



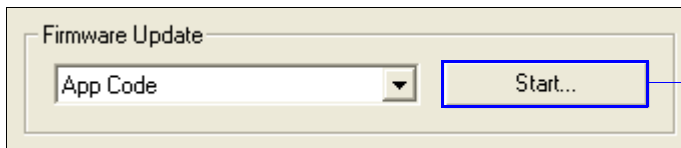
MS-1 (with Demo Board) Firmware Update Guide

Application code versions are specific to your MS-1. Consult with your sales representative before downloading application code. If needed, application code will be sent to you in the form of an *.mhx file.

Contact Microscan's help desk if you have difficulty downloading application code to the MS-1: helpdesk@microscan.com

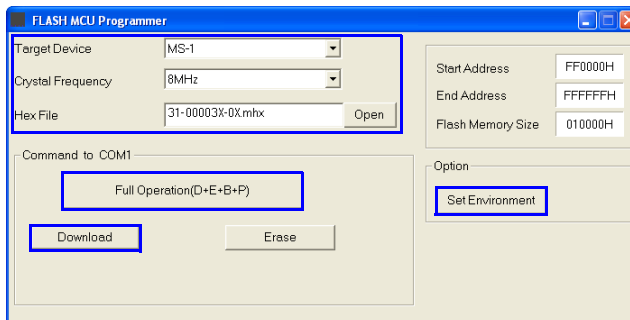
Downloading Application Code to the MS-1 with a Demo Board

1. Connect to the MS-1 via **ESP**.
2. Verify your current firmware using **Firmware Verification** in **ESP Utilities**.
3. Set the demo board's mode switch (**S2**) to the **ON (Firmware Update)** position (up; toward the scan engine).
4. Connect the demo board interface cable by plugging the RJ45 connector into the demo board and plugging the RS-232 connector into the host computer. Plug the 5VDC power supply into the DC jack on the demo board interface cable.
5. Click the **Start** button in **ESP Utilities** to open the firmware update utility.



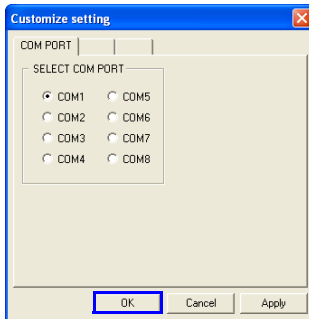
Click the **Start** button in **ESP Utilities** to open the firmware update utility.

6. Select **MS-1** from the **Target Device** dropdown menu.
7. Select **8MHz** from the **Crystal Frequency** dropdown menu.
8. Click **Open**, select the appropriate firmware file (**31-00003X-0X.mhx** file) and click **OK**.

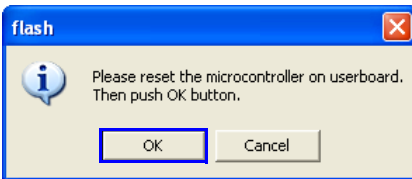


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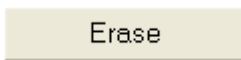
- Click the **Set Environment** button to bring up the COM Port menu.



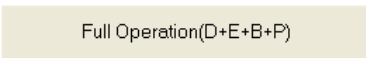
- Select the appropriate COM Port and click **OK**.
- Click the **Download** button. When the following dialog appears, cycle power to the reader (turn power off and then back on) and then click **OK** to continue.



- Click **OK** again once firmware is downloaded.
- Click the **Erase** button to clear old firmware.



- Click **OK** again when you see the dialog stating that old firmware has been erased.
- Click the **Full Operation(D+E+B+P)** button. When the dialog shown in step 11 appears, cycle power to the reader (turn power off and then back on), and then click **OK** to complete the download process.



- Click **OK** again when you see the dialog stating that the firmware download is complete.
- Return the mode switch (**S2**) to the **Decoded Operation** position (down; away from scan engine).
- Cycle power to the demo board (power-off and then power-on again) to begin MS-1 operation.
- Verify installation of the new firmware using **Firmware Verification** in **ESP Utilities**.
- If the firmware update procedure fails, check hardware and pinout connectivity, and repeat the procedure.

Caution: Do not interrupt power or disconnect the host cable while download is in progress. Be sure that each download is complete before moving on to the next.

Important: When updating firmware, be sure that the application code and boot code versions are mutually compatible.