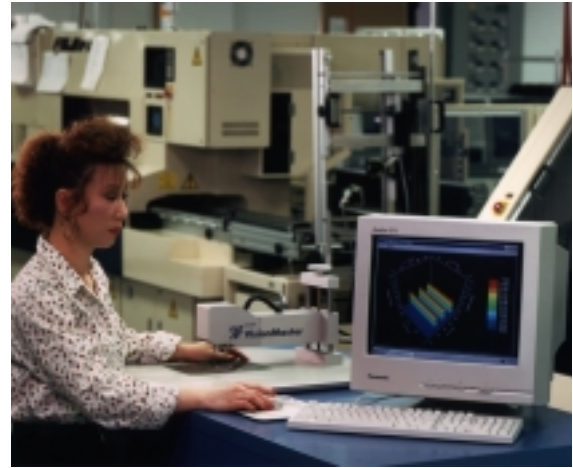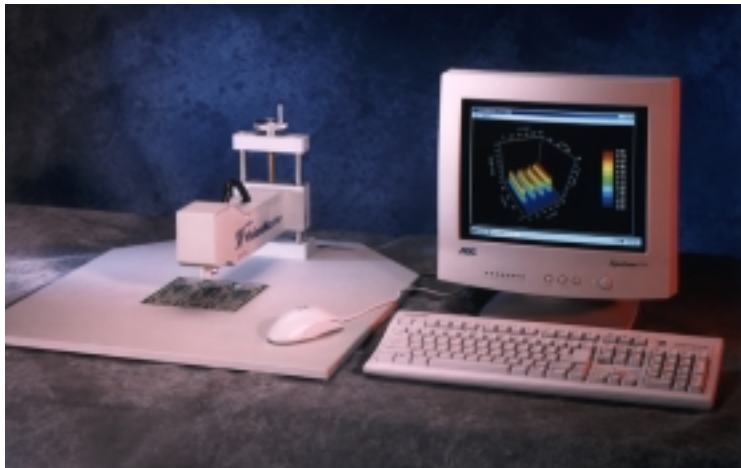# VisionMaster®

VisionMaster is sophisticated, 3-dimensional measurement technology coupled with an intuitive Windows® user interface and packaged in a rugged, bench-top system designed for the electronics production floor. With only a few minutes of training, an operator can perform accurate, 3-D measurements of solder paste pads, ball grid arrays and many other PCB features. VisionMaster's completely automatic measurement process eliminates operator errors and offers excellent measurement repeatability. This makes VisionMaster an exceptional value for the electronics manufacturer concerned with improving production yields.

At last, a 3-D measurement system that's both affordable and easy to use!

VisionMaster automatically calculates volume and height on the objects or features selected by the operator. Data collected by the system can be stored for further processing, downloaded, or analyzed by the system's optional SPC software. In addition, colorful 3-D profiles of the measurement area – suitable for formal reports – can be displayed on screen with just a few clicks of the mouse.

Automatic 3-D Measurement

Intuitive Windows® Interface

System Features

- Fully automated volume & height measurements
- Full color 3-D profiles of measured objects or features
- Windows® user Interface that's easy to learn and use
- Accurate and repeatable measurements regardless of substrate/feature color and reflectivity
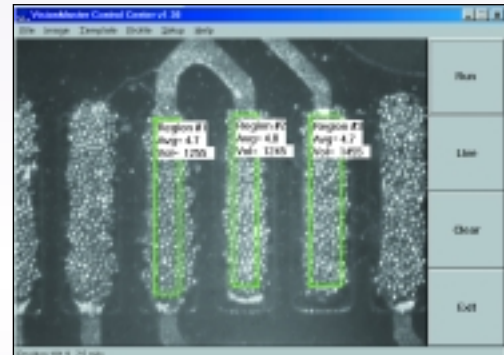- One-year, end-user warranty including technical support

System Includes

- VisionMaster 3-D camera assembly
- 400 MHz CPU and SVGA monitor
- Large work surface
- Fiberoptic light source
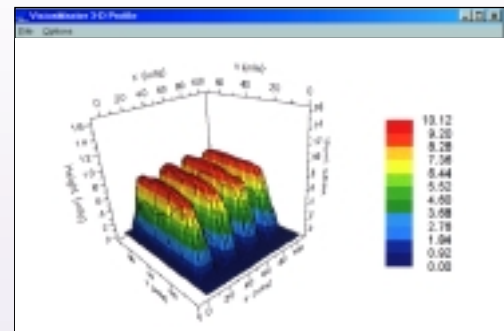- Hardware/software reference and online help

Options

- Verax Systems®SPC Software Suite (LAN Ready)
- NIST traceable standard
- Extended warranty options
- System and SPC software training at your facility

Quality 3-D images in seconds

VisionMaster®

The optional Verax Systems® SPC Software is a powerful tool that helps operators control a production process. Data collected by VisionMaster is instantly analyzed by the Verax Systems SPC Software. Calculations crucial to understanding manufacturing performance are reported, including:

- X-bar and range
- X-bar and sigma
- X-bar and moving range
- Histogram with normal and non-normal (Johnson) curves
- P chart, np chart, c chart and u chart
- Pareto, weighted pareto for defects and corrective actions
- Variance and standard deviation
- Skewness, kurtosis and chi-squared for goodness of fit
- Min, max and median values
- Cr, Cp, Cpk and lower Z values

Collect and analyze data automatically

Automated 3-D Measurement

Simply place an object under VisionMaster's 3-D sensor and focus the image. A magnified view can be seen on the system's large computer monitor. Select the measurement and reference areas on the monitor screen using the mouse. Click the "Run" button and within moments VisionMaster's advanced image processing engine calculates characteristics of the highlighted measurement areas including:

- Minimum height
- Maximum height
- Average height (weighted and non-weighted)
- Volume
- Area

Next, select "3-D Profile" and a full color, three-dimensional image of the measurement area appears. With the mouse pointer, grab the image and rotate it to find the perspective you desire. Adjust the aspect ratio of the graph and prepare it to be stored on the system's computer or to be printed.
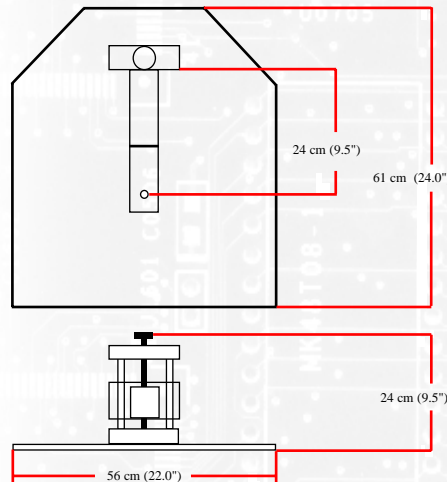
®VisionMaster is a registered trademark of Crescent Technologies, Inc.

System Specifications

Maximum Object Thickness	5.1 cm (2.0")
Standard Work Surface (W × L)	56 cm x 61 cm (22" x 24")
Throat Depth (measurement area to rear support)	24 cm (9.5")
System Computer	400 MHz (or better) - 64 MB RAM
Computer Monitor	44 cm (17") SVGA, 800 x 600 resolution
Electrical Requirements	100-240 VAC, 50-60 Hz, 2.0 Amps
Ambient Operating Temperature	+15° C to +28° C (+60° F to +82°F)
Ambient Operating Humidity	<90% non-condensing
System Weight* (crated)	40 Kg (88 lbs)
System Weight* (un-crated)	20 Kg (44 lbs)

*not including system PC and monitor

Sensor Specifications

Resolution	1.78 µm (0.07 mils)
Measurement Range	0.365 mm (14.4 mils)
Field of View	2.1 mm x 2.8 mm (83 mils x 110 mils)
Integral Video Camera	Solid state video camera
Illumination	Fiberoptic white light

24 cm (9.5")
61 cm (24.0")
24 cm (9.5")
56 cm (22.0")

VisionMaster®