

RELEASE NOTES FOR GAGE COMPUSCOPE WINDOWS DRIVERS v5.04.38

OVERVIEW

These CompuScope Win7/Win8.x/Win10 Drivers support the following Gage PCI Express CompuScopes models: Cobra, CobraMax, Razor, RazorMax, Octopus, Octave and EON Express. In addition, these drivers also support the RazorMax PXle and FCiX CompuScope.

Please refer to the section "[COMPUSCOPE DRIVER VERSION RECOMMENDATION](#)" further down in this document for a comprehensive list of CompuScope cards and the recommended driver version to install.

Important notes for Windows 7/8 OS

Please refer to the section "[INSTALLATION OF COMPUSCOPE DRIVERS ON WINDOWS 7 and 8 OS](#)" in this document.

Important notes for PCs with Skylake CPU architecture

Please refer to the section "[COMPUSCOPE DRIVER UPDATE FOR SKYLAKE CPUs](#)" at the end of this document.

ENHANCEMENTS and BUGS FIXED IN THIS RELEASE

EON Express CompuScope

- Added support for the "A4" FPGA.
- Fixed the problem of LVDS calibration with some external clock frequencies when using external clock.
- Improved calibration time when using external clock.

CobraMax-RFS CompuScope

- Fixed the problem of incorrect eXpert firmware version shown in CompuScope Manager.

KNOWN BUGS IN THIS RELEASE

RazorMax CompuScope

- User DC Offset may be adjusted but has low accuracy.

FCiX CompuScope

- When capturing data with an FCiX CompuScope, changing the sample rate from the Web Page does not always succeed.
- The FCiX unit will not be shown on the CompuScope Manager if the physical FCiX cable connection is made while the CompuScope Manager is opened. A restart of CompuScope Manager will correct the problem.

- In order to detect the FCiX CompuScope, check "Enable Remote" check box on CompuScope Manager then click on the "Refresh" button.
- It is recommended that the Gage Web page should be closed while starting GageScope or CsTest on the same PC to connect to the FCiX unit.
- Some signal display problems exist when using Gage Web page with Internet Explorer.
- The API to reset the remote FCiX CompuScope returns before the operation is completed. If the user activates any CompuScope functions too quickly, the FCiX to PC communication may be compromised. In this case, a reset of the system is required.
- The Trigger timeout and DC offset setting in the INI file has no effect on the Gage Web page.
- The client software may connect to a random FCiX CompuScope in the case where there are multiple ones on the same network. Please turn OFF all unused FCiX CompuScopes and leave ON only the one that you want the client SW to connect to.
- When Restart Device is selected on the Gage Web page, please wait for about 30s or so before performing any other actions on the remote FCiX CompuScope.

Other CompuScope models

- If the CompuScope manager is left open when running GageScope (or any applications connected to a CompuScope card) and with input ranges different than +/- 1V, errors on calibration may appear on CompuScope manager diagnostic page.
- In rare circumstances, errors on calibration may occur on CobraMax PCIe when using Windows 8.1 operating system.
- Adding or removing virtual systems will reset the Signal Out options on the Gage cards to their default values. Using the "save Configuration" option in CompuScope Manager can be used to set new defaults.

COMPUSCOPE DRIVER VERSION RECOMMENDATIONS

The table below lists all available CompuScope card models and the recommended driver versions to install.

CompuScope Product	Driver version
PCI Cobra & CobraMax	4.80.22
PCI Razor	4.80.22
PCI Octopus	4.80.22
FCiX	5.04.38
PCIe Cobra Max	5.04.38
PCIe Cobra & Cobra-RFS	5.04.38
PCIe Razor & Oscar	5.04.38
PCIe Octopus & Octave	5.04.38
PCIe EON Express	5.04.38
PXIe and PCIe Razor Max	5.04.38

Although support for Eon, CSUSB, CS16XY PCI, CobraMax PCI, BASE-8, CS8XXX PCI, and Cobra PCI has continued in the CompuScope version 5.xx.xx drivers, it is still recommended to use the older 4.80.22 drivers.

Please visit the Gage website (www.gage-applied.com/Support) to download the appropriate CompuScope drivers.

IMPORTANT NOTES ABOUT DRIVER VERSION CONFLICTS

1. When upgrading a driver, sometimes the previous device driver files will be locked and thus the new installation will fail. In this case, please delete any "Unknown Devices" in the Windows Device Manager, run LegacyClean.exe (with the "/Combine" switch), and then restart the CompuScope Driver installation.

2. Under Windows Win7, the installation will prompt you that the RM (and RM64 in x64 bit version) service resource(s) must be stopped before continuing. Please select the automatic stop (default) option and the upgrade will continue.

3. If after a physical installation of the CompuScope card and Windows cannot find a driver for it, you will have to manually direct Windows to look in the folder \driver within which the drivers have been installed (the default path would be C:\Program Files\Gage\CompuScope\drivers).

If you plan on downgrading the driver version, you must:

1. Uninstall the CompuScope Drivers via the Programs and Feature in Windows Control Panel (if driver version 3.80.00 or older is currently installed).
2. Use the LegacyClean.exe utility from the CompuScope CD in the folder .\Utilities\LegacyCleanup. View the Readme prior to using this utility.
3. Install the CompuScope Drivers.

INSTALLATION OF COMPUSCOPE DRIVERS ON WINDOWS 7 and 8 OS

As technology evolves, it is critical to stay ahead of those who wish to defeat cryptographic technologies for their malicious benefit. As part of this effort, Gage has updated CompuScope Driver to use SHA-256 Code Signing certificates as per updated Microsoft guidelines.

Before installing Gage CompuScope Drivers, it is recommended that you update your PC with all latest updates from Microsoft. If not, you must download and install the updates for Security SHA-256 and C runtime, as described below.

Gage CompuScope drivers will not install and run properly if the OS does not have the latest updates for SHA-256 and C Runtime.

Notes:

- If you are using Window 7, you need to install both updates for Security SHA-256 and C runtime. However, if you are using Window 8/8.1 OS, it has already updates for SHA-256; you need only to install the update for C Runtime.

- If you have Gage CompuScope drivers installed in your PC, you must uninstall them before installing the SHA-256 and C Runtime updates.

1. Updates for Security SHA-256 (Only for Windows 7 OS)

Download then install the minimum requirements for SHA-256 support:

- Windows 7 OS with Service Pack 1 installed
- Update with Microsoft security advisory: Availability of SHA-2 code signing support for Windows 7 and Windows Server 2008 R2: March 10, 2015 (KB3033929)
[https://support.microsoft.com/en-us/kb/3033929\](https://support.microsoft.com/en-us/kb/3033929)

After installed these 2 updates, during CompuScope Driver installation, you will be asked for confirmation of all the driver signatures that are being registered with Windows 7 (even if the checkbox to remember is selected). Just confirm and install each of Gage drivers.

2. Update for C Runtime: (Window 7 and Windows 8/8.1)

Update for Universal C Runtime in Windows

<https://support.microsoft.com/en-us/help/2999226/update-for-universal-c-runtime-in-windows>

COMPUSCOPE DRIVER UPDATE FOR SKYLAKE PCs

Some newer PCs that use modern CPUs with the Skylake architecture have problems running Gage CompuScope digitizers with older on-board firmware. This section describes how to update this firmware on a separate PC so that the CompuScope hardware will operate correctly on the Skylake PC.

Problem with Intel Skylake PCs

If you have a new PC that starts having problems (as described below) after installing a CompuScope card, then the PC most likely has an Intel Skylake CPU and the CompuScope card has old firmware.

Please install a new driver with firmware fixes for Skylake then update the CompuScope firmware by following the procedure below.

Typical symptoms of CompuScope cards with old firmware on a Skylake PC

Very long boot time, slow response and sluggish mouse movement when having a CompuScope card installed.

Procedure to update firmware for a Skylake PC

In order to complete this procedure, you must have a non-Skylake PC (PC with a non-Skylake CPU).

In case you do not have a non-Skylake PC, please your contact Gage representative, who will arrange to have your CompuScope firmware upgraded at the Gage factory.

1. Remove the card from the Skylake PC.
2. Install the new driver (with Skylake fixes) on both PCs.
3. Install the card in the non-Skylake PC then boot the PC.
4. Run CompuScopeManager

- For EON Express and RazorMax:
 - Check FW status on the main tab. It should show 'OUTDATED'.
 - Update firmware via CompuScopeManager/Firmware page by clicking the button "Update Firmware..."
 - For other CompuScope models:
 - Firmware update should start automatically with a message on the screen.
5. Once the process of updating firmware is completed, power down the PC.
 6. Reboot the PC.
 7. Run CompuScopeManager again to make sure that the CompuScope card has the latest firmware.
 - For EON Express and RazorMax:

Check the FW status on the main tab. It should show 'OK'.
 - For other CompuScope models:

No firmware update should occur, the FW status on the main tab should show 'OK'.
- The 'OK' status confirms that you have updated firmware successfully.
8. This step is only needed for EON Express or RazorMax with Expert firmware:
 - From CompuScopeManager/Boot Firmware tab, change the boot firmware:

Image0 (current) to Image1
or Image1 (current) to Image 0
 - Click the button "Activate"
 - Shutdown the PC
 - Reboot the PC
 - Repeat the steps 4 to 7
 - From CompuScopeManager/Boot Firmware tab, change the boot firmware back to the original setting:

Image1 (current) to Image0
or Image0 (current) to Image1
 - Click the button "Activate"
 9. Shutdown then remove the card from the non-Skylake PC.
 10. Install the card in the Skylake PC and boot the PC
The card should operate without any problems.

Comments and suggestions can be addressed to:

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