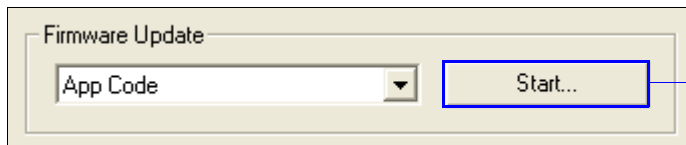




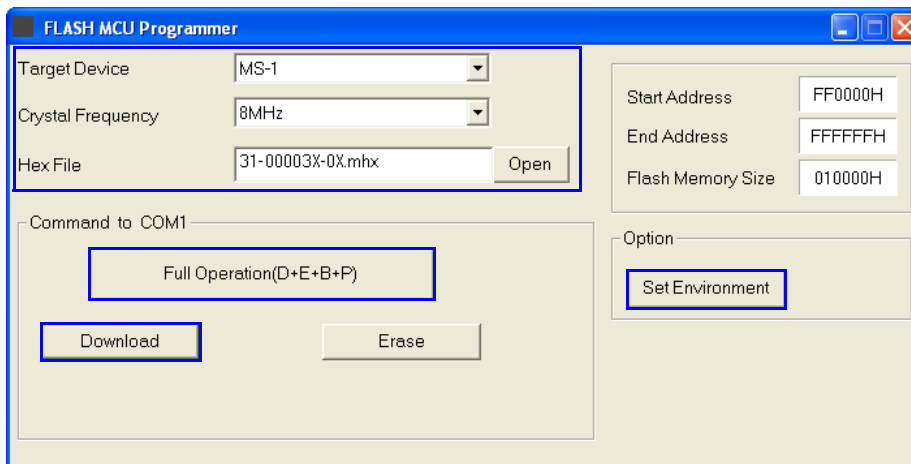
MS-1 Firmware Update Guide



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

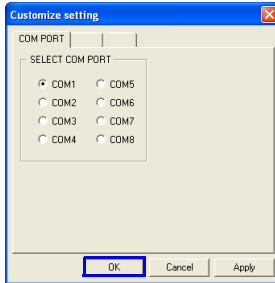
Hardware Signal Settings		
Pin	Decoded Operation	Firmware Update
Pin 8	High	Low
Pin 11	High	Low
Pin 12	High	High

1. Connect to the MS-1 via **ESP**.
2. Verify your current firmware using **Firmware Verification** in **ESP Utilities**.
3. Set **Pin 8**, **Pin 11**, and **Pin 12** of the MS-1 to **Firmware Update** status (see **Hardware Signal Settings** table above).
4. Select **MS-1** from the **Target Device** dropdown menu.
5. Select **8MHz** from the **Crystal Frequency** dropdown menu.
6. Click **Open**, select the appropriate firmware file (**31-000037-XX.mhx**) and click **OK**.

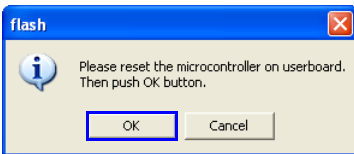


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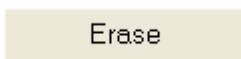
7. Click the **Set Environment** button to bring up the COM Port menu.
8. Select the appropriate COM Port and click **OK**.



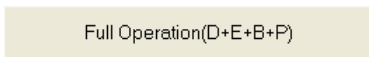
9. Click the **Download** button, pull **Pin 12** as a low trigger signal, and click **OK** to connect.



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



12. Click **OK** again when you see the dialog stating that old firmware has been erased.
13. Click **Full Operation(D+E+B+P)**. When the dialog shown in step 9 appears, supply a low trigger signal to **Pin 12** and then click **OK** to complete the download process.



14. Click **OK** again when you see the dialog stating that the firmware download is complete.
15. Set **Pin 8**, **Pin 11**, and **Pin 12** of the MS-1 to **Decoded Operation** status (see **Hardware Signal Settings** table on the previous page) and supply a low trigger signal to **Pin 12**.
16. Verify installation of the new firmware using **Firmware Verification** in **ESP Utilities**.
17. 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.