



akrometrix

Thermal Warpage & Strain Metrology

AXP 2.0 Thermal Warpage System

For Fast Thermal Surface Topography

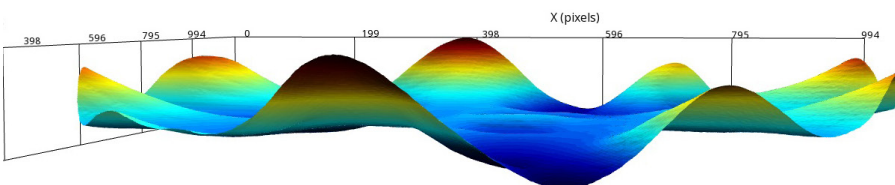
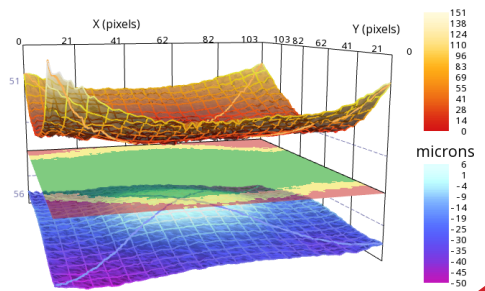
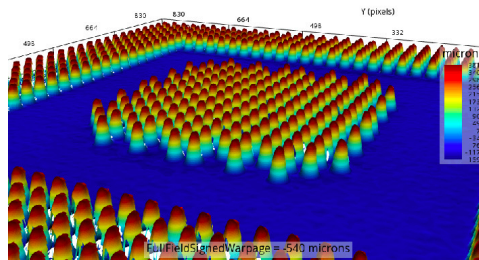
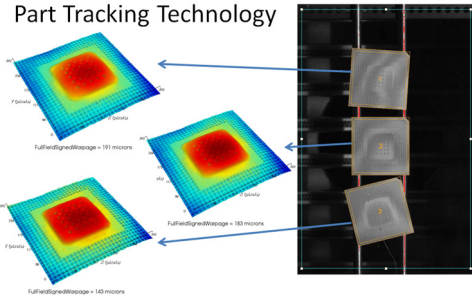
- Accommodates substrates up to 375mm x 375mm
- **Field of View** Measurement in 2 seconds
- **With z resolution** down to 0.85 microns
- **Runs on the Akrometrix Studio Software Suite**
- **Optional Capabilities:**
 - DFP2
 - Subroom to -55°C
 - DIC for CTE Capability



ON VIRTUALLY ANY SUBSTRATE

- PCBs
- Panels
- Wafers
- Stacked Die
- Individual Die
- Populated Boards
- Wafers on Film Frame
- Components
- Fan out Wafers

Part Tracking Technology



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AXP 2.0 Technical Specifications

	AXP Base Platform, 100LPI Grating	200LPI Grating	300LPI Grating
Vision Measurement Technology	Shadow Moiré	Shadow Moiré	Shadow Moiré
Maximum Field of View (FOV) (mm)	375x375	375x375	250x250
Minimum Field of View (FOV) (mm)	348x260	232x173	116x87
Maximum Sample Size (mm)	400x400	400x400	250x250
Minimum Sample Size (mm)	6x6	4x4	2x2
Maximum Measured Surface Coplanarity	4000 microns	1000 microns	250 microns
Resolution, Z-axis (vertical displacement)	2.5 microns	1.25 microns	0.85 microns
Accuracy, Z-axis (vertical displacement)	2.5 microns / 3%	1.25 microns/ 3%	0.85 microns/ 3%
Resolution, XY-axes (horizontal displacement)	N/A	N/A	N/A
Strain Resolution	N/A	N/A	N/A
Maximum Measurement Points per Acquisition	1,447,680	1,447,680	1,447,680
Maximum Measurement Density (points per mm ²)	16	64	144
Minimum Measurement Density (points per mm ²)	7	7	18
Thermal Processing Technology	Radiant IR	Radiant IR	Radiant IR
Maximum Heating Rate, 50°C to 250°C (°C/s)*	3.5	3.5	3.5
Maximum Cooling Rate, 250°C to 125°C (°C/sec)*	2.25	2.25	2.25
Maximum Temperature (°C)	300	300	300
Cycle Time 25°C to 250°C to 25°C (minutes)*	10	10	10
Maximum Thermal Profiles	Unlimited	Unlimited	Unlimited
Maximum Thermal Cycles Time	Unlimited	Unlimited	Unlimited
Maximum Acquisitions per Cycle	Unlimited	Unlimited	Unlimited
Automated Data Collection	yes	yes	yes
Batch Data Analysis	yes	yes	yes
Software	Akrometrix Studio 8.1 or later	Akrometrix Studio 8.1 or later	Akrometrix Studio 8.1 or later
Data Export Formats	.dat, .txt, .png	.dat, .txt, .png	.dat, .txt, .png
Sample Set-up time, typical	2 minutes	2 minutes	2 minutes
Sample preparation method, typical	none	white paint	white paint
Data Acquisition (Measurement) Time, approximate	2 seconds	2 seconds	2 seconds
Data Analysis Time per Acquisition, approximate	2 seconds	2 seconds	2 seconds
Approximate Length, Width, Height (mm)	1280x970x1780	1280x970x1780	1280x970x1780
Approximate Weight (kg)	575	575	575
Electrical Requirements	220VAC, 3 phase, 45A	220VAC, 3 phase, 45A	220VAC, 3 phase, 45A
Air Requirements	N/A	N/A	N/A
Other Utilities	exhaust 14286 lpm	exhaust 14286 lpm	exhaust 14286 lpm

*Heating/cooling rates and cycle times based on 27x27x1.4mm substrates sample



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