BeamMic Readme

Contents

Section 1 - Change log

- v2.19.0 10/21/2024
    - Added camera temperature result for certain cameras that have an internal temperature sensor.
    - Changed result statistics to clear on data source changes.
    - Fixed rare crash which would occur when applying ROI changes while using an external trigger.
    - Fixed an issue with pixel scale that affected some cameras.
    - Changed the way the SP203P camera is identified so the SP203P and the SP932U will not interfere with each other.
    - Fixed the export button so it remains enabled even when there is no data.
    - Fixed an issue with Positional Stability when loading a positional stability file saved in pixels.
    - Fixed the export to a csv file so that the pixel pitch is saved. This can be used to determine what optical scaling was used when the file was saved. On load, optical scaling and units now update in the UI to what they were when the file was saved. The Pixel Scale result in the Results window is now left unchanged when loading a file in case a data source is connected.
- v2.18.2 6/25/2024
    - Fixed an issue where the SP203P camera would not enumerate in BeamMic.
- v2.18.1 2/20/2024
    - Fixed an issue with internal memory on the SP932U camera.
    - Fixed an issue that disabled the export button after loading a data file when not connected to a data source.

- v2.18.0 12/18/2023
    - Added support for the SP203P camera.
    - Fixed an issue where the Smear Correction panel was disabling after navigating away from the Capture ribbon.
    - Changed visibility on the Smear Correction panel so that it is hidden for cameras that can't use it.
- v2.17.0 11/1/2023
    - Added detection if the data file or setup file was saved in a future version.
    - Added blooming correction to the Automation Interface for the SP932U camera.
    - Fixed an issue that prevented saving a multiple paged PDF report with both the 1D and 3D displays enabled.
    - Fixed an issue where the SP932U would wait for a final trigger after turning off trigger mode.
    - Fixed an issue where BeamMic would occasionally hang when attempting to Ultracal the SP932U while a trigger mode was enabled.
    - Fixed an issue that crashed BeamMic when changing trigger delay with the arrow controls on certain cameras.
    - Fixed an issue that was allowing message boxes to appear when using the Automation Interface.
    - Fixed an issue where Ultracal background subtraction could be disabled when hardware triggering certain model cameras.
- v2.16.0 9/9/2022
    - Fixed all known issues for BeamMic and camera drivers for Windows 11.
    - Fixed an issue where languages that require double-byte character localizations could not be used in the setup and data file names due to a restriction introduced by a third-party component.
    - Updated Matlab example code.
    - Removed outdated Matlab example documentation in favor of in-line documentation in the examples.
- v2.15.1 12/23/2021
    - Fixed an issue where the SP932U camera was not detected by BeamMic in some configurations.
    - Fixed an issue where color formatting was not applied to Result and

Statistics items in the grid or in floating mode.
    - Fixed an issue where the Blooming Correction mode did not disable when switching to data sources that did not have the feature enabled or supported.
    - Fixed an issue where the Enhanced Auto Aperture was not placed and sized accurately when in Off-Axis mode and the rotation angle changed.
        - This issue was isolated to v2.15.
    - Fixed an issue where the Threshold Power/Energy Density result would display the incorrect units in some cases.
    - Fixed an installation utility error when .NET 4.x was not already present on the system.
    - Improved the user experience when entering the Blooming Correction wavelength setting.

- v2.15 9/24/2021
    - Added SP932U camera with blooming correction capabilities.
    - Fixed error message displayed when failing to connect to a data source.
    - Fixed an issue where Floating Results did not correctly restore from setup files.
    - Fixed an issue where closing Chart displays could cause a hang of the UI in very fast frame rates.

- v2.14 3/16/2020
    - Added SP920s camera.
    - Added functionality to the automation interface for selection of data format (Standard or Compressed).
        - Default of Standard data format restored.
    - Removed the ability for the user to select zero frames when generating a report.
    - Fixed error message displayed when failing to connect to a data source.
    - Fixed an issue where loading a setup file via the automation interface would cause the display to stop updating enabled results values.

- v2.13 2/15/2019
    - Added camera image smear correction for CCD cameras.
    - Added Enhanced Auto Aperture feature. This significantly improves the ability of the software to optimize the auto aperture, particularly with small diameter beams and low signal to noise conditions. Refer to the User Guide for additional information.

    - Added Exposure, Gain, Black Level, and Tap Mode to the Frame Info results. These results will only be shown if the camera under use allows setting them.
    - Improved algorithm for faster camera enumeration.
    - The option to save 2D images as TIFF files, formerly "on" by default, is now "off" by default.
    - Fixed random application lockups when:
        - Starting the application.
        - Moving or resizing a manual aperture.
        - When the application is under heavy computational and/or presentation load.

- v2.12.1 05/16/2018
    - Fixed incorrect fluence values displayed in 3D backplane and status bar.

- v2.12 04/23/2018
    - Upgraded FlyCap camera driver to 2.12.2
    - Improved performance of most results.

- v2.11.0 9/13/2017
    - Upgraded PGR drivers to 2.11.164.
    - Added support to auto upgrade installed drivers during installation.
    - Improved reliability of the console service and data server interaction allowing connections to devices to be more stable.
    - Fixed a memory leak in the automation interface.
    - Fixed an issue where the application would not exit when running an automation client without the UI

- v2.9.1 - 3/9/2017
    - Due to limitations imposed by LabVIEW and the consumption of .NET dlls, an additional Spiricon.Automation.LabViewInjector object was created for LabView automation clients.

- v2.9 – 2/14/2017
    - Added automation interface.
    - Fixed an issue where having an SP928 or SP907 and a custom ROI configured, the ROI width and height would be cut in half after performing an Ultracal.

    - Fixed an issue where a custom ROI could not be restored from a saved setup for an SP928 or SP907.
    - More reliable communication with SP928, and SP907 cameras.
    - Other miscellaneous bug and instability fixes.

- v2.8.1 - 8/3/2016
    - Fixed inability to license cameras for the product.

- v2.8 - 6/28/2016
    - Full Windows 10 compatibility.
    - Added support for SP907 and SP928 cameras.
    - Enhanced application logging for diagnostics.
    - Renamed application title to make it easier to identify in Task Manager.
    - Fixed a calculation error that returned an incorrect plateau uniformity result.
    - Fixed a presentation error that caused beam profiles on elliptical beams to display on the wrong axis.
    - Fixed a licensing problem that prevented demo licensing.
    - Fixed a problem in setup files saved with the setting of 2D elements of the 3D display turned off. The application would start but not become visible.

Section 2 - Errata and Workarounds

We work hard to find and correct any bugs in this software product. However, as of this release we still have a few tough bugs for which we have not found complete solutions. The following list details these bugs and offers recovery and work-around methods if available:

- Users with Adobe Reader X may see inconsistent behavior when using the What's This? feature. This is due to flaws in a new security feature in Adobe Reader X. Users can restore previous functionality of What's This? by disabling &"Protected Mode&" in the Reader X Preferences menu.
- Users with 1550nm phosphor-coated cameras should begin with one of the pre-canned 1550nm setups. All user-custom setups for these cameras should begin with the provided versions.

Section 3 - BeamMic Notes

Supported Operating Systems:

- Windows 11 (64 bit)
- Windows 10 (64 bit)

Extensive testing has not and will not be performed in earlier operating systems; however, we have yet to encounter any major operational problems.

Documentation

- A PDF version of the User's Guide is included with the installation. Adobe Acrobat Reader is recommended in order to view this file. Adobe Acrobat Reader installation can be obtained here https://get.adobe.com/reader/.

Installation

- Ophir products are only supported when fully updated to the latest Windows updates.
- You must have Administrative privileges in order to fully install BeamMic and the required camera driver package.

Troubleshooting and Reporting Bugs

If you suspect you have found a bug in our software please help us identify it by sending the following information to service.ophir.usa@mksinst.com.

1. A description of the actions that reproduce the problem.
2. The .bmSetup or .bmData file you were using at the time.
3. All files (if any) in the directory C:\ProgramData\Spiricon\BeamMic\Logs.
4. All files (if any) in the directory C:\ProgramData\Spiricon\DataServer\Logs.

The more information you can provide, the more likely we can reproduce it in our lab, and fix it.