

Upgrading firmware on your RTGOM

The RTGOM undergoes extensive testing in an attempt to eliminate the need for firmware upgrade in the field. Occasionally, however, it may become necessary to upgrade the firmware on your RTGOM device(s). This is accomplished in one of two ways:

1. With the FW Update program that is included with the L-and-M –Software-Suite-v#.#.# found [here](#). This software suite is often already installed on the system where the RTGOM is attached. This is the simpler, preferred method and the only method that can update multiple devices at once. This requires firmware version 1.1.0.0 or later, and requires a healthy, running device.
2. With a free program called C2Prog from Codeskin at www.codeskin.com . This is required for firmware versions 1.0.3.8 and earlier and is also used for all firmware versions when the RTGOM has become unresponsive (C2Prog operates at a lower layer to send firmware to the device).

Both of these methods are described below. Both are supported in Windows environments.

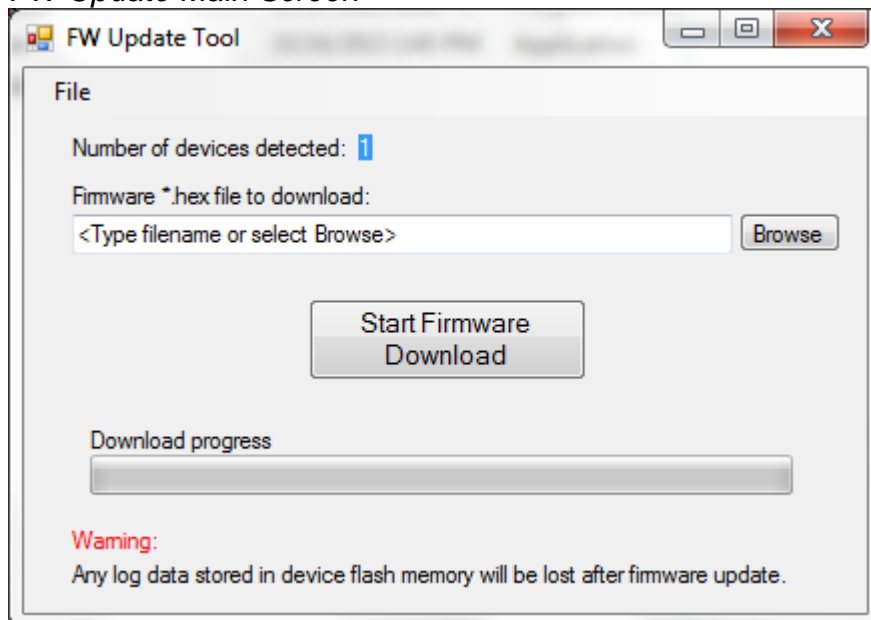
Using FW Update

FW Update is available and automatically installed with the L-and-M –Software-Suite.

Upgrading RTGOM Firmware with FW Update

1. FW Update.
 - a. The FW Update app is found within the L-and-M-Software-Suite folder on the Desktop.
 - b. Reference the *FW Update Main Screen* image below.
2. Select the “Firmware *.hex file to download” to the RTGOM device
 - a. This is found in the firmware download file obtained from the L and M Instruments web site (landminstruments.com) and installed in a local directory
3. Select “Start Firmware Download”

FW Update Main Screen



Using C2Prog

Installing C2Prog

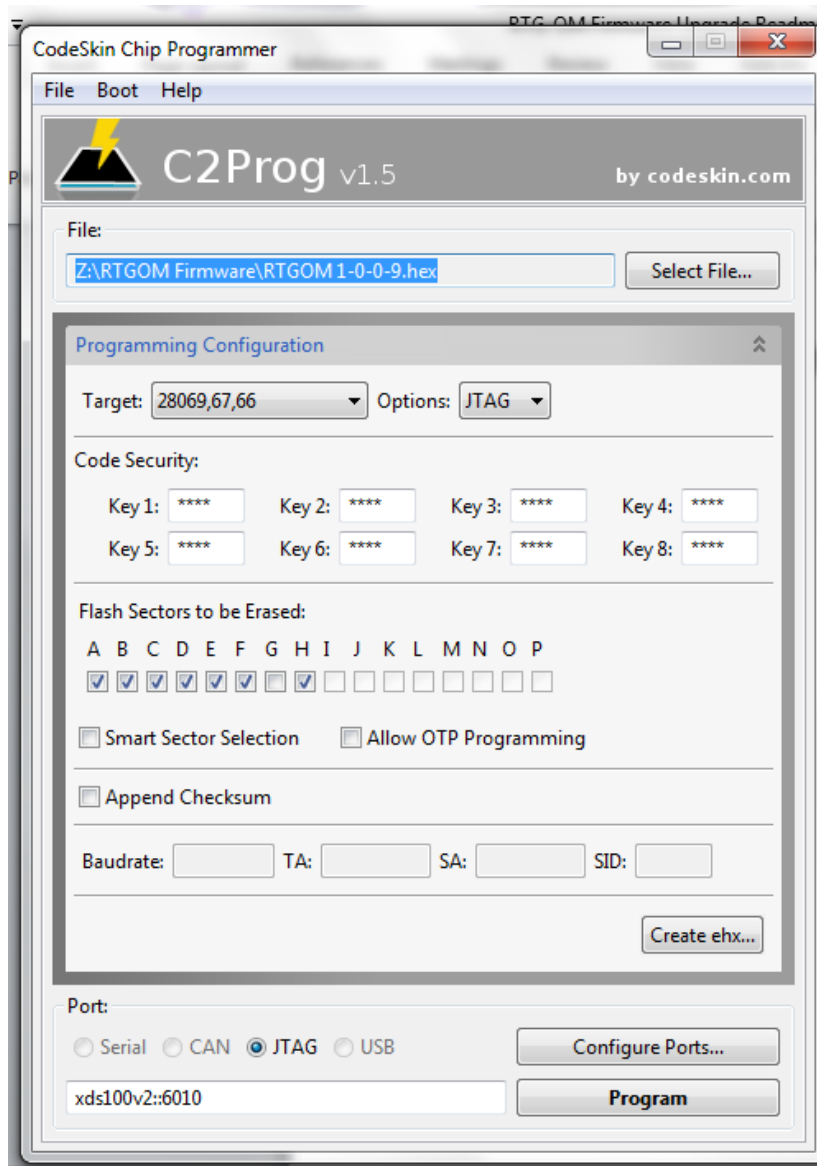
The first step involves installing the C2Prog software. This is available from codeskin (www.codeskin.com). Version 1.5 build 223 (February 24, 2013) is the minimum version of C2Prog required to program the RTGOM device.

Upgrading RTGOM Firmware with C2Prog

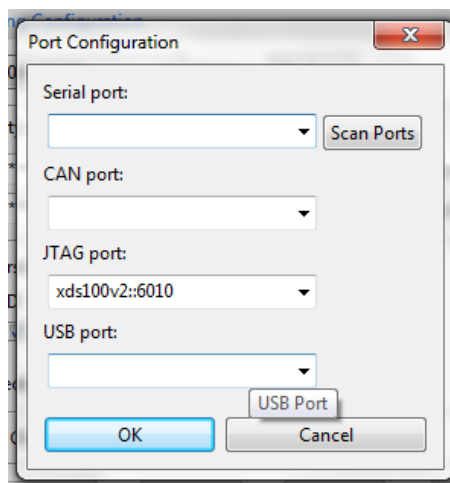
4. Run C2Prog.
 - a. Reference *C2Prog Main Screen* image below.
5. Select File to be programmed
 - a. This is found in the firmware download file obtained from the L and M Instruments web site (landminstruments.com) and installed in a local directory
6. Select Target as “28069,67,66”
7. Select Options as “JTAG”
8. Leave all Code Security entries as-is.
9. **Important:** Deselect “Smart Sector Selection” as shown in the *C2Prog Main Screen* below
10. Select Flash Sectors to be Erased:
 - a. A, B, C, D, E, F, H
11. **Important:** Ensure ‘G’ is not selected
 - a. G contains critical device information. If accidentally erased, the unit will need to be returned to the factory for re-programming, including a fee for this service.
12. In the “Port:” section at the bottom of the main screen, enter the following in the text box:
XDS100v2::6010.
 - a. Your entry should look identical to the *C2Prog Main Screen* image below.
 - b. In the future this configuration will show up in the “Configure Ports...” screen, as shown below in the *Configure Ports Screen* image below.
13. Select “Program”
 - a. Reference *Successful programming output from C2Prog* image below.
 - b. If updating the firmware on multiple RTGOM's:
 - i. Press the Scan Ports button (see *Configure Ports Screen*)
 - ii. Select the appropriate RTGOM COM port number. If running RTGOMGUI, the scannedportinfo.txt file in the application directory has a list of all RTGOM COM ports for reference.

Usage Note: C2Prog has been known to have difficulties programming devices connected through external USB hubs. If issues arise, connect the device directly to a PC USB port.

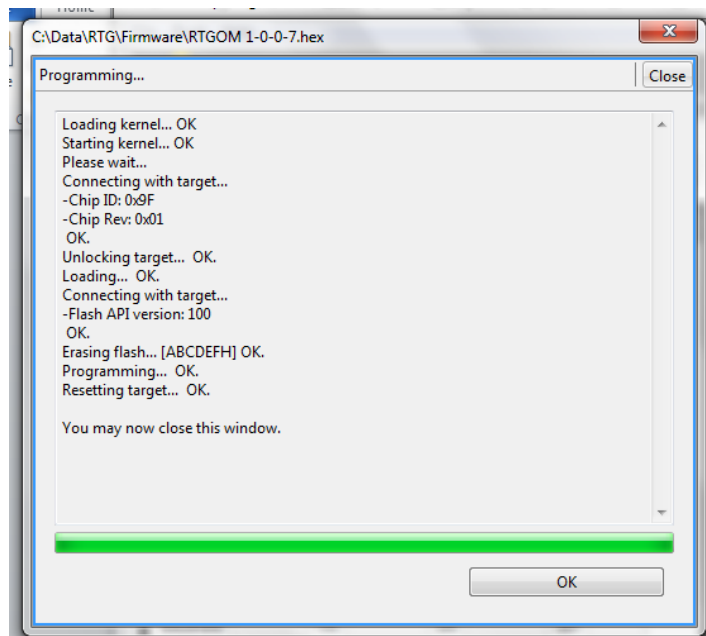
C2Prog Main Screen



Configure Ports Screen



Successful programming output from C2Prog



TROUBLESHOOTING

Potential issue running on older AMD 64-bit systems

Problem Configuration:

- AMD-based system
- Windows7 64-bit operating system
- FTDI driver 2.08.28 and higher

Description:

When running with the configuration above, the C2Prog hangs after “Loading kernel, Starting Kernel, and Please Wait...” It is believed, but not confirmed, to be an incompatibility between AMD’s usbfilter.sys 1.0.11.82, and later versions of FTDI’s ftdibus.sys driver, when running JTAG firmware update.

Work Around:

Run the 2.08.24 version of the FTDI driver.

LICENSING INFORMATION

C2Prog Licensing Information

C2Prog is a 3rd-Party tool distributed, under appropriate licensing terms, for use with the RTGOM Ready-To-Go Optical Monitor. The license terms are passed on to you and summarized below. For more detail see the "doc" folder of the C2Prog installation [usually located at Program Files (x86)\C2Prog\doc].

Except where otherwise noted, all of the documentation and software included in the C2Prog package is copyrighted by CodeSkin, LLC.

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