
Canlan Firmware Update

Installation Guide



Introduction

The CA-FLASHPROG1 programming kit is provided for updating Canlan firmware in the field. The kit consists of a 10-pin header to DB9 programming cable with integrated level-matching circuitry, designed specifically for loading the flash memory chip on the Canlan CPU board. In addition a CD-ROM containing programming software, firmware and boot loader bin images, and related documentation is included.

This product, like all microcontroller products, uses semiconductors that can be damaged by electrostatic discharge (ESD). When handling the exposed PCB components, appropriate measures must be taken to avoid ESD hazards and consequent damage. Component failure due to inappropriate handling is not covered under the warranty.

Firmware Update Procedure

The following procedure must be followed to update the Canlan flash memory device with a new firmware image. All connections including power must be disconnected prior to beginning a firmware upgrade.

1

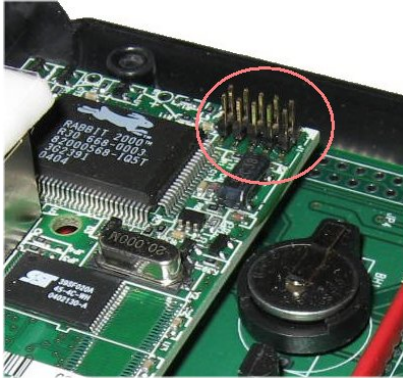
Opening the Canlan



Remove the top cover from the Canlan by removing the four screws in the base of the unit and gently lifting the cover.

Internally, the device consists of a lower base communications board and a smaller CPU PCB with an RJ45 connector. Both red and green colored PCB versions of the CPU module have been produced.



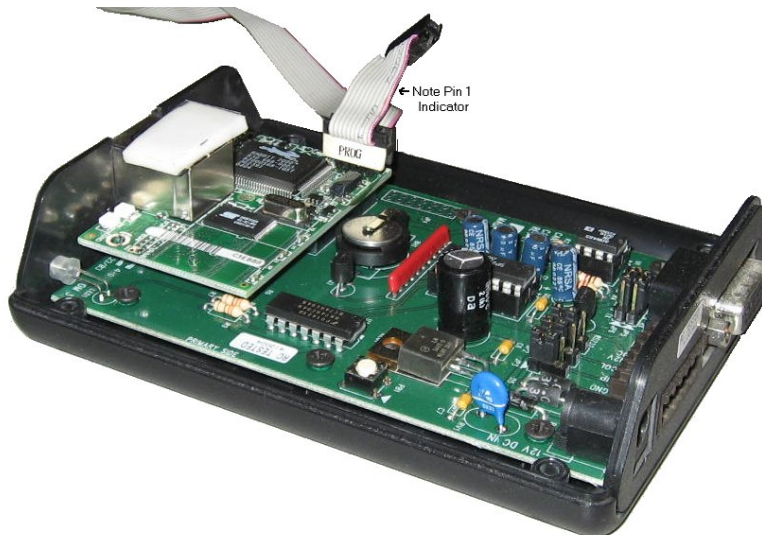


The flash programming interface is the 10 pin header **J1** located to the upper right corner in the image to the left.

The supplied 10 conductor programming cable has two header connectors labeled **DIAG** and **PROG** respectively as well as a female DB9 connector for connecting to the host PC. The **PROG** connector must be attached to the **J1** header on the CPU module as shown below.

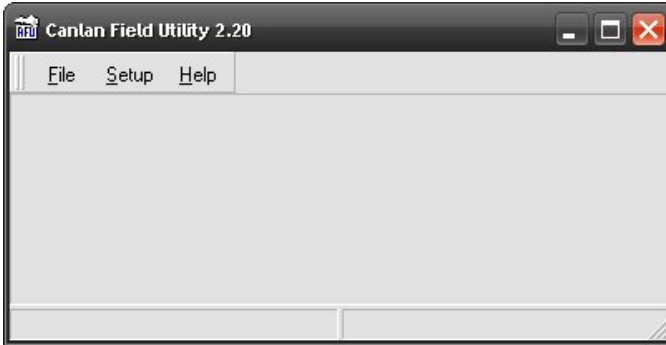


Ensure correct orientation of the cable by noting the location of the red colored conductor with respect to the 1 imprinted on the PCB. Also ensure that all 10 pins are seated within the header connector.

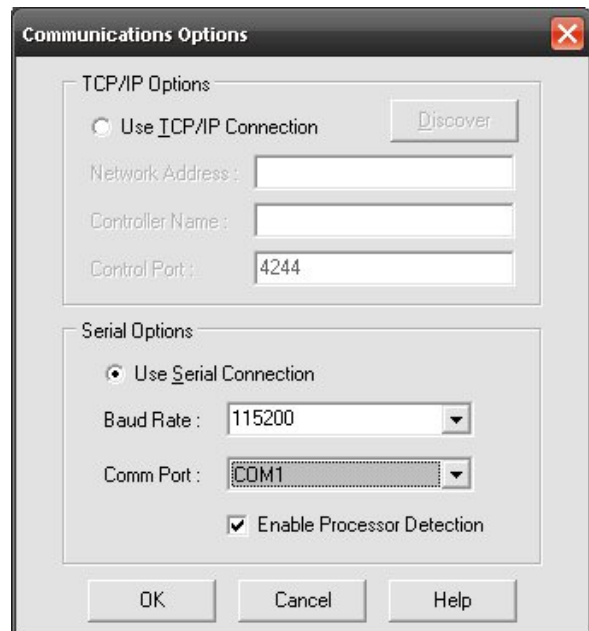


Once the programming cable has been properly attached, power may be re-applied to the device.

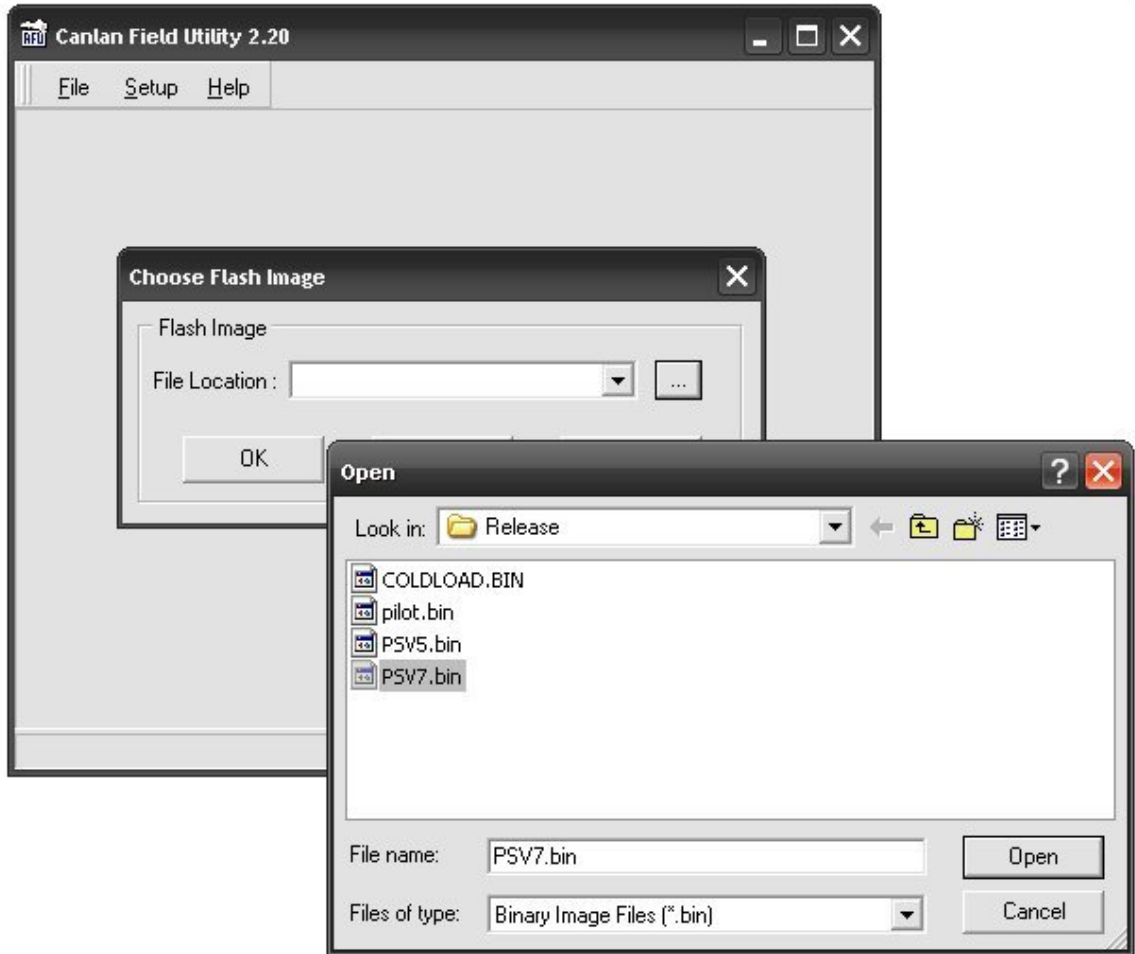
The supplied flash programming software can be accessed via the *Start Menu* under the *Canlan Flash Utility* menu item. Select the *Flash Utility* to run the software.



By default, the communications port is COM1, but may be changed via the *Setup, Communications* menu. The *Use TCP/IP Connection* option is **not** available for the Canlan and the *Use Serial Connection* must be selected. Please note that an actual serial port should be used since most USB based serial port emulators will not function with this utility.



Select the firmware to be loaded into the Canlan from the *File, Load Flash Image* menu item.



The browse button will reveal several files in the installation folder. The COLDLOAD and pilot bin files are boot strap modules that are sent initially during the flash process to erase and load the actual firmware code. Canlan firmware filenames are of the format PSVx.bin, where x represents the firmware version number. Once the bin file has been selected, press OK to initiate the firmware update process.

The upload dialog begins and the progress bar displays the current upload progress.



When the firmware has been successfully flashed into the controller, the upload dialog is closed. The application status bar can be used to verify successful completion by ensuring that the number of transmitted bytes equals the number of bytes to send as shown below.



An unsuccessful update will be reported via a popup window and will more than likely result due to bad or incompatible serial port emulators or hardware.

Remove the power connector followed by the programming cable and re-assemble the exterior case. Please note that the Canlan will not operate with the programming cable attached, so this step is necessary for final testing. When the case has been re-assembled and the power restored to the unit, the Canlan may have reset its internal IP address and other configuration information. Please refer to the Canlan Installation Guide for further information.