

# Updating Controller Firmware

## XL4, XL7, and ZX OCS Models – Boot Loader Guide

### 1. INTRODUCTION

This guide details how to update or change firmware on the XL4, XL7, and ZX 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.

### 2. OVERVIEW

The XL4, XL7, and ZX 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.
- 3) Update the firmware through the controller's Firmware Update function

### 3. DETAILS

- 1) Visit [www.heapg.com](http://www.heapg.com) and click **LOG IN** (an account is required to access firmware updates, create one if necessary). Go to **Support→Controller Firmware** and download the most recent firmware set with the correct communication protocol.

**-OR-**

Visit <http://www.horner-apg.com/en/download/ocs.aspx> and click the **Firmware tab**. In and download the desired firmware (an account is required to access firmware updates, create one if necessary).

**Note: The following process will clear the application program. Make sure to back up before updating firmware.**

- 2) Update firmware in an XL4e or XL7e by completing the following steps:
  - a. Unzip all files (from step 1's downloaded .zip file) onto a Micro SD card.
  - b. Plug the Micro SD card into a powered-up XL4e or XL7e
  - c. Press and hold the **SYSTEM** key until the **Boot Installer** screen appears.
  - d. Press the **Install Bootloader** button and then press **Yes**.
  - e. When **Operation Completed** appears, press **OK**.
  - f. Power-cycle the XL4e or XL7e and wait for it to boot up.
  - g. Press **SYSTEM**, select **View Status** and press the **Enter** button.
  - h. Scroll down to see the versions numbers, which should be:

**Firmware Rev: 14.02**  
**FPGA Rev: 0.3**  
**InitRD Rev: 1.02**  
**OS Ver: 2.6.35.30**

**Note: Different firmware versions will reflect different values.**

- i. If any of the version numbers are incorrect, verify the correct files were copied to the Micro SD card and repeat steps b through h.

- 3) Update firmware in a ZX by completing the following steps:
- a. Unzip all files (from step 1's downloaded .zip file) onto a USB Flash drive.
  - b. On the USB Flash drive, rename one of the following files to **syslinux.cfg**:

**syslinux.cfg\_zx452** [to upgrade a 7" ZX452]  
**syslinux.cfg\_zx752** [to upgrade a 15" ZX752]  
**syslinux.cfg\_zx1152** [to upgrade a 22" ZX1152]

- c. Plug the USB Flash drive into a powered-up ZX.
- d. Touch the upper-right-hand screen corner to slide out the control panel.
- e. Press and hold the **F5** key until the **Boot Installer** screen appears.
- f. Press the **Install Bootloader** button and then press **Yes**.
- g. When **Operation Completed** appears, press **OK**.
- h. Power-cycle the ZX and wait for it to boot up.
- i. Touch the upper-right-hand screen corner to slide out the control panel.
- j. Press **SYSTEM**, select **View Status** and press the **Enter** button.
- k. Scroll down to see the versions numbers, which should be:

**Firmware Rev: 14.02**  
**BIOS Rev: (Depends on Model)**  
**CAN Rev: 0.05**  
**InitRD Rev: 1.01**  
**OS Ver: 3.1.4-01**

**Note: Different firmware versions will reflect different values.**

- l. If any of the version numbers are incorrect, verify the correct files were copied to the USB Flash drive and repeat steps c through k.

#### 4. TECHNICAL SUPPORT

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