

X5 Firmware Update Manual

OCS – Bootloader Guide

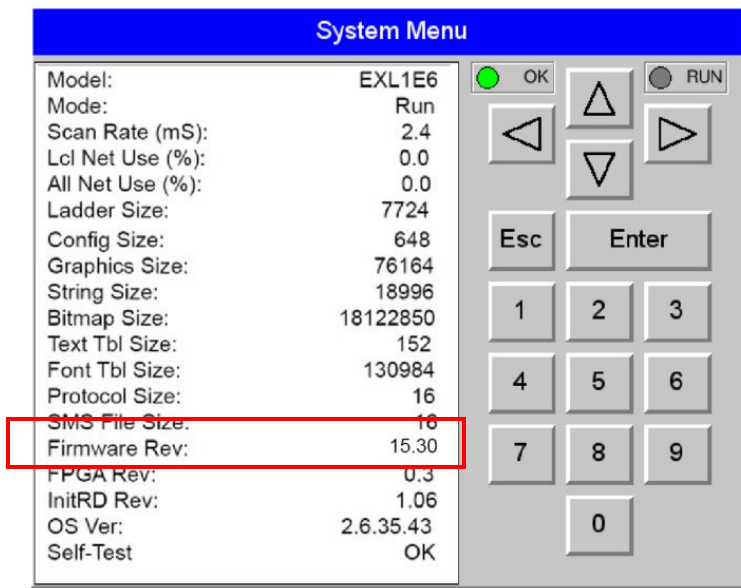
Introduction

This guide details how to update or change firmware on the Horner OCS Controllers. Updating firmware to the newest version adds new benefits to the controller. Also, changing firmware is necessary when changing communications between CsCAN and CANopen.

WARNING: Firmware updates should only be performed when the equipment being controlled by the OCS is in a safe, non-operational state. Communication or hardware failures during the firmware update process can cause the controller to behave erratically resulting in injury or equipment damage. Make sure the functions of the equipment work properly after a firmware update before returning the device to an operational mode.

How to Check for Current Firmware Revision

To check the firmware revision on a controller, open **System Menu** → **View Status**.



Details

Note: Updating firmware will clear the application program, screens, configurations, and register data. If required, make sure to backup program and register data before updating firmware. The controller's User Manual has instructions for doing backups.

There are three methods for updating firmware. The method used depends on the type of controller being updated.

Method A: Removable Media Method – The controller firmware is updated by a bootloader, using a microSD card or USB Flash drive (**not through the Cscape Firmware Update Wizard**). To update or change firmware:

- 1) Download desired Firmware set from the Horner APG website. (Verify CsCAN or CANopen communications.)
- 2) Save Firmware files to microSD card or USB, these are the removable media devices.
- 3) Update the firmware through the controller's Firmware Update function

NOTE: Files from the Horner website come as a .ZIP file which need to be unzipped and placed in the root of the drive for them to function properly.

Method B: RS232 Serial Connection – Serial firmware updates are done from Cscape software to the controller's primary serial port, MJ1 in most cases.

Method C: Mini USB Port – The mini USB port can be used to update firmware in the X2, X4 & X7 as well as the XLE and XLT series. This is quicker than doing so via MJ1.

STEP ONE:

In North America, visit <https://hornerautomation.com>. Go to **Support → Controller Firmware** and download the most recent firmware set with the correct communication protocol and controller.

-OR-

In Europe, visit <http://www.hornerautomation.eu/support/firmware>. and click the **Firmware** tab and download the desired firmware. Create an account to enable access to the latest firmware updates.

Firmware Update for X5

- 1) Update firmware in an X5 by completing the following steps:
 - a. Unzip all files from downloaded .zip file onto removable media.
 - b. Plug removable media into a powered-up controller.
 - c. Touch the upper-right-hand screen corner to slide out the control panel.
 - d. Press and hold the **SYSTEM** key until the **Boot Installer** screen appears. Select System upgrade option. Boot Installer screen appears.
 - e. Press the **Install Bootloader** button and then press **Yes**.
 - f. When **Operation Completed** appears, press **OK**.
 - g. Power-cycle the controller and wait for it to boot up.
 - h. Touch the upper-right-hand screen corner to slide out the control panel.
 - i. Press **SYSTEM** key, select **View Status** and press the **Enter** button.
 - j. If any of the version numbers are incorrect, verify the correct files were copied to the removable media device and repeat the steps above.

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