

Release Notes

Agilent Microarray Scanner Software Versions A.8.4

for

Agilent G2565CA Microarray Scanner

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This document describes the enhancements, defect fixes, and software compatibility issues related to the release of Scan Control V 8.4.

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Support for Microsoft Windows Vista 32

Version 8.4 of Scan Control software can now be used on either the Windows XP or Windows Vista 32 operating systems. If this software is to be installed on Windows Vista 32, please see the additional instructions on how to install the Windows Vista drivers appropriate for the Agilent microarray scanner Vista32Drivers.pdf. Additionally, Windows Vista users should install the Tera Term software as the terminal emulator to capture scanner diagnostic information. The Hyperterminal software that was used for this purpose in the Windows XP operating environment is no longer available under Windows Vista. Please see Terminal_install_release_notes.pdf for installation and use instructions.

TIFF Splitting

A fix for an issue with the TIFF Splitter feature that was introduced with the 8.3.1 release of Scanner has been added. The 8.3.1 version introduced TIFF splitting capability for 2um and 3um 16-bit scans. When split and rotated, the barcode was not on the bottom as it was in prior versions of the scanner software.

Data port receiving error

A fix for the "Data Port receiving data failed" error has been added. When this error occurred, the system would be locked in a "busy" state until the user restarted the software.

Laser Power Error

A fix for one type of laser calibration error has been added. The error would occur in certain cases when the user manually turned off the laser through the Laser On/Off menu after a scan, but before the lasers have an opportunity to do a power calibration check. Prior to the fix, the lasers had been turned back on by the software and the lasers calibrated before they were warm. This triggered a laser calibration error.

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SelfTest

SC 8.3 performs a self-test upon connection. Results of this self-test are maintained in the log files for Agilent Support.

Tools

Three tools have been added:

1. **Unlock Door:** If the door lock jams, you can activate the mechanism again using this tool.
2. **Reset Calibration Warnings:** Certain calibration warnings can be cleared using this tool. You should do so only when advised by Agilent support.
3. **Extended Laser Calibration:** An extended laser test and calibration can be performed using this tool. You should only do so when advised by Agilent support.

Scan to Network

In SC 8.1, failure of a network connection while saving a file could result in loss of data. In SC 8.3, this error will result in the file being saved to the local disk; the location will be reported in the Carousel Run Report.

Error Recovery by Rescan

Certain very infrequent errors that would result in skipped slides in SC 8.1 now cause the scanner to repeat the scan.

Improved Laser Saver

If the SC 8.1 laser saver was activated while the Progress dialog was still open, the door could not be unlocked to remove slides. The door now unlocks automatically at the end of the carousel run.

Improved Error Reporting

Certain errors that are reported in the Progress dialog could be overwritten in SC 8.1. In SC 8.3, the Progress dialog contains a scrollable multiline display, preventing these errors from being overwritten.

Communication Failure Diagnostics

If SC 8.3 cannot communicate with the scanner, it attempts to diagnose the problem by checking for interfering applications (e.g. HyperTerminal), for stopped services, and for incorrect network configuration.

Screen Redraw

SC 8.1 occasionally failed to redraw the screen correctly after an overlapping window was closed, or after a new scan region was defined using the Scan Region Editor. This is not the case in SC 8.3

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Scan Control 8.1 is a major upgrade from 7.3. Please be sure to read the manual to learn how to operate this new software.

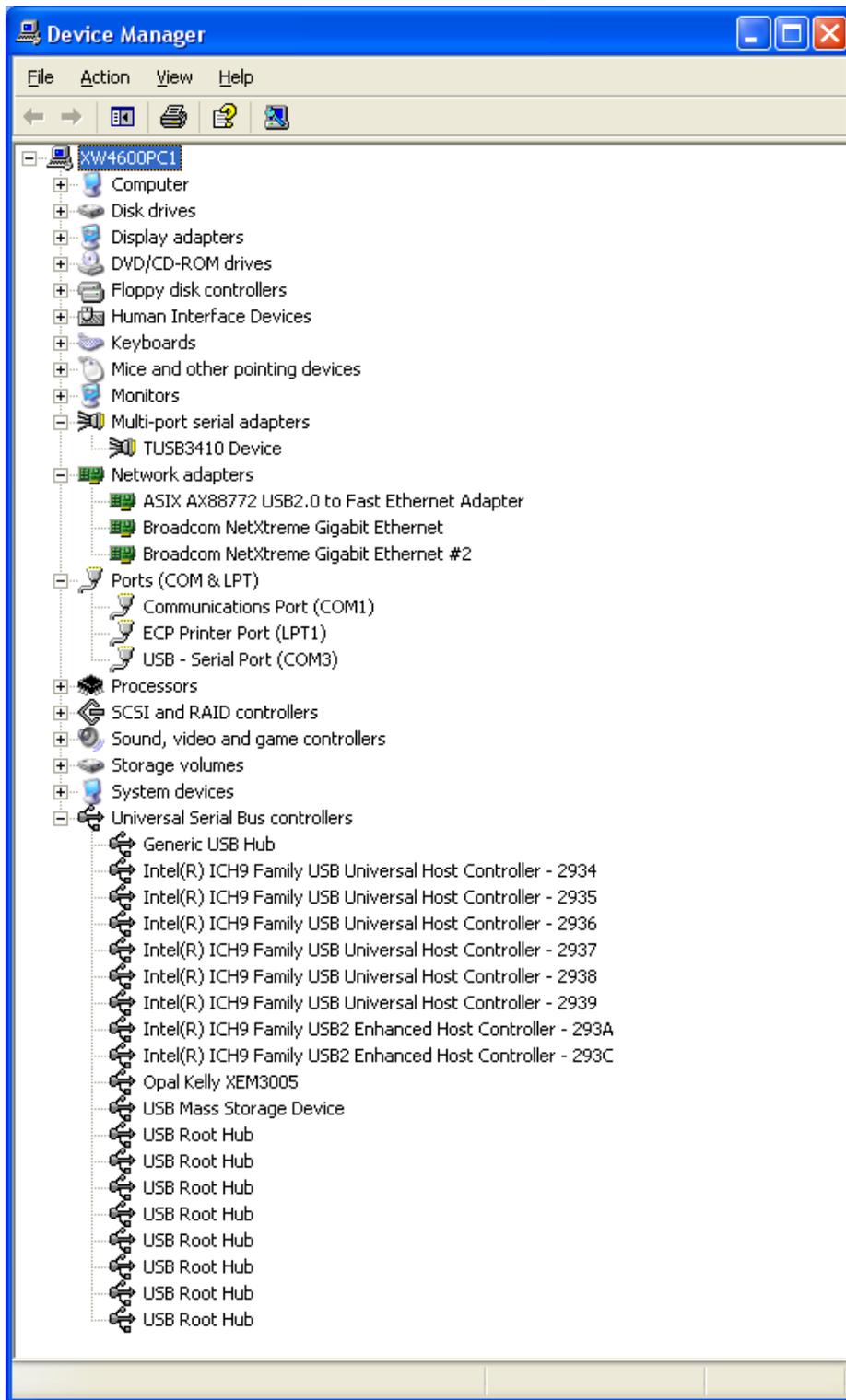
USB/Ethernet/Serial Connectivity

The G2565CA scanner utilizes a USB data interface to enable the higher data rates required for 2 and 3 um scanning. The original Ethernet interface is still logically required to control other aspects of the scanner's operation. However, this Ethernet has been physically moved to an internal USB/Ethernet converter, attached to an USB hub inside the scanner. The diagnostic serial port has also been moved to this hub.

Consequently, the G2565CA connects via a single USB cable, but logically via USB, Ethernet, and (for debug) serial connections.

When operating correctly, these connections can all be seen in the Device Manager, as shown below. The hub is visible as "Generic USB Hub"; the data collection system can be seen as "Opal Kelly XEM3005"; the Ethernet as "ASIX AX88772" Ethernet adapter; and the serial as "USB - Serial Port (COM3)".

Use of a high-quality USB2 cable is required for correct operation of the scanner. Using a USB1 cable, or a cable with a ferrite, may result in failure to connect, or loss of data.



Ethernet Failure-to-Connect at Power-On

Since power to the internal hub is only supplied when the instrument is powered, the device drivers must initialize when the scanner is turned on. The ASIX Ethernet device driver may not initialize if certain software, including Scan Control and HyperTerminal, is running. Hence, you may need to close all open applications before turning on the scanner. Attempting to run

Scan Control if the ASIX device is not initialized will result in a "No instruments found" error message.

Control of Laser Subsystem/Extended Warmup Period

A major internal difference in the software is that control over certain subsystems has been moved from the embedded firmware to the host PC. In particular, the lasers are now turned on and off by the host. This means that the scanner will not begin to warm up until the host software is started.

Modification to the red laser to enable higher resolution scanning has also resulted in extended warm-up times, as much as 30 minutes.

Agilent recommends the use of the Laser Auto On/Off function to ensure that your scanner is ready at the desired time of day.

Minimum Scan Region

Scan regions smaller than 5 mm by 2 mm may cause instability in the software.

Running ScanControl with other applications

ScanControl requires certain PC resources to be available to ensure that data can be processed at the same rate that the scanner generates it. Other applications that require significant resources, such as Agilent Feature Extraction, should not be run during a carousel run.

Scanning to Network Drives

During a scan, data is first saved to local disk; then, during final processing, the TIFF files are saved to the specified location. If a network drive is specified as the final location, data is written there during final processing, after completion of the scan. However, if the network connection fails during this write process, data loss is possible. Agilent continues to recommend that scans first be saved to local disk, and transferred after the carousel run is complete.