

MEMS Test Handler

TESEC
TESEC Corporation



ULTRA P

MEMS TEST HANDLER

High Volume Manufacturing Stimulus and Test for Inertial MEMS Devices

The ULTRA P is a high performance production handler that provides thermal conditioning, full 6 DOF mechanical stimulus and an electrical ATE signal path for testing Micro-Electro-Mechanical Systems (MEMS) Accelerometers and Gyroscopes.

The system is intended for high volume device manufacturing test, allowing up to 96 devices to be tested in parallel, but may also be used for verification, validation, and device engineering tasks.

The ULTRA P is a revolutionary step forward in device handling, thermal, mechanical stimulus and electrical signal performance.

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Accelerating MEMS Test Standards

- High UPH & Parallel Test Count
- Thermal Accuracy / Stability
- Aerospace Grade Rate / Position
- Signal Path Fidelity / Bandwidth
- Quick & Easy Change Kits

Key Test Features

- Full 6 DOF Test Capability
- Magnetic Test Option
- Packages Types: LGA, BGA, CSP
- Package Sizes: 2x2mm or larger
- UPH: 19,200 at Ambient or Temp.

ULTRA P Performance Specifications

ULTRA P	Feature	Details	
Input / Output	JEDEC Tray	16X Pick & Place Input / Output	
Carrier	Size	136mm x 136mm x 5mm 5.35" x 5.35" x 0.20"	
	Device Pockets	2 to 96	
Thermal Chamber	Temp Range	-40°C to +125°C, standard -55°C to +130°C, option	
	Resolution	0.1°C	
	Accuracy	±1°C	
	Stability	±0.1°C	
	Heat Source	Electric Coil, 5200 watts	
	Cold Source	LN2, 20-40 PSI	
	Temp Control	PID Controller	
Temp Measure	User and Chamber Sensors		
Rate Stimulus	Primary Axis	-360° to +360°	
	Secondary Axis	0° and +90°	
	Third Axis	0° and +90°	
	Constant Mode:	Acceleration	4,000 ⁰ /Sec ²
	Rate (Velocity) Range	.0005 ⁰ /Sec ² to 2000 ⁰ /Sec ²	
	Rate Accuracy	±0.01% of programmed value	
	Repeatability	±5 Arc Seconds (.001°)	
	Accuracy	±15 Arc Seconds (.005°)	
	Sinusoidal :	Speed/Velocity Range	10 to 500 ⁰ / second
	Freq Range	1 to 20Hz	
DUT IO	Number of Lines	400 standard, 50Ω 800 optional, 50Ω	
IO Signals:	Bandwidth	1.5GHz	