

Firmware Update Manual: Canvas

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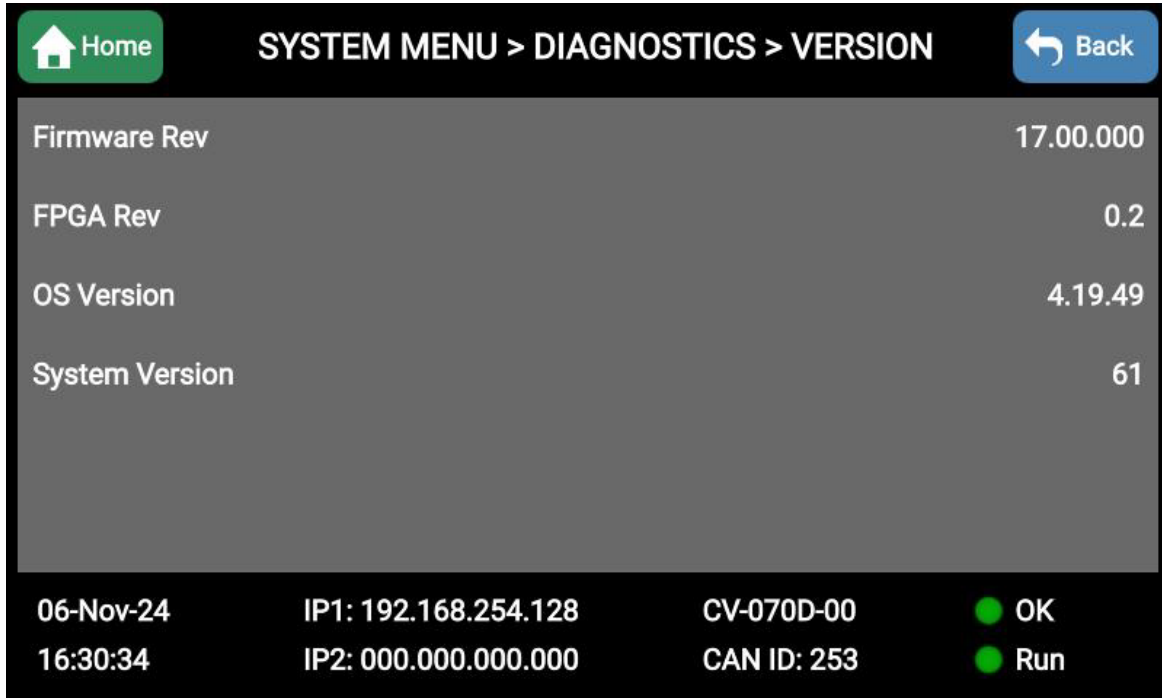
Introduction

Use these instructions to update or change firmware on the Horner OCS Canvas Controllers.

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. Confirm that the functions of the equipment work correctly following a firmware update before returning the OCS to operational mode.

How to Check for Current Firmware Revision

To check the firmware revision (Rev) on a controller, open **System Menu > Diagnostics > Version**.



The screenshot displays the 'SYSTEM MENU > DIAGNOSTICS > VERSION' screen. At the top left is a 'Home' button with a house icon, and at the top right is a 'Back' button with a left arrow icon. The main content area lists the following information:

Firmware Rev	17.00.000
FPGA Rev	0.2
OS Version	4.19.49
System Version	61

At the bottom of the screen, there is a status bar with the following details:

06-Nov-24	IP1: 192.168.254.128	CV-070D-00	● OK
16:30:34	IP2: 000.000.000.000	CAN ID: 253	● Run

Upgrading Firmware for Canvas Series


NOTE: Use a FAT-formatted single-partition microSD card.

It is essential that there is no bootable partition or associated boot files on the card or drive.

1. Download the zipped folder from the firmware website:
<https://hornerautomation.com/controller-firmware-cscan/>

NOTE: When the file downloads, it will have the following name (or a variation thereof):
FWXX.XX_Canvas_fullset.zip (The initial filename is preceded by a version number so that the user knows what version is being downloaded.)

2. Extract the folders from the zipped file
3. Copy the following zip file into the root directory of the microSD card.

 Canvas_fullset

4. Insert the microSD card into the Canvas OCS.
5. Use one of the following methods to update the firmware:
 - [System Menu](#)
 - [System Register Bits](#)

Firmware Upgrade Using the System Menu

1. Insert the microSD card into the Canvas OCS.
2. Press and hold the **System** button for several seconds to display the **System Recovery** screen.
3. Select **System Upgrade SD**.

NOTE: The firmware upgrade begins after a brief announcement.

System Register Bits Used for Firmware Upgrade

- %SR154.9 - Set by user to upgrade firmware using microSD card.
- %SR154.10 - Set by user to upgrade firmware using USB.
- %SR154.11 - Set by firmware to request confirmation for upgrading firmware, resetting %SR154.9 / %SR154.10. When user resets SR154.11, the upgrade process begins.
- %SR154.12 – Setting this bit high (ON) will not retain programs / variables after firmware update. Setting this bit low (OFF) will retain programs / variables after firmware update.
- %SR154.14 – If the firmware upgrade is not required, then %SR154.14 will be set. For example: In case firmware on OCS and on the microSD / USB is same.
- %SR154.15 – This bit will be set by firmware if there is any error in updating firmware such as a missing firmware file.

User Configurable Splash Screen

A custom splash screen can be updated on the Canvas OCS units.

NOTE: The user must create the **splash.jpg** with the correct resolution as per the model used.

OCS	Resolution
Canvas 4	320x240
Canvas 5	480x272
Canvas 7	800x480
Canvas 7D	800x480
Canvas 10D	1024x600

1. The custom splash screen must be a .jpg image file with the filename **splash.jpg**.
2. Place the custom files on a microSD card, then into the OCS.
3. Press and hold the **System Key** until the **System Recovery Screen** is displayed.
4. Select **Replace System Graphics SD** to replace the splash screen from a microSD card.

User Configurable Splash Screen, continued

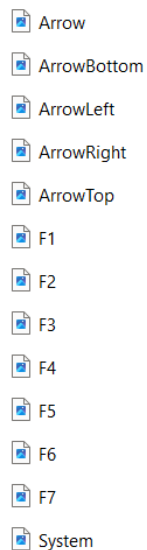
User-created splash screen and function keys can also be updated on the Canvas OCS units.

Users must replace the .PNG images located in the **keys** folder of the Canvas firmware files. Only the **keys** folder is required from the Canvas firmware files.

Note: The **keys** folder can be found at **Canvas_fullset > Options > keys**.

Important! Replacements can be made to the following customizable images and must:

- be named exactly the same as the original images,
- saved as a .PNG image inside the keys folder
- saved as a 60x60 resolution



1. Place the keys folder into the root directory of a microSD card.
2. Insert the MicroSD card into the OCS.
3. Press and hold the **System Key** until the **System Recovery Screen** is displayed.
4. Select **Replace System Graphics SD** to replace the splash screen from a microSD card.

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