels (drive high, drive low, expect high, expect low, tri-state)
Maximum Cycle Speed	25 MHz
Clock Channels	Quantity 16 1 nanosecond resolution 5 nanoseconds accuracy
Standard Power Supplies	Quantity 6 1 to 48V 25 mV resolution 0 - 8A @ 5V / 15A @ 1.2V Voltage/Current Monitoring (higher voltages by request)

OPTIONAL: HIGH CURRENT

Power Supplies	Quantity 6 0.6V to 5.5V 1 mV resolution 0 - 60A Voltage/Current Monitoring
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SOFTWARE SPECIFICATIONS

Operating System	Microsoft Windows 10
System Operations Software	GEN User Interface
Development Software	GEN Test Development Kit



KX10

Extreme Flexibility & Versatility with individual temperature control

COST EFFECTIVE

“Built-In” Device Thermal Management

IMPROVES YIELD

Reduces Costly Expense of
Thermal Runaway

EXCEPTIONAL PERFORMANCE

Resources to Test and Burn-in Most
Demanding Devices



Similar to the KX5 electronic hardware, the KX10 is the most cost effective solution for 10W devices in high volume production using sockets with individual device temperature control.

It addresses burn-in up to 30W with high reliability and uptime. The chamber is configured to provide 2 independent temperature zones with cooled air capability. The system, with an easy to use GEN Test Development kit, offers a wide range of voltages exclusively designed for burn-in of automotive devices. It also provides the choice of an advance centralized software management system to ensure high process quality and device reliability.

- Microcontrollers
- Hybrid Digital/Mixed Signal
- Microprocessor
- Synchronous SRAM
- Digital Signal Processors
- Graphics Controllers
- Flash Memory
- Synchronous DRAM

SYSTEM SPECIFICATIONS

SYSTEM SUMMARY

Overall Dimension	2.3 m (L) x 1.4 m (W) x 2.4 m (H)
Chamber size	550 mm (L) x 700 mm (W) x 1530.6 mm (H)
Number of Zones	2 independent zones
Number of Slots	48 (24 per zone)
Slot Pitch	50 mm

THERMAL PERFORMANCE (Chilled Air for use with individual device temperature control)

Chamber Setpoint Temperature	20°C to 125°C
Power Dissipation	25 kW @ 70°C (12.5 kW x 2)
Setpoint Resolution	1°C
Temperature Gradient	-0/+10°C @ maximum heat dissipation
Airflow velocity	Typ 2.5 m/sec
Heater	9 kW x 2
Chamber Temperature Monitoring	8 Thermocouples per zone

FEATURE

Maximum Cycle Speed	25 MHz
Clock Channels	Quantity 16 1 nanosecond resolution 5 nanoseconds accuracy
Chilled Water	Yes
Individual DUT Temp Management	+/- 1°C < 5W / +/- 5°C @ 20W
Number of DUT Power Supplies	48 - 0-5.5V 15A 6 Hi-V 1-48V 8A @ 5V / 15A @ 1.2V
DUT I/V Monitoring	Sampling (suitable for logging)
Voltage Control	Real-time Vector Controlled
I/O	16 Clocks 304 I/O
Temp Ramp Up	18 mins (40°C - 125°C)
Temp Ramp Down	15 mins (125°C - 25°C)

SOFTWARE SPECIFICATIONS

Operating System	Microsoft Windows10
System Operations Software	GEN User Interface
Development Software	GEN Test Development Kit

