

Verifying the operation of your hardware

Verifying installation and configuration of CompuScope hardware with CompuScope Manager

The CompuScope Manager utility is used to verify the configuration of your CompuScope cards.

The CompuScope Manager utility is installed at the same time as the CompuScope 4.xx drivers. You can access the CompuScope Manager from the Gage folder in the Programs category of the Start Menu of Windows.

The main screen of the CompuScope Manager is the Resource Manager tab (see Figure 1 below):

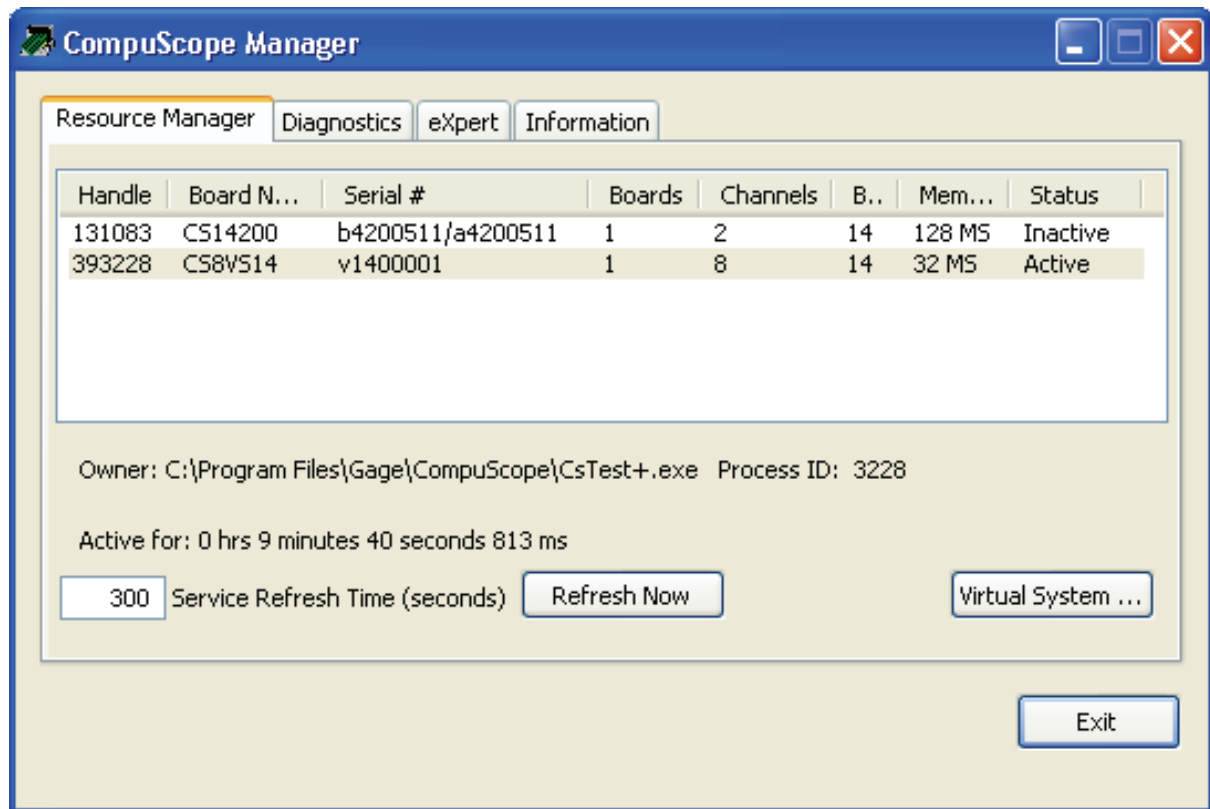


Figure 1: Card information from the Resource Manager tab of the CompuScope Manager

This window provides you with information about the CompuScope system or systems installed in your PC. In this case there is a CS14200 and a CompuScope Virtual System (CompuScope Virtual Systems are described in more detail on the next page). You can see the CompuScope model, the system's serial number, the number of cards in the system, the number of channels in the system, the nominal resolution of the system, the on-board memory, whether the system is active or inactive, and the handle of the system.

Refreshing is used to update the activity status of the CompuScope system(s) (Active or Inactive). The adjustable "Service Refresh Time" field indicates how often, in seconds, the activity status will be updated. In addition, the "Refresh Now" button forces the activity status to be immediately updated. Refreshing entails such housekeeping operations as freeing the handle of a CompuScope system that is no longer in use. The "Refresh Now" button is useful in order to clean-up loose ends that may have occurred. For instance, a CompuScope process like GageScope may have been aborted with the Windows Task Manager such that a CompuScope system handle was not properly freed. The activity status must be refreshed before a new CompuScope process using this system may be initiated.

Note: You will need administrative rights to modify the Service Refresh Time.

If you right-click on one of the installed boards, a sub-menu allowing you to reset the system or to configure the auxiliary output of your system (if available for the system) appears (see Figure 2 below):

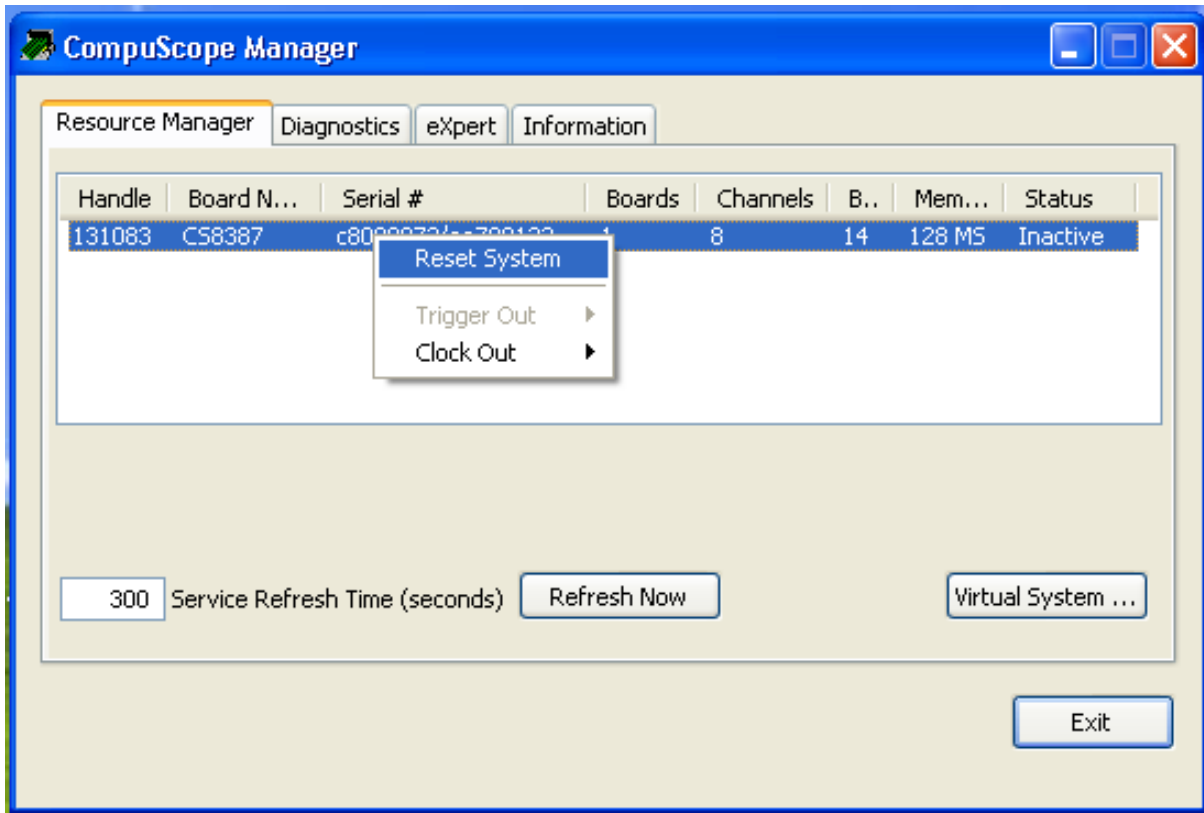


Figure 2: Sub-menu of selected board from the Resource Manager tab of the CompuScope Manager

The Diagnostics tab contains a display box that indicates events associated with the CompuScope drivers that have occurred.

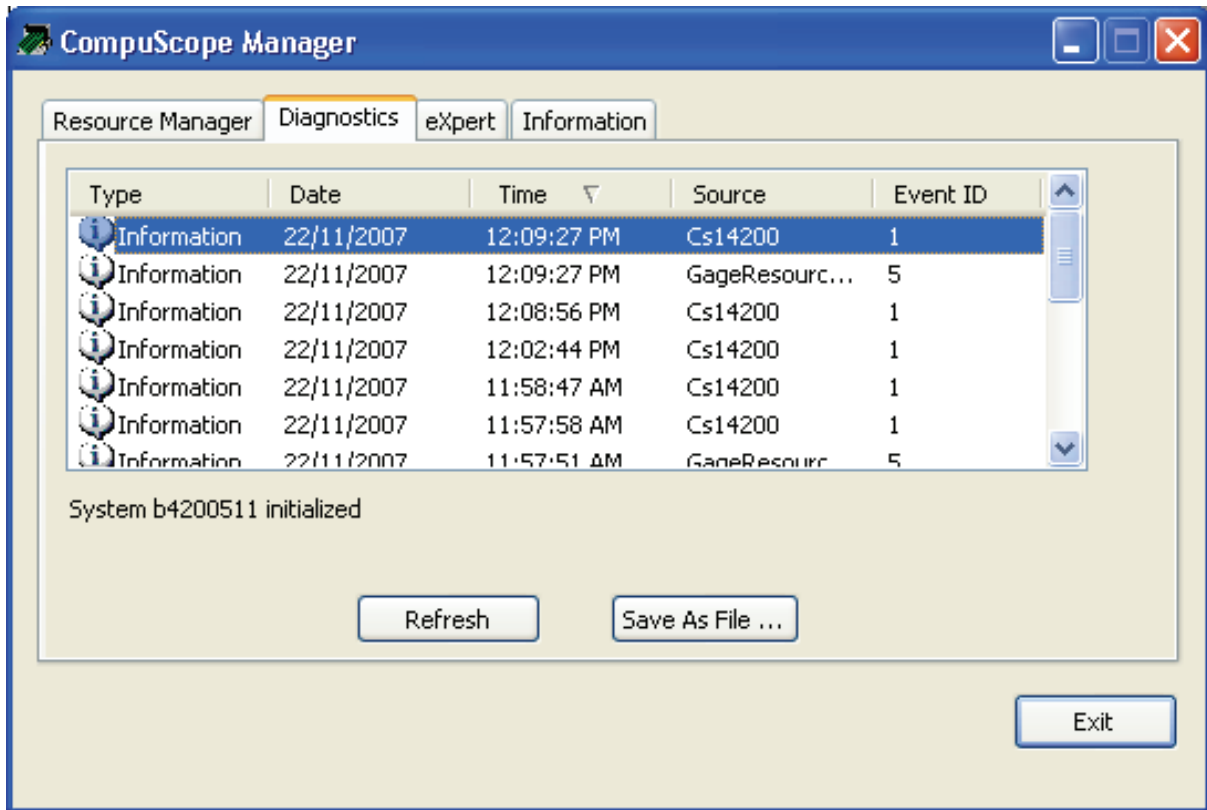


Figure 3: CompuScope Driver Events from the Diagnostic tab of the CompuScope Manager

The Information tab contains important information about the CompuScope hardware and firmware, the CompuScope drivers, and the host PC. The Modules box lists various driver files. Specifics on a given file are shown to the right of the Modules box when you click on a file. The Registered DLLs box displays a list of registered DLLs. The “System Info” button provides information on the host PC. The “Save As File” button will save all information about the host PC, the CompuScope drivers, hardware, and firmware to a text file. It is strongly recommended that you supply this text file to the GaGe Technical Support department in the event of a service call.

Verifying signal acquisition of a CompuScope card with GageScope and CSTest+

We strongly recommend that you become familiar with GageScope as a powerful tool for capturing and analyzing signals, even if you will eventually develop your own application to control your hardware. Since it embodies all the knowledge required to operate the wide array of CompuScope cards and all their functionalities, GageScope is the ideal tool to verify the operation of your hardware and to troubleshoot applications you may develop on your own. GageScope Lite is provided for free to all users of CompuScope digitizer cards for precisely this purpose.

However, if you have not already installed GageScope, or if you do not wish to install it at this point, we provide a simple utility, CSTest+ for CompuScope 4.xx drivers that allows you to capture signals and verify the correct operation of your new CompuScope card.

Note: Both 32 and 64-bit versions of CsTest are available for 32 or 64-bit operating systems.

Installation of a CompuScope Virtual Systems

GaGe CompuScope drivers now have the capability to install a CompuScope Virtual System (CSVs). CSVs with 8, 12, 14, or 16 bits of vertical resolution may be installed simply by pressing the **Virtual System...** button within the CompuScope Manager utility. From the subsequent menu, CSVs may be added or removed as are real CompuScope systems.

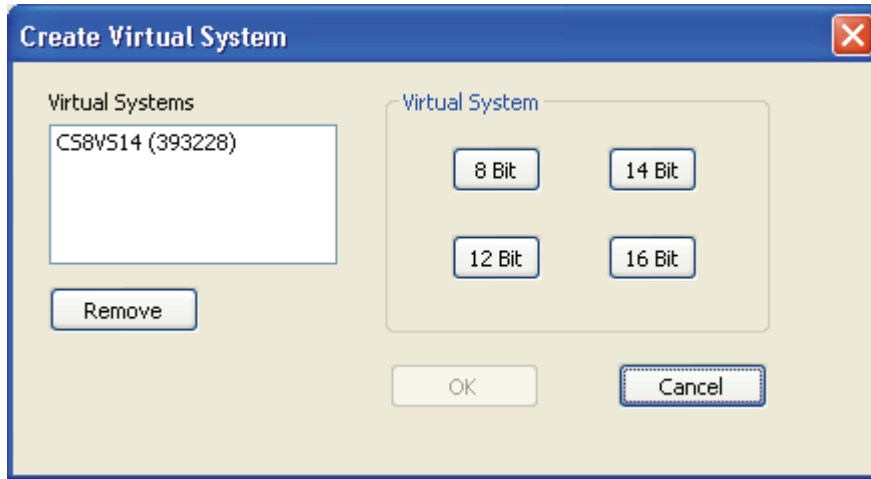


Figure 4: Create Virtual Systems from the Resource Manager Tab of the CompuScope Manager

CSVs behave as real CompuScope digitizers that have periodic signals like sine waves and triangle waves connected to their input channels. When installed, CSVs behave exactly like real CompuScope digitizers from a software perspective. All GaGe CompuScope applications, such as GageScope, CsTest+ and all SDKs, control a CSV in the same fashion as a real CompuScope.

With a CSV, for instance, users may familiarize themselves with all GageScope functionality without requiring actual CompuScope hardware. The biggest advantage of a CSV, however, is in the development of user application software from a Software Development Kit. A CSV allows a programmer to develop and debug application software without having a physical CompuScope digitizer installed in their computer. This is useful, for instance, for customers who want to begin software development before their CompuScope hardware is delivered. CSVs allow programmers to develop their application without any CompuScope hardware at all. Typically, the majority of software development effort may be done using a CSV and a real CompuScope digitizer is required only for final testing.

Note: If using a 64-bit operating system, any modifications to the virtual systems will require a reboot before any changes take effect.