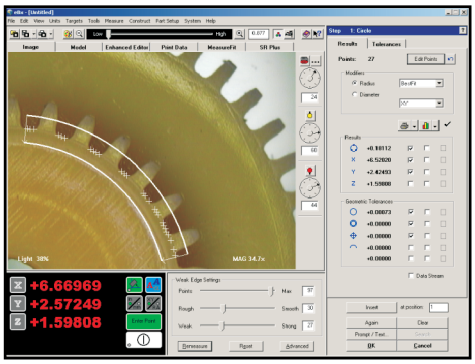
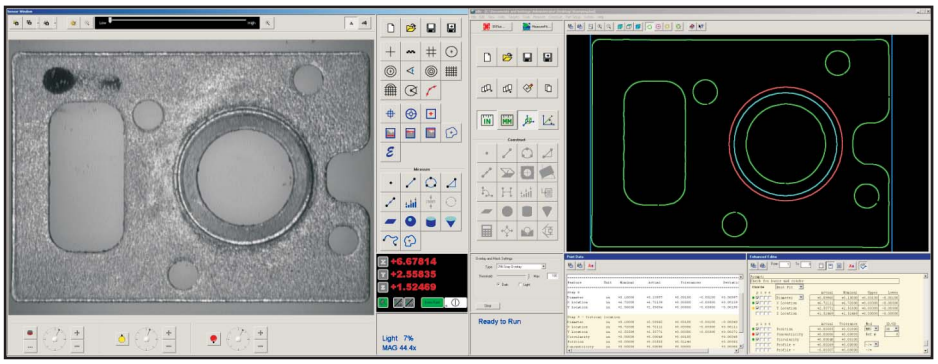
RAM Optical Instrumentation

Measure-X
Metrology Software



Classic Mode



Dual Monitor Mode (DMUI)

Measure-X® metrology software makes measurement easy — *in any environment for any user.*

FEATURES

- **Measure-X metrology software for motorized Sprint™ 3D CNC systems**
- **Three user interfaces. Supports single & dual monitor operation**
- **Three axis measurement capability**
- **Touch screen capability**
- **Interactive editing tools for quick program changes**
- **High level image processing capability**
- **Edge Trace**
- **Autofocus**
- **Centroid**
- **Renishaw® touch probe capable**
- **Calibration routines**
- **Y14.5 compliant measurement**

HIGH PRODUCTIVITY SOFTWARE

Full-featured CNC Measurement Software

Measure-X® metrology software has a full-featured user interface for RAM Optical Instrumentation (RAM) Sprint™ CNC video measurement systems. Measure-X makes it simple to measure parts and create part routines. Designed with an intuitive point & click functionality, Measure-X can be used by inspectors with little or no training, yet is powerful enough to satisfy the demands of an engineer.

The easy to use interface offers a highly productive metrology work environment. The oversized, synchronized *Image*, *Model*, *Program List*, and *Print Data* windows simplify operation and increase productivity.

The on screen display has a large Image window, with real-time video display. A large color-coded Model window with a CAD-like image is synchronized with the Program Editor and Print Data window. All interactive windows are viewable at one time, eliminating window toggling, tabbing, and minimizing.

With a few simple clicks, feature measurement and part construction can be performed. Custom tools eliminate tedious steps when measuring parts with irregular edges & contours.

Measure-X displays measured results during the inspection process in the Print Data window. This window allows step verification while data is collected during the creation and editing of a step in a measurement routine. The measurement results are highlighted with their associated step, eliminating scanning through raw data by eye. Part result data can be saved to a file, exported to any standard database, or printed.

Motion control for stage positioning in the X, Y, and Z axes can be mouse-controlled, similar to using the standard system joystick.

Measure-X integrates easily with optional software specifically designed to enhance your data analysis — custom reports, statistical analysis, and fitting measurement data to CAD files.

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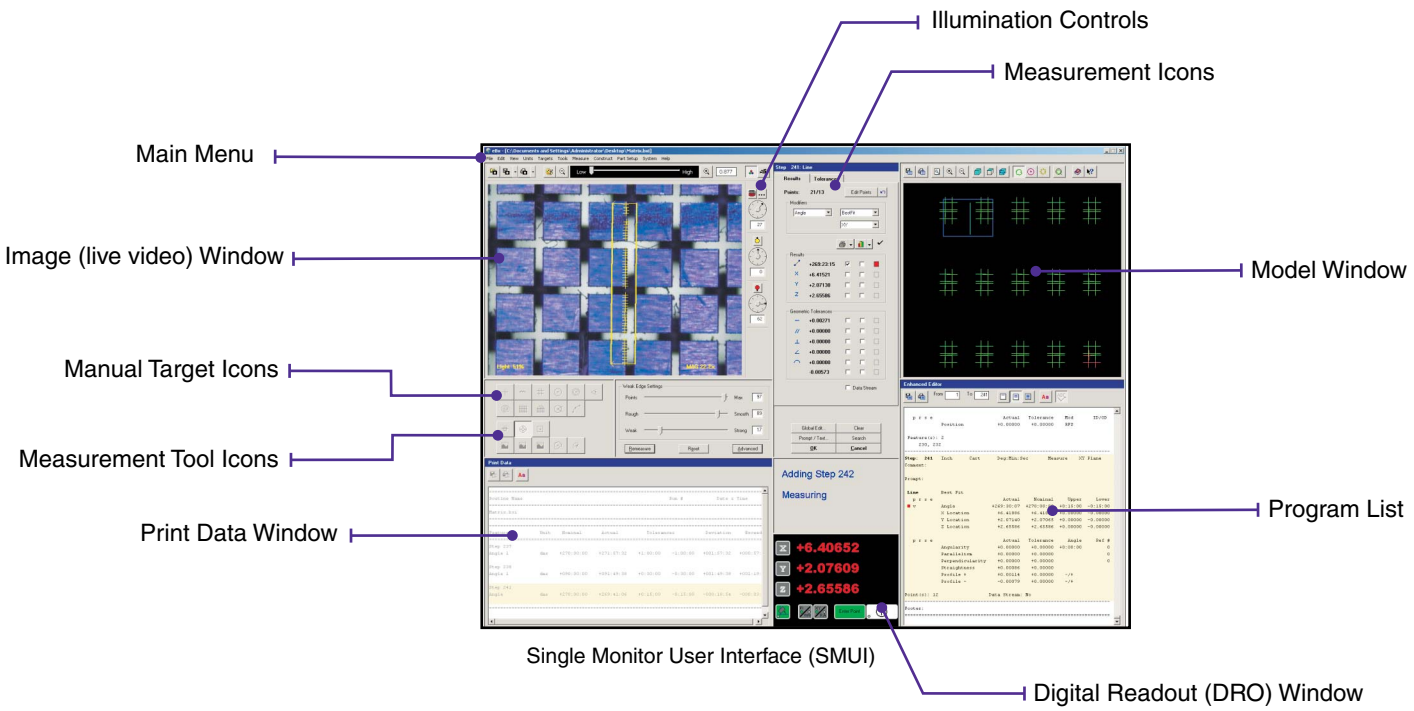
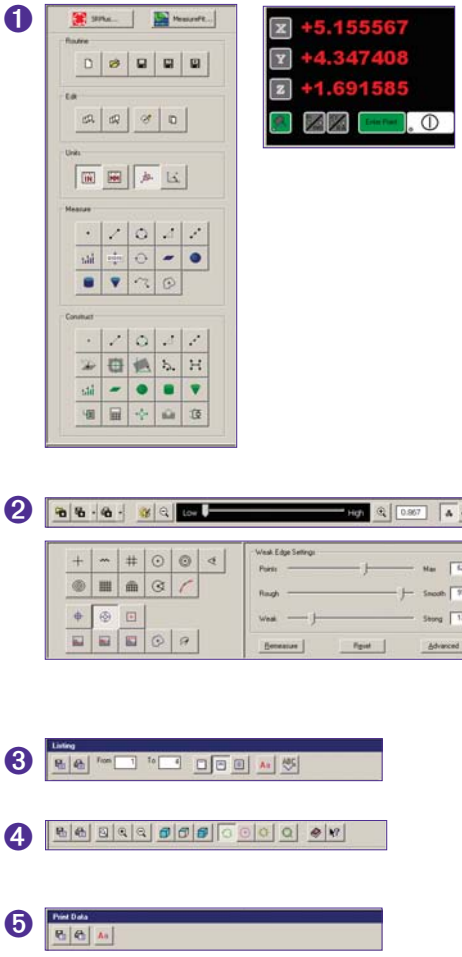


Single Monitor User Interface (SMUI)

Icon & Tool Highlights

Easy & Intuitive Windows Interface



1 Measurement Window

Contains icons for creating, saving and editing routines, 2D and 3D construction, and measurement units. The toolbox also contains VectorLight™ ring light, profile light and coaxial square on illumination controls, and a Digital Readout (DRO) Window. Similar icon toolbars are used in the Image, Model, Program List, and Print Data windows.

2 Image Window

The user can display live video, freeze, save and/or print video images, change magnification, target, and background color. The Manual Target toolbar lets the user select a specific target for manual measurements, and Measurement Tools allow the user to perform automatic measurements. The optional touch probe icon is displayed in this toolbar. Tool & Target Settings Window uses sliders to select the number of points measured, edge quality, and image contrast. Illumination controls mimic the control knobs on the system.

3 List Window

Lets the user save and/or print, display & format steps in the program listing. The editor permits the user to directly edit parameters, nominals, tolerances, point data and desired output for each step in the current routine.

4 Model Window

Displays the current datum, actuals, nominals, and point data in a top view or isometric CAD-like model that reflects the feature measurements.

5 Print Data Window

Allows the current routine results to be saved and/or printed in fonts selected by the user.

Feature Function Highlights

Powerful functions that are accessed by icons in the Measurement toolbar.

Autofocus automatically measures points in the Z axis for height measurements

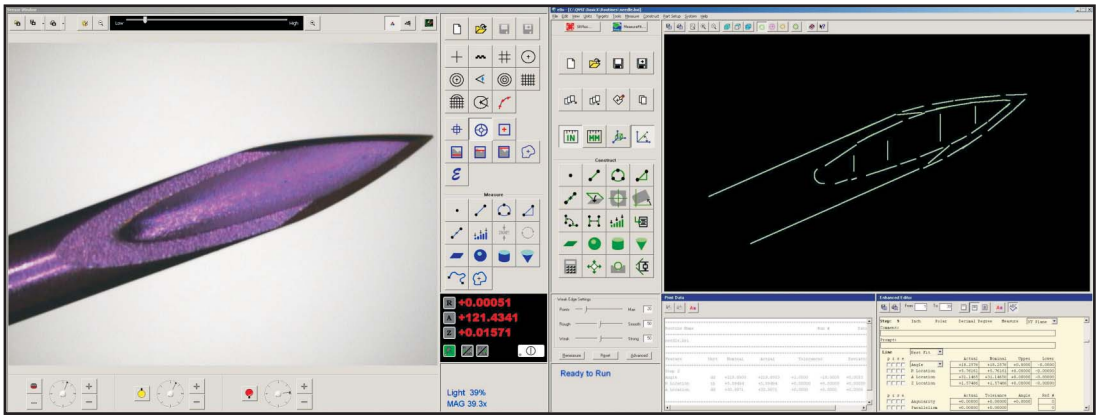
Centroid automatically measures irregular shapes and calculates weighted center, area, and size

Edge Trace allows high density point measurement on any feature or shape

FeatureFinder™ is a smart tool that automatically measures lines, arcs, and circles

Strong Edge is a directional target that searches for edges outside the field of view

Weak Edge targets automatically measure average, minimum, or maximum excursions



Dual Monitor Mode

Monitor Option Highlights

Measure-X supports three user interface layouts: Classic, Single Monitor, and Dual Monitor.

- **Classic User Interface**
  The Classic user interface continues the layout of the popular Basic-X software.

- **Optional**
  Single Monitor User Interface (SMUI)
  This interface displays all windows on a single monitor in one view.
  Dual Monitor User Interface (DMUI)
  The Image window is displayed on the left monitor, and the Model window on the right monitor with the appropriate tools and icons on each monitor.

The Measure-X Dual Monitor User Interface (DMUI) layout displays a larger view of the part image within the window. The larger real-time image allows easier access to features to be accessed at one time, which speeds and enriches the measurement process. When configured with the optional touch-screen interface, Measure-X makes a sensible solution for the shop floor and other work areas where keyboard and mouse may be inconvenient or prohibited.

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Measure-X Metrology

Software

The Vision is Simplicity

Measure-X Metrology Software is specifically designed for the Sprint CNC family of measurement systems from RAM Optical Instrumentation. Measure-X is also available as an upgrade for existing Sprint CNC and RAM Legacy systems and as part of a retrofit of older systems. Call us about applying the benefits of Measure-X to your existing measurement system.

Additional Software Features

Standard automatic calibration routines allow the user to recalibrate the system at their discretion.

- Lights calibration enables the end user to calibrate lights across multiple machines enabling seamless program transfer
- Optics calibration linearizes the field at each zoom position, minimizes field errors in the optical path, and sets the correct light level
- Touch probe and change rack calibration ensures the Renishaw components and all probe tips will measure correctly when called upon
- Sensor alignment ensures that all sensors are calibrated to the same system centerline to enable the user to switch sensors in a part routine without the need to reset the part datums

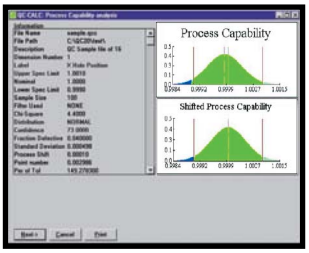
The system configuration editor allows the user to change the system startup sequence and allows manipulation of system performance

- Stage speed can be modified
- Joystick deflection vs. stage direction can be reversed
- Sensitivity of the mouse or trackball can be modified
- Icons and menus can be reconfigured
- Operator preferences can be modified

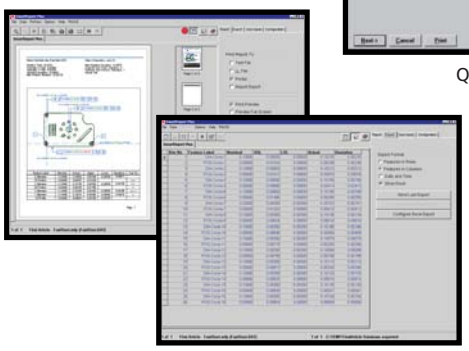
Optional Software

- MeasureFit® Plus — fully automated fitting analysis with complete GD&T capability to multiple datums
- SmartReport® Plus — provide data collection and automatic configurable report generation
- SmartCAD® — create measurement routines from CAD files
- QC Calc™ — fully automated Statistical Process Control (SPC) with realtime plotting capability

MeasureFit Plus



QC-CALC



SmartReport Plus

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