RCC2414
Firmware Update Manual

1. 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.
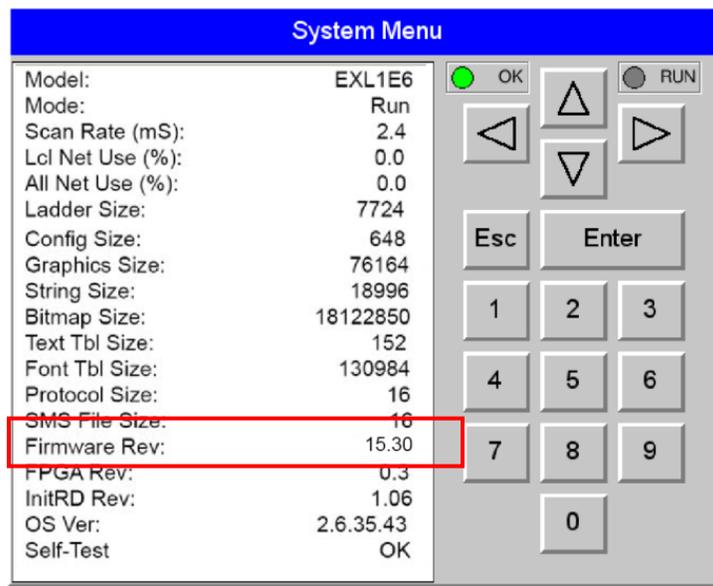
2.   Resources

For further information on this controller, please refer to the following documents on our website: www.hornerautomation.com .

User Manual for RCC Series: **MAN1078**
Datasheet for RCC2414: **MAN1033**

3.   How to Check for Current Firmware Revision

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

4. 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.

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.

5. Firmware Update for RCC Controllers

LED - Normal Functionality

LED	Off	ON	Flash (1Hz)
PWR	No power applied	10-30Vdc applied	
OK	Self test fail	Self test pass	I/O forcing enabled.
RUN	Stop mode	Run Mode	Do I/O Mode.

Switch - Normal Functionality:

A. Load Switch
1. Pressing the **LOAD** switch during power-up boots from the microSD card. This starts a Firmware Load if the microSD is bootable and valid firmware files are found on it.
2. After boot-up, pressing the LOAD switch for three (3) seconds will load an Application file stored on the microSD. The application file name must be DEFAULT.PGM. When loading an application file from microSD, there should not be firmware files present on the microSD card. NOTE: When pressing the LOAD switch for three seconds after boot-up, if firmware files present on the microSD card, it can trigger a firmware update that may not properly complete.

B. Run/Stop Switch

1. After boot-up, pressing the **RUN/STOP** switch for three (3) seconds toggles the RCC between RUN and STOP modes.

6. Technical Support Contacts

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