

NanoModeScan Readme  
Version 2.60

**Contents:**

- Section 1 - Change log
- Section 2 - Errata and Workarounds
- Section 3 – NanoModeScan Notes

\*\*\*\*\*

**Section 1 - Change log**

Rev 2.60 (01/16/2020)

- Added built-in lens support to provide precision focal length calculation based on lens manufacturer specifications.
- Implemented persistence of Lens Selection into data files, versioned the m2k file format, and provided backwards compatibility to v6 and earlier files.
  - Any m2k file that did not support Lens Selection will operate in a User Defined lens mode that functions as it always has.
- Fixed Windows 10 crashes that prevented general use caused by changes in the MFC framework.
  - This version is developed and tested on Windows 10.
- NanoScan I hardware is no longer supported with this version. This and all future versions will only be developed and tested with NanoScan II hardware.
- Fixed 1D Beam Profiles not displaying for all NanoScan II hardware
  - The profiles will now rescale between 12-bit and 16-bit maximum A/D values when the peak value exceeds 4096 counts.
- Fixed the Show/Hide NanoScan UI button being out of sync with NanoScan.
- Fixed numerous stability issues and crashes.
- Changed the default scan rate to 10Hz per customer and internal demand.
- Fixed issues where graphs errantly showed old data when moving between views.
- Fixed Ellipticity Chart not displaying any data.
- Fixed an issue where file paths with a '.' character would be written to an invalid path
  - The m2k file would be saved to an undisclosed parent folder instead, such as:
    - C:\Users\john.doe\Documents\NanoModeScan\example.m2k
    - C:\Users\john.m2k
- Fixed an issue where UI labels were being changed erroneously by the software causing unexpected UI labeling.
- Fixed character encoding of special characters in the UI labeling.
- Fixed an issue where the scan rate would get out of sync if the user made two selections quickly.
- Fixed an issue where the waist profiles would not display during Rayleigh mode.
- Fixed an issue where Alignment mode profiles would display on the Rayleigh mode tab. When Rayleigh mode is not in an active run the profile displays are intended to be blank.
- New InstallShield 2019 product installation provides better compatibility with modern Windows operating systems.
- Redesigned the NSConfig.exe utility. This is now the NanoScan Port Configuration utility.
  - Added helpful information on how to use the utility.
  - Added a refresh button to allow for COM ports which are connected to the PC after the utility has been launched.
  - Added support for process elevation to allow for registry keys to be set when run from a non-elevated user account.
    - The utility will ask to elevate the process before modifications can be made.

- On non-elevated accounts a Windows User Account Control prompt will be displayed to allow for elevation of the utility process.
- Fixed a blocking issue if the PC does not have any COM ports and the HKLM\HARDWARE\DEVICEMAP\SERIALCOMM registry key is missing or empty.

Rev 2.52 (01/21/2013)

- Changed floating point precision on selected variables.
- The following methods in the com interface have been fixed: Measure and Openfile.

Rev 2.51 (6/23/2011)

- Added logic to attempt to reconnect to a lost scan head before starting a measurement.
- The software will no longer hang if it can't communicate with the motion controller.

Rev 2.50 (6/9/2010)

- Added support for selecting the proper head when presented with multiple heads.
- Fixed an issue involving a DISPID mismatch between the IDL, and the actual DISPIDs.
- Changed the code so it will only look up a NanoScan ActiveX function's DISPID once, and cache it for later use instead of looking it up every time it is needed.

Rev 2.40 (2/2/2010)

- Added an option to use a weighted fit in ISO mode (also added a FitWeighting ActiveX property.)
- Modified how the software interfaces with NanoScan
- Fixed some issues with the displayed graphs when changing modes.

Rev 2.30 (10/23/2008)

- Added support for USB Serial port adapters/dongles.
- Added support to use any available COM port not just COM1 & COM2
- Added ActiveX automation support. See manual for details.
- Added a Show/Hide NanoScan button.
- Bug Fixes including (but not limited to):
  - A bug where the slit/4sigma radio button would become disabled after some failed ISO measurements.
  - Various actual and potential motion control related bugs.
- Works with Windows Vista.
- Version Jumped to 2.3 to rectify version inconsistencies.

Rev 2.02 (03/20/2008)

- Fixed file loading problem for pulsed mode;
- Added profile scaling for pulsed mode;
- Added Ellipticity beam information in the Alignment screen.

Rev 2.01 (11/15/2005)

- Added the Rayleigh method;
- Added beam width selection ( user can select  $1/e^2$  or  $d4\sigma$  )
- All head rotation frequencies are available both in CW and pulsed mode. Default rotation frequency on program start up is 20Hz.

Rev. 2.0 (11/17/2004)

- Retrofitted to work with the NanoScan software. Communication between NanoModeScan and NanoScan is implemented through ActiveX.
- File loading and saving is not backward compatible.
- Added head rotation control for pulsed mode (1.25Hz and 2.5Hz). In CW mode system runs by default at 20Hz.

\*\*\*\*\*

## 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:

Rev 2.59 Beta (09/26/2019)

- Moving the rail to the extreme limit may cause the system to hang in some cases. It is recommended to avoid setting the rail to its most extreme limits. The potential impact is deemed to be low.
- The Alignment view has been observed to have an extreme display performance issue on some select systems. This may have a low to moderate potential impact on use.
  - The cause is currently unknown but may have a correlation to specific display adapter models or drivers which are unknown at this time. If you experience this issue we recommend updating the Windows Updates and graphics drivers to the latest versions.
- Starting and stopping the measurement system repeatedly has been observed to cause a crash of the application. The cause is unknown, and the potential impact is deemed to be low.

Rev 2.52 (01/21/2013)

- The Multiple Scan Heads feature may not work correctly on some systems.

Please contact [service@us.ophiropt.com](mailto:service@us.ophiropt.com) for additional support on these or other observed issues.

\*\*\*\*\*

## Section 3 – NanoModeScan Notes

Supported Operating Systems:

- Windows 7 (32-bit & 64-bit)
- Windows 10 (32-bit and 64-bit)

While NanoModeScan is a Windows 7 and Windows 10 product, full operation is expected in earlier Windows operating systems. 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 Operator's Manual is included with the installation. You must have Adobe Acrobat Reader in order to view this file. You can install Adobe Acrobat Reader from the \Acrobat Reader\ directory on the installation CD.

**Installation:**

- It is recommended that all users are fully updated to the latest Windows Updates. If all updates are not applied to your system this may cause problems with NanoModeScan. This product is developed and tested only with all latest Windows Updates.
- Under Windows 7 and Windows 10 you must have Administrative privileges to fully install NanoModeScan and the required driver packages.

If you suspect you have found a bug in our software please help us identify it by sending 1) the actions that reproduce it and 2) the .m2k file you were using at the time, to [service@us.ophiropt.com](mailto:service@us.ophiropt.com). The more information you can provide, the more likely we can reproduce it in our lab, and fix it.

*\* NanoModeScan is a trademark of Ophir-Spiricon, LLC*

*\* Windows, Windows Vista, Windows 7, and Windows 10 are registered trademarks of Microsoft Corporation in the United States and other countries.*