



## Studio Software Update 8.1 – Release Notes

Previous Studio Release: 8.0

Supported Equipment PC: Z97, Z170

Offline Studio Operating System: Windows XP (Service Pack 3) or higher; extensive testing specifically performed on Win 7 32/64 bit and Win 10 64 bit

### Summary:

All included Studio applications have been validated for compatibility with previously created Akrometrix Studio file formats. Important bug fixes and added features are listed below. This list does not include all resolved bugs and added features. Known issues are presented with workarounds where applicable.

### Update Procedure:

#### ***Install Studio 8.1***

Download and Unzip the Studio Installer zip file. Install all applications for Studio 8.1 by launching the provided file “Akrometrix Studio 8.1 Installer x86[or x64].exe”. Uninstalling older Studio applications is not required prior to launching this file, as this will be done automatically. A computer restart should be performed after the install. Take note to only install the x86 version for 32 bit systems and x64 for 64 bit systems.

### Key Feature Changes or Additions:

#### ***AXP 2.0 Support***

Much of the developmental changes around Studio 8.1 focused on the release of the new AXP 2.0 product. As before a single Studio software is used to run all Akrometrix equipment. Some differences will be seen in using the AXP 2.0 with respect to the added heaters and heating controls. Multiple features will also prove valuable to other Akrometrix equipment and offline Studio use.

#### ***Studio 8.1 Features:***

- Measurement acquisitions can now be tracked by a new variable field “Nominal Temperature”. This field can be set in Profile Generator and used in data outputs and reports in place of “Setpoint Temperature” or “TemperatureReading” fields to improve communication of intended acquisition temperature.
- New gauge, Signal Strength (SS):
  - o Gives a magnitude for sign direction, essential a quantity of how positive or negative a surface is when considering warpage direction
  - o Results from 0-100%+ (note results can be returned slightly larger than 100%)
  - o Calculated using 2<sup>nd</sup> order polynomial fit, similar to JFFSW
  - o Signal Strength (SS):

$$SS = ABS \left( \frac{em^2 + fn^2}{4 * coplanarity} \right)$$

#### ***Studio Manager:***

- o Now features a “Quit” option added to its context menu in the notification area icons

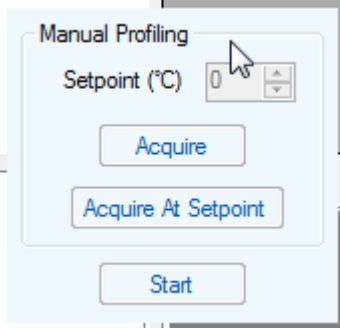
#### ***Surface Measurement:***

- o The “Power Output Limit” field no longer resets to 100 between profile starts
- o Part Tracking now supports an ellipse model with comparable functionality to the already provided rectangular model.
- o Users can now specify custom prefix, suffix, or full names for Part Tracking regions

- The limit on the number of specified regions in Part Tracking has been increased from 99 to 999.

- **Thermal Profiler:**

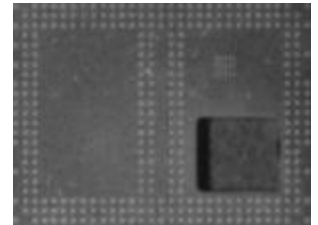
- New Manual Temperature Profiling – A new interface is provided to manually enter a temperature set point for oven response. Measurement Acquisition can be made on demand or once a set point is reached. Thermal Profiler tracks the progress of the profile, where no input profile is provided.



- The Test ID Metadata field is now shown on the main Start window to improve workflow
- Test ID is now used in the profile graph title on profile start and is used as the default filename when saving profiles
- The last 8 Test IDs used are now retained and can be recalled
- Search Area files are now saved when running DFP/CXP with Part Tracking active

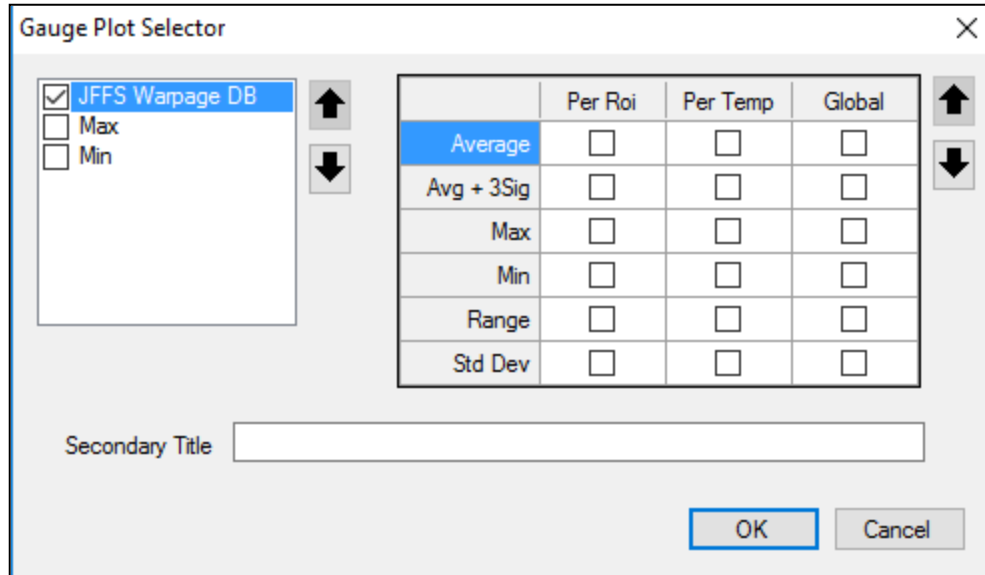
- **Surface Analysis**

- “Surface Images”, as shown to the right, can now be saved as output options in the Analyze tab of Batch Processing
- When extracting partitions for phase and displacement images, the extracted region can now optionally be saved direct to a file instead of to a new window



- **Surface Analysis (Related to Automated Report Generator – ARG) – The ARG functionality continues to evolve and improve, justifying a dedicated section to changes associated with this capability added in Studio 8.0**

- Groups Tab
  - The “Rename ROI” function is renamed to “Edit Metadata” and allows for editing of multiple data fields
  - Grouped files can be copied to a windows folder via a context menu in the Grouped Results table
  - Two new grouping fields have been added, “Max Number of Roi Sizes” and “Max Number of Roi Locations” to give more grouping options
  - Adding files taken manually into a thermal profile has been made more robust and intelligent
  - Identification of files that are “corrupt” or lacking required Metadata has been improved
    - The Grouped Results table indicates corrupt file count
    - Users are prompted to fix missing ROI names after indexing when necessary
- Layout Settings Tab
  - Added a subtitle field per gauge for gauge plots and tables
  - Gauge statistics can now be calculated for all applicable gauges in the Layout Settings tab. Statistics include average, average + 3 Sigma, Max, Min, Range, and Standard Deviation. Additionally these statistics can be calculated per region of interesting, per temperature, or globally.



- A new field, Gauge Table/Graph Displayed Temp, in the Layout Settings tab allows the user to switch between Average Temperature Nominal, Average Temperature Reading01, and Actual Temperature Set Point for the gauge table and graph
- Added the option under Z-Scaling for Common Z Scale to be set to none
- Overall report layout has been improved to handle higher quantities of data for gauge table and graph layouts. Previously very large quantities of regions or temperature points were not being shown clearly in gauge tables and graphs.

### **Key Bug Fixes:**

#### **- Surface Measurement**

- Saturated dark and light pictures are now correctly only shown in the default ROI on startup
- An error message will now inform the user if a profile with no acquisition points is loaded
- Illegal characters are now better handled when choosing Browse For Output Path
- Grayscale values under 25 are now considered as saturated dark to give more realistic use of the function
- Search Area files during profiling no longer have a corrupt Roi name metadata field

#### **- Surface Analysis:**

- Gauge vs. Temperature graphs are now scaled in the x axis by acquisition count instead of acquisition index to match the gauge table and prevent gaps in the Gauge vs. Temperature graphs
- Array Generator now correctly uses Region Prefix and Suffix names when in "Column-Row" region naming mode
- Chord graphs now have the correct default footer template in batch analysis

#### **- File Converter:**

- Fixed an issue preventing .tif files from being converted

### **Known Issues:**

- Attempting to calibrate after using the Part Tracking feature can cause Surface Measurement to shut down in some cases. To avoid run any calibration routines prior to enabling Part Tracking.



**Versions (listed for reference):**

SurfaceMeasurement	8.1.10491
SurfaceAnalysis	8.1.10491
ProfileGenerator	7.5.10491
FileConverter	7.5.10491
StudioManager	7.6.10491
LicenseUtility	7.5.10491
User Manuals Studio	7.7 (Updated manuals for Studio 8.1 will be released at a later date)