



PYXIS R  
7" SMART DISPLAY MODULE

USER MANUAL

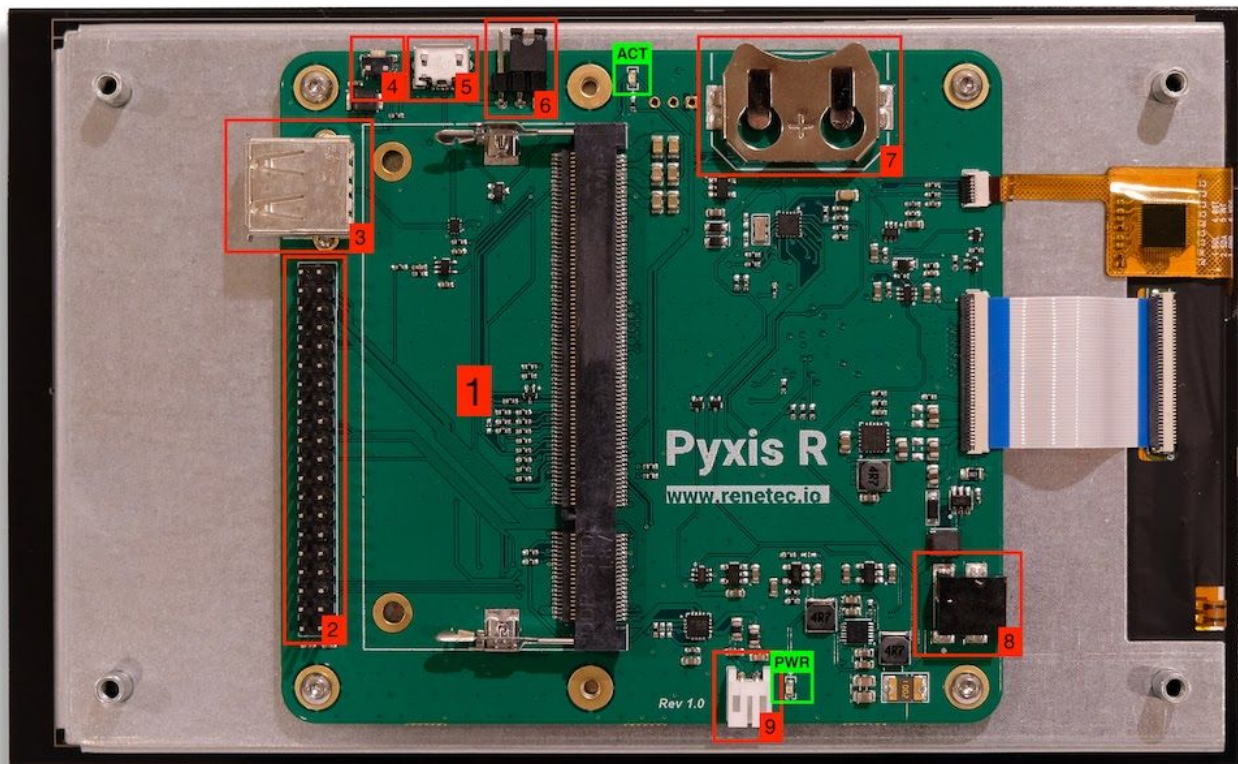
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## COMPATIBILITY

The module is compatible with all versions of Raspberry Pi CM3+ with onboard eMMC Flash.

## HARDWARE DESCRIPTION



- 1 - Raspberry Pi CM3+ slot
- 2 - 40-pin Raspberry Pi GPIO header
- 3 - USB 2.0 host connector
- 4 - Multi-purpose button
- 5 - Micro-USB device connector (for flashing CM3+ eMMC)
- 6 - Boot / flash selection jumper
- 7 - RTC battery holder
- 8 - DC power barrel connector
- 9 - Speaker output connector

LEDs:

PWR - power

ACT - activity

## Multi-purpose button

The button (4) is connected to GPIO21 of the Raspberry Pi. With Pyxian OS the button is used to access the system menu.

## Audio

Digital amplifier MAX98357A is connected to the PCM interface on GPIO pins 28, 29, 31.

## Real-Time Clock

The functionality is not currently supported but will be enabled with a future software update.

## SOFTWARE

### Getting OS image

Supported operating systems are available to download in the corresponding section of the product page: <https://www.renetec.io/pages/pyxis-rpi-display-module>.

### Pyxian OS

Pyxian is a pre-build OS image with Pyxis SDK. It is optimized for full-screen kiosk-mode web applications and web-based embedded GUI applications. Pyxian is a recommended OS for the Pyxis display module.

### Raspberry Pi OS

Even though it is possible to install an official OS image from Raspberry Pi Foundation, multiple additional steps are required to make the display work. Instead, a pre-packed image from our web-site must be used. It contains all necessary hardware support.

There are two versions of Raspberry OS that we actively maintain and keeping up-to-date with official releases:

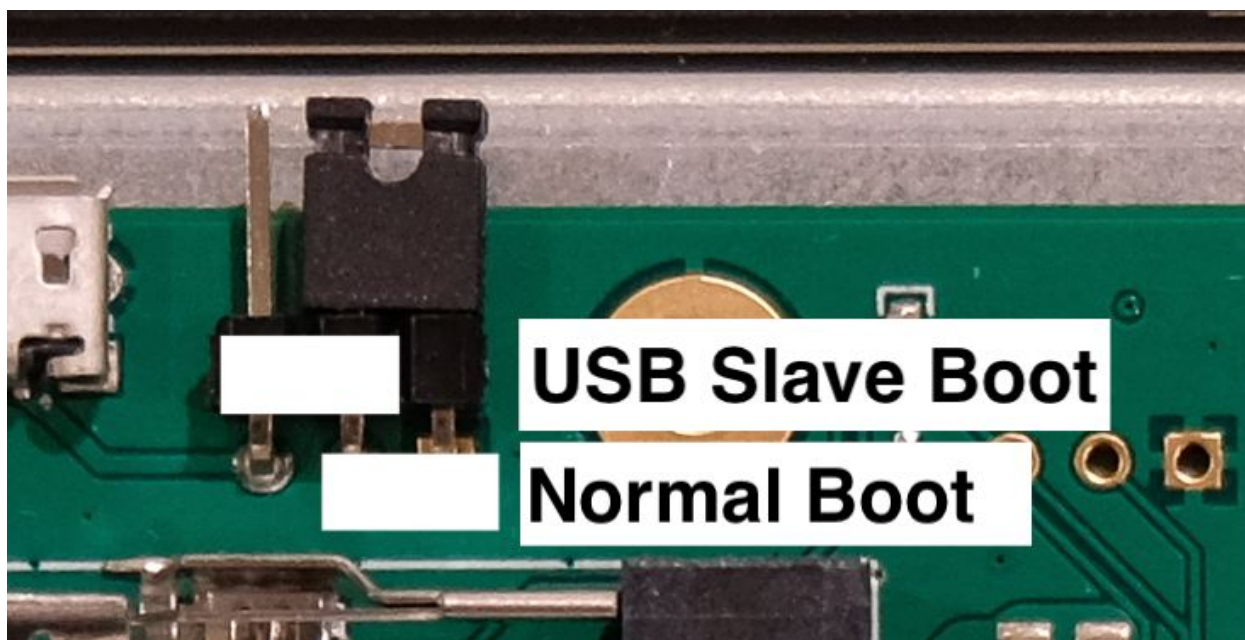
- Raspberry Pi OS Lite, without the desktop environment.
- Raspberry Pi OS Desktop, with desktop environment but without extra software.  
Additional software should be installed separately if desired.

## Flashing the image into eMMC flash

For flashing the image, please follow the official instructions from Raspberry Pi foundation here:

<https://www.raspberrypi.org/documentation/hardware/computemodule/cm-emmc-flashing.md>

USB slave boot mode is enabled with the jumper:



The first boot takes several minutes, as the OS expands the file system. Please don't interrupt the power during this process and allow it to finish.

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