CC Linux – System update using uuu

CC Linux application note

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Contents

Revision history

| Rev	Date	Comments
PA1	2022-06-20	For review
FG	2023-11-21	Finalize
FG	2024-02-21	Update

1. Introduction

This document covers the installation/upgrade of the Operation Systems on Vision series namely CCpilot V510, V700, V710, V1000 and V1200 display computers.

The uuu tool method (Universal Update Utility) is used to update the entire system at once (bootloader, main + rescue Linux kernels, and main + rescue filesystems). These updates are released as *.zip* archives in the following format:

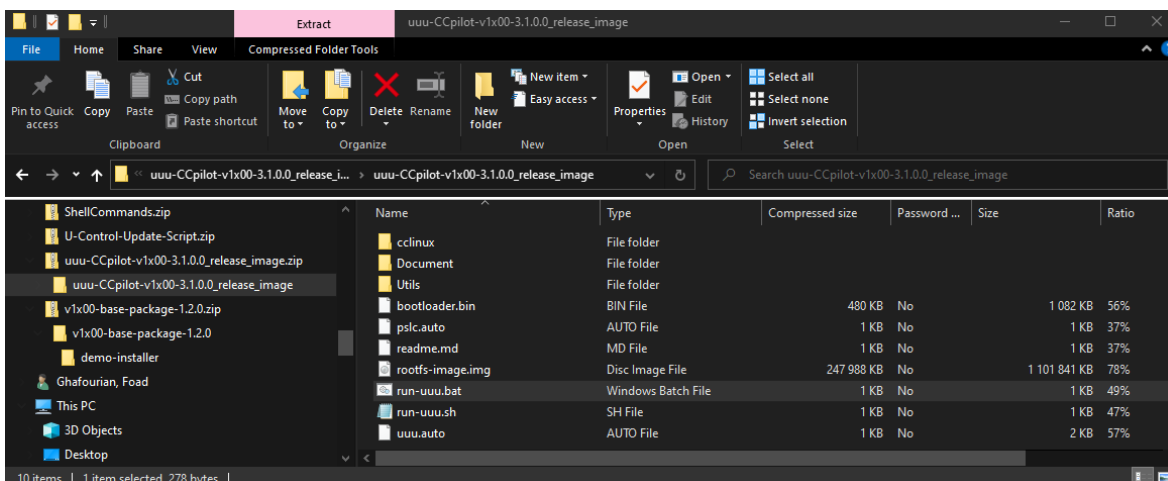***uuu-CCpilot-<DeviceName>-<OS-version>_release_image.zip***

As an example, below is the .zip image file for a CCpilot V700 display with the OS version 3.3.0.4:
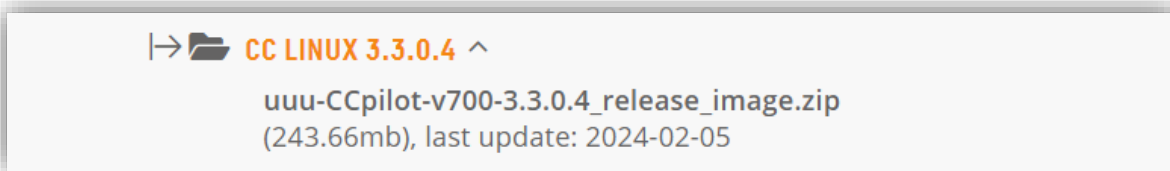
Downloads website for our CCpilot V700: CCpilot V700 Downloads

This method uses the uuu tool which is run on a Windows host PC. The program is made freely available by NXP and is also included in the above mentioned *.zip* file.

This is the content of the *.zip* file, containing the OS installation files and uuu-method files.

Contents of the uuu-CCpilot-v1x00-3.1.0.0_release_image.zip
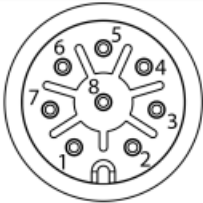
2. Preparation

⚠️ Observe that this update will remove all the user files and data. Please make sure to perform a proper backup before continuing!

1. Unpack the .zip containing the new image on a Windows host PC

2. You will need a male-male USB2 or USB3 to be able to connect the CCpilot display to your host PC

3. Cable needed to power the device into *"serial-download-mode"* by:

   a. Using our cable-dev-kit:
      Power connection cable with three banana-plugs, power (red), ignition (yellow), force (green) and ground (black) cable.
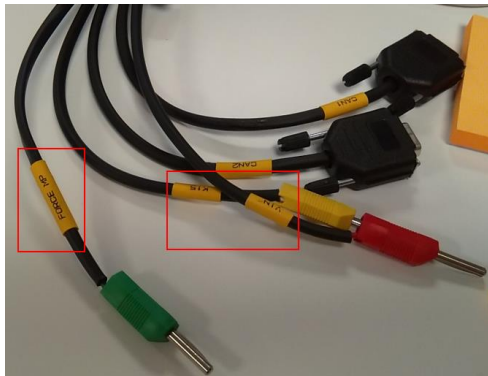
Banana-plugs

   b. Or create your own cable set, this is the pinout for the power cable:

	Power and CAN M12 Connector Matching plug: Female, 8-pin, A-coded with shield	
Pin	**Signal**	
1	Power supply	
2	Ground	
3	*Force pin for USB serial download mode of the i.MX 8X	
4	Key switch signal	
5	CAN1 high	
6	CAN1 low	
7	CAN4 high	
8	CAN4 low	

Table 5: Power and CAN M12 connector pinout

*Pin for forcing the USB serial download mode of the i.MX 8X for flashing of boot and/or image. Active high. Leave floating or grounded for normal operation.

M12 pinout from the Technical_manual: [CCpilot V700 - Technical manual](#)

3. Update procedure

1. Remove both power and ground from your CCpilot display

2. Power the device into "serial-download-mode" by connecting power (red), ignition (yellow) and force (green) cables to the power supply

3. Connect the USB male-male to the display and then to your PC

⚠️ Note: On CCpilot V1000 and V1200 the male-to-male USB cable needs to be connected through the USB-C connector on the back of the device!

Figure 3: CCpilot V1000/V1200 rear side view
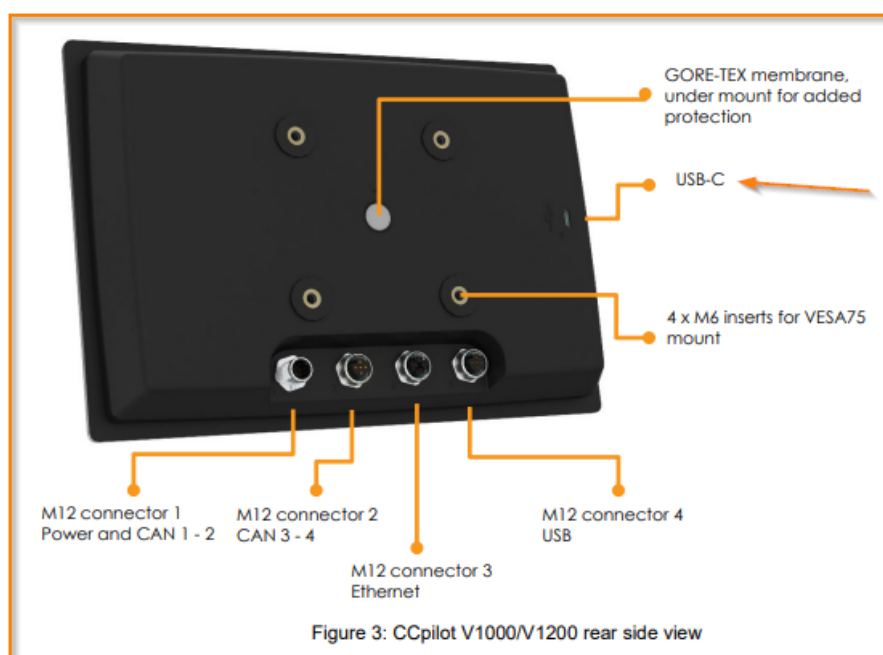
4. Connect ground (black) cable to power supply ground

5. The screen will be turn black and led will be flashing green

6. Optional: Use *Zadig* (https://zadig.akeo.ie/) to check that the device has been correctly recognized in "serial-download-mode"

   a. Download and open *Zadig*

   b. Select "List All devices" from the options menu

   c. Locate "SE Blank 8QXP" from the dropdown list

7. Run *"run-uuu.bat"* on the host PC

   A cmd window opens in your PC, detecting the device and shown in the output, it says to cycle the target power and press Enter to continue in the cmd window as the image below

⚠️ If the status of the command *ucmd mmc hwpartition …* is *Fail*, the error can be ignored. It does not affect the installation.

8. Cycle power by unplugging and plugging back the ground (black) cable

   Here you will see a status percentage bar at the left bottom om the window, when it is 100% and done the cmd windows will be close automatically, which means the device was updated successfully.

9. Restart the CCpilot display

   a. Remove power to the display

   b. Remember to remove the force pin (green) and remove the USB cable

   c. Power up the board as usual.

Technical support

Additional sources of information are available on the CrossControl support site:
https://crosscontrol.com/support/
You will need to register to the site to be able to access all available information

Contact your reseller or supplier for help with possible problems with your device. To get the best help, you should have access to your device and be prepared with the following information before you contact support.

- The part number and serial number of the device, which you can find on the brand label.

- Date of purchase, which can be found on the invoice.

- The conditions and circumstances under which the problem arises.

- Status indicator patterns (i.e. LED blink pattern).

- Prepare a system report on the device, using CCSettingsConsole (if possible).

- Detailed description of all external equipment connected to the unit (when relevant to the problem).

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