

REVOLUTION PI

Release Notes
Buster for RevPi Core (including Core
SE), RevPi Connect (including Connect
SE), RevPi Compact and RevPi Flat

KUNBUS GmbH

1 Release Notes Buster 01/2023 (Core SE Release)

Support for Core SE

The image contains updates of the kernel and of many packages to support the new RevPi Core SE. The kernel contains bugfixes which benefit the entire RevPi product line.

Raspberry Pi OS Buster

As before, our image is based on Raspberry Pi OS 2022-09-26, which in turn is based on Debian Buster. Therefore, basic features of the OS remain identical (e.g., suite of the APT repository, system identification in the file `/etc/issue`). More details about Raspberry Pi OS updates are available at https://downloads.raspberrypi.org/raspios_oldstable_armhf/release_notes.txt.

Based on the Raspberry Pi OS, we have performed certain customizations such as removing unnecessary packages, adding APT repositories and installing customized packages from KUNBUS. More details are available at <https://github.com/RevolutionPi/imagebakery>.

The image includes all package updates released by the Raspberry Pi Foundation until January 2023 and released by the Revolution Pi project until January 2023. It comes with kernel 5.10.152-rt75.

Third-party Software

No updates.

revpi-hat-EEPROM

The revpi-hat-EEPROM tool was created in order to provide a board specific configuration. For future products the customer doesn't need to provide any information to the revpi-factory-reset script.

All information is located in the EEPROM. The repository for this tool is here: <https://github.com/RevolutionPi/revpi-hat-EEPROM>.

The <https://github.com/RevolutionPi/revpi-hat-EEPROM/blob/master/docs/RevPi-HAT-EEPROM-Format.md> describes the content of the HAT EEPROM on a RevPi.

The "revpi-EEP" tool can be used to create an image which is compatible with the RevPi-HAT-EEPROM-Format. As input the tool needs a configuration file in json format. The json format is described here: <https://github.com/RevolutionPi/revpi-hat-EEPROM/blob/master/docs/JSON-Format.md>.

We maintain a repository with template configuration files for all supported products: <https://github.com/RevolutionPi/revpi-hat-data>.

The EEPROM should only be read by the bootloader. At runtime most data are accessible through the procfs (`/proc/device-tree/hat/`). See <https://github.com/RevolutionPi/revpi-hat-EEPROM/blob/master/docs/RevPi-HAT-EEPROM-Format.md> for more details.

revpi-modbus

We have released revpi-modbus packages in version 1.1.0-1. Several optimizations have been performed. The license was changed to GPL-2.0.

piserial

piserial has been cleaned up. Factory reset was adjusted for devices with HAT EEPROM and the device types are now recognizable in the devicetree, thus

some operations can be skipped during the revpi factory reset stage.

For further information please take a look at <https://github.com/RevolutionPi/piserial/blob/raspios/buster/debian/changelog>.

revpi-tools

revpi-tools was released as version 2.0.1-2 and like piserial, revpi-tools was also restructured. Support for newer versions of the RevPi Core 3+/S/SE has been added. Furthermore, on RevPi Flat devices, the unused HDMI output is now automatically disabled during boot to save power. Fixed an upgrade issue when using apt-get upgrade.

raspberrypi-kernel

The package raspberrypi-kernel was released in version 9.20221118-5.10.152+revpi1 with patches for several "Common Vulnerabilities and Exposures" (CVEs) regarding WLAN: CVE-2022-41674 (RCE) CVE-2022-42719 (RCE) CVE-2022-42720 (RCE) CVE-2022-42721 (DoS) CVE-2022-42722 (DoS).

The new release also add support for RevPi HAT EEPROMs in the form of a device tree overlay and some adjustments in piControl. In piControl an issue has been fixed whereby IOs were not or were incompletely stopped when using the "piTest -S" command. With this fix the input values of attached devices will not be written to the process images, when an IO stop was issued.

Additionally, it is now possible to build the kernel package for the arm64 architecture. The default build target is still armhf.

More details can be found in the official changelog:
<https://github.com/RevolutionPi/kernelbakery/blob/master/debian/changelog>.