

BeamGage Professional Readme

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Section 1 - Change log

- v6.17 9/24/2021
 - Added SP932U camera with blooming correction capabilities.
 - Default exposure of the Lt665 and L11059 has been changed to the minimum available value.
 - Fixed error message displayed when failing to connect to a data source.
 - Added compatibility for next-generation interfaces in the ResultsEngine. Most users will see no impact to this change.
 - Developers of existing custom calculations libraries will need to update and rebuild their projects with an additional DLL reference for BeamStack.Interfaces.dll.
 - See the Custom Calculations HTML documentation for more information.
- v6.16.2 05/27/2021
 - Fixed an issue where the power meter scale factor did not restore from setup files.
 - Fixed an issue where the Juno and Pulsar meters would only produce zero values when used with pyroelectric sensors and then loaded from a setup file.
 - Fixed the connection capability of the Ophir Juno and Centauri power meters.
 - Fixed various connection stability issues with Ophir meters with displays and keypads.
 - Including the Nova II, Vega, StarLite, StarBright, and Centauri power meters.
 - Fixed an issue where closing Chart displays could cause a hang of the BeamGage GUI in very fast frame rates.

- Fixed an issue where Floating Results did not correctly restore from setup files.
 - Disabled dynamic tap matching for the multi-tap mode of the LT665 camera and similar models.
- v6.16 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 a calculation error with 1D Gaussian Centroid location inside an aperture.
 - Fixed a calculation error with 1D Gaussian Widths when off-axis.
 - 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.
 - v6.15.3 10/25/2019
 - Added all user programmable beam width method settings available in the Beam Width expansion dialog to the automation interface.
 - This interface can be accessed via the existing ProgrammableSettings property.
 - e.g.
`_bga.ProgrammableSettings(AProgrammableSettingsNames.PercentPeakClip, 50.0);`
 - Fixed an issue where BeamGage would reset volatile memory settings upon connection in the SP920G cameras.
 - This had been intended behavior which caused the camera to restart fresh for every connection, but for Flir GenICam devices also clears the persistent IP address properties.
 - Fixed an issue where launching a second instance of BeamGage which loads the same camera as the first instance, no longer changes the camera settings of the first instance upon connection.
 - The first instance is intended to maintain primary control of the camera.
 - v6.15.1 2/15/2019

- Added support for SP920 CCD camera.
 - Added camera image smear correction for all CCD cameras. LT665 and L11059 cameras can apply smear correction only when using a single tap mode.
 - 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.
 - 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.
 - 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.
 - When the tap mode is changed on LT665 cameras.
 - Fixed improper loading of Positional Stability files that showed the azimuth angle ellipse incorrectly and improper placement of pixels.
- v6.14 12/3/2018
 - Added support for SP1201 & SP1203 InGaAs cameras.
 - Added option to set single-tap or multi-tap mode on supported Lumenera cameras.
 - Added Automation methods to get and set positions for BeamDisplay Cursor and Crosshair.
 - Revised HDF5 items in data and setup files for human-readable inspection.
 - Added support for saving image data in TIFF Gray32bppFloat format. This option is selectable on the file save dialog.
 - In Automation, PointingStabilityResults property is deprecated. PositionalStabilityResult is preferred.
 - Statistical pass/fail settings saved in setup files are now restored when loading the file.
 - Trigger delay settings in a setup file are now restored when loading the file.

- Corrected SocketException in Automation if GUI is not displayed.
- Setup file now restores bit depth settings.
- Fixed program lockup when aperture is moved or resized while a power meter is attached.
- v6.13.1 05/23/2018
 - Added SP920-G GigE camera.
 - Corrected inability to license PyroCam demo cameras.
 - Fixed incorrect fluence values displayed in 3D backplane and histogram.
 - Removed the 10ms lower exposure limit on SP300 and SP920 cameras.
- v6.13.0 04/23/2018
 - Upgraded FlyCap camera driver to 2.12.2.
 - Corrected an error in display of beam intensity color values in the Color Bar, 2D cursor tooltip and status bar when power calibrated.
 - LW230, SCOR20 and FX cameras are no longer supported. These cameras may continue to operate but will be explicitly disabled in a future version of BeamGage.
 - Improved performance of most results. Gaussian results remain slowest because of heavy computation effort.
- v6.12.0 02/26/2018
 - Corrected an error in the calculation of Positional Stability.
 - Corrected a program lockup when using trigger mode with Gevicam cameras.
 - Corrected failure of AutoX and Auto Setup when using a Lumenara camera.
 - Corrected inaccuracies in LT-665 exposure and gain control.
- v6.11.0 9/13/2017
 - Upgraded Pleora drivers to 4.1.7.3988.
 - 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

- v6.9.1 - 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. Please refer to the LabView example for more details.

- v6.9 - 2/14/2017

- Power Meter wavelength setting can now be set through BeamGage.
- Power Meter range is set to automatic when connected through BeamGage.
- Ophir Power Meter drivers are no longer installed automatically. They can be installed/uninstalled via the driver manager.
- Power results, when measured through a power meter, now support statistics.
- Enhancements to the automation now require an additional reference to Spiricon.automation.dll
- Additional preconfigured setups are installed to support BeamCheck.
- Fixed an issue where having an SP300, 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 SP300, SP928, or SP907.
- More reliable communication with SP300, SP928, SP907, XC-130 cameras.
- Other miscellaneous bug and instability fixes.

- v6.8 - 6/28/2016

- Full Windows 10 compatibility.
- Integrated with StarLab 3.2 software.
- Enhanced application logging for diagnostics.
- Improved text and images in Driver Manager for ease of camera identification.
- 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 installation incompatibility between BeamWatch and BeamGage where installing one product would render the other unusable.

- Fixed a compatibility issue with Windows FIPS security settings that would render the product unusable.
- 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.
- Fixed a problem with the automation server that required recompilation of client code when the product was upgraded to a new revision.
- Fixed the failure to connect to a camera of the same model (but different serial number) as the one saved in a setup file. Affects Pyrocam IIIHR, Pyrocam IV and Gevicam.

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 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 pre-canned versions.
- A 640x480 frame format at 14 bits per pixel on the GRAS20 camera will not run at 60 Hz. This option is available as a selection but will not work properly.
- Under certain conditions Beam Stability files saved under earlier versions may not load properly in BeamGage. A resolution of this problem is scheduled in the near future.
- LabVIEW does not natively support the .NET CLR 4. LabVIEW users must take special action to continue using the BeamGage Automation Interface. Please refer to the LabVIEW specific pages of the Automation Interface Documentation for more details and a known workaround.
- Due to the amount of PC memory required to handle the large frame size of the LW11058/LW11059 cameras we recommend that Windows 7 64-bit with a minimum of 4GB of RAM. Using this camera in a 32-bit environment may produce adverse behavior.
- Users with Adobe Reader X may see inconsistent behavior when using the What's This? feature. This is due to limitations created by a 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. This is safe to do if careful security and anti-virus best practices are used with all PDF files.

Section 3 - BeamGage Notes

Supported Operating Systems

- Windows 10 (64 bit)
- Windows 7 (32-bit & 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-Spiricon products are only supported when fully updated to the latest Windows updates.
- You must have Administrative privileges in order to fully install BeamGage and the required camera driver packages.
- For maximum performance a dedicated video card is recommended over on-motherboard video outputs.

If you suspect you have found a bug in our software please help us identify it by sending a description of the actions that reproduce it and the .bgSetup file you were using at the time to service.ophir.usa@mksinst.com. The more information you can provide, the more likely we can reproduce it in our lab, and fix it.

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