

# ULTRA L MEMS TEST MODULE

## ULTRA L

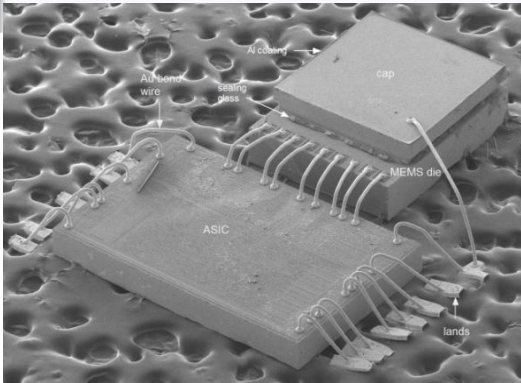
### For Laboratory / Engineering Stimulus and Test of Inertial MEMS Devices

The ULTRA L is a high performance “Lab” system that provides thermal conditioning, mechanical stimulus and an electrical ATE signal path for testing Micro-Electro-Mechanical Systems (MEMS) Accelerometers and Gyroscopes.

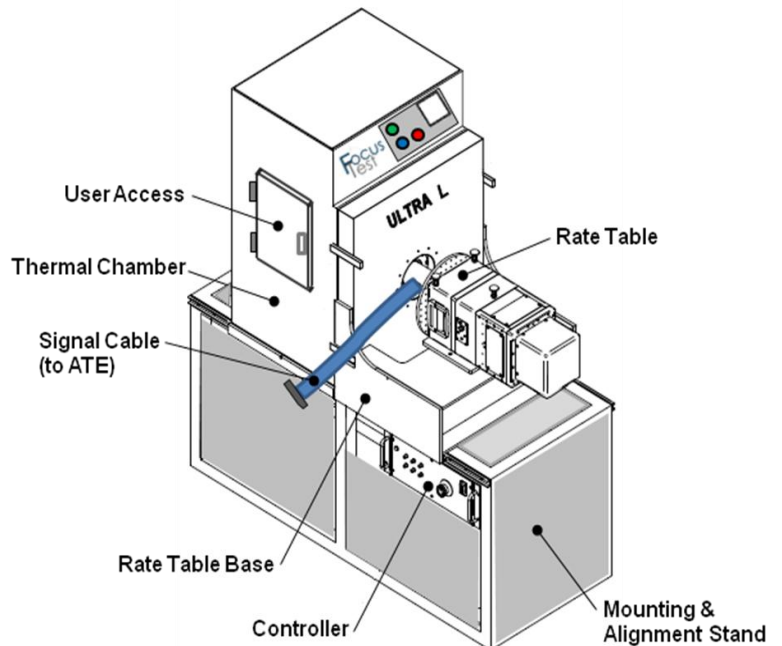
The system is intended for device verification, validation, and device engineering tasks, eliminating the need to use expensive, high volume manufacturing equipment to perform these tasks.

The system allows up to 96 devices to be tested in parallel.

The ULTRA L provides 100% fixture, stimulus and electrical interface compatibility with the ULTRA P high volume manufacturing system.



Key Features	Details
Parallel Test	Up to 96 devices
Thermal Capability	-40°C to +125°C (Standard) -55°C to +130°C (Option)
Positional Stimulus	All Axis (X, Y, Z): -360° to +360°
ATE Interface	800 IO Signal Lines



# ULTRA L

## Performance Specifications

### Setting MEMS Test Standards in:

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

ULTRA L	Feature	Details	
<b>Carrier</b>	Size	136mm x 136mm x 5mm 5.35" x 5.35" x 0.20"	
	Device Pockets	2 to 96	
<b>Thermal Chamber</b>	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		
<b>Rate Stimulus</b>	Primary Axis	-360° to +360°	
	Secondary Axis	-360° to +360°	
	Third Axis	-360° to +360°	
	Constant Mode:	Acceleration	0.256°/Sec <sup>2</sup> to 4,000°/Sec <sup>2</sup>
		Rate Range	.0005°/Sec to 1000°/Sec
		Rate Accuracy	±0.01% of programmed value
	Sinusoidal:	Repeatability	±5 Arc Seconds (.001°)
		Position Accuracy	±15 Arc Seconds (.005°)
		Speed Range	10 to 1,000° / second
	Freq Range	1 to 20Hz	
<b>DUT IO</b>	Number of Lines	800 IO, 50Ω	
IO Signals:	Bandwidth	1.0GHz	

### Test Features

- Full 6 DOF Test Capability
- Accelerometer, 3 Axis
- Gyroscope, 3 Axis
- Magnetic Test Option
- Packages: LGA, BGA, CSP
- Sizes: 2x2mm or larger

