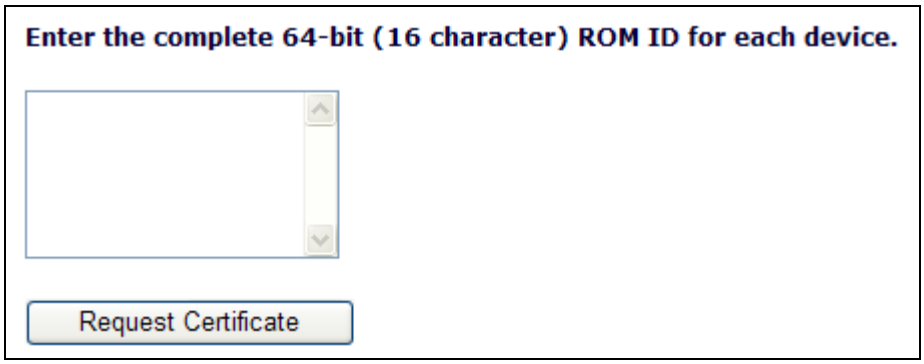
NIST Traceable Certification Web Application for DS1922 Thermochrons

MAXIM now provides International Validation certificates guaranteeing NIST traceability for our line of DS1922 temperature data loggers. This is done through a web application located on Maxim's website here:
http://www.maxim-ic.com/products/ibutton/ibuttons/thermochron_nist

Each data logger is an iButton, and all iButtons have a unique registration number (otherwise known as a ROM ID) that is factory lasered into each device. This assures absolute traceability because no two parts have the same number. The ROM ID is also used as the part number (and 1-Wire network address) of the device. The web application presents the user an input box into which he/she inputs a ROM ID or a list of ROM IDs into the box. Then, by clicking the "Request Certificate" button, a certificate is presented to the user to either download or display in PDF format. See Figure 1 for a screenshot of the input box of the web application.

Figure 1. Screenshot of Thermochron ROM ID Input Box



Note: Each ROM ID is represented by 16 hexadecimal digits. The first two digits represent the CRC. The next 12-digits make up the *serial number*. The last two digits represent the family code of the device. Only DS1922 serial numbers starting with a serial number of F6F00 and greater reside in this database.

Inputting ROM IDs into the Web Application

Thermochron ROM IDs can be input into the certificate-generating web application in three different ways:

1) The ROM IDs can be typed in one at a time. Through visual inspection of the iButtons, one can read out the number visually and type it into the input box of the web application. This is not recommended.
2) A ROM ID or list of ROM IDs can be pasted into the web application's input box from another file, such as a text file or spreadsheet column.
3) The web application can also read ROM IDs from the iButtons themselves. This is done through a signed Java applet.

Below are a couple of ROM IDs that can be copied and pasted into the web application to retrieve NIST traceable validation certificates. They are listed in the database of the web application and are "good" DS1922Ls:
9400000009F8D841
240000000A060341

Using the Signed Java Applet

For software requirements, make sure the following items have been installed on a PC running a Microsoft operating system (preferably Windows XP Service Pack 2 or newer):

- Install the latest version of Java.
    - Please visit http://www.java.com to download and/or verify that the latest version of Java has been installed.
- Install the latest version of the 1-Wire Drivers.
    - The drivers can be downloaded here: http://www.maxim-ic.com/products/ibutton/software/tmex.

For hardware requirements, make sure the following hardware is installed:

- Purchase a 1-Wire adapter from Maxim.
    - We recommend using a DS9490R#. This is a USB adapter that plugs into a USB port of a PC running a Windows operating system: http://www.maxim-ic.com/ds9490r
- Purchase a 1-Wire reader or probe.
    - Use either the DS1402D-DR8 reader (http://www.maxim-ic.com/ds1402d-dr8) or a DS9092GT (http://www.maxim-ic.com/ds9092gt) touch probe. Both will plug directly into a DS9490R#.