Hardware for 4273π

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4273π, Version 1.4. http://4273pi.org

Below are a few points, intended to be helpful, which we make without any endorsement. For a more detailed guide, see the list of peripherals for the Raspberry Pi at http://elinux.org/RPi_VerifiedPeripherals. If questions remain, the Raspberry Pi forum at http://www.raspberrypi.org/forums is extremely helpful.

Raspberry Pi

We tend to test 4273π with the Raspberry Pi 1 Model B and the Raspberry Pi 2 Model B. We are sure that the Raspberry Pi 1 model B+, Raspberry Pi Zero and Raspberry Pi 3 will also work fine.

4273π is also expected to work on the Raspberry Pi 1 Model A and Raspberry Pi 1 Model A+, though this has not been tested.

SD card or microSD card (depending on model of Raspberry Pi)

4273π requires this to be 32 GB in size.

Monitor cable

Monitors with digital input

For a monitor with an HDMI input socket, a standard HDMI-HDMI cable should work. For a monitor with a DVI-d input socket, a standard HDMI-DVI cable should work.

<u>Monitors with VGA input</u>

If the monitor has a digital input, it is easiest to use it (see above). However, many projectors and older monitors only have VGA inputs.

Before making a large purchase of HDMI-VGA converters (e.g. for a classroom), we suggest you obtain just one and test it with your monitors first. This will reduce expense if it happens not to work.

We have found this HDMI-VGA converter cable to work in almost all cases:

Cable Matters Gold Plated Premium HDMI to VGA Active. Amazon UK, B007SM7O2U.

Occasionally, with the Cable Matters converter, the overscan must be changed on the Rasbperry Pi. This is a relatively simple configuration change (see the README file, distributed on the 4273π Web site and with the 4273π SD card image).

As a lower-cost alternative, this HDMI-VGA converter cable should also work:

Camac HDMI TO VGA Cable Adapter for PC Laptop Power-Free, Raspberry Pi, MHL support. Amazon UK, B0088K7QUQ.

However, in the case of the Camac converter, add or uncomment the following lines in `/boot/config.txt` on the Raspberry Pi:

```
hdmi_drive=2
hdmi_group=2
hdmi_mode=16
hdmi_force_hotplug=1
disable_overscan=0
```

These settings should force display output by the Raspberry Pi, at the reduced resolution of 1024x768.

USB stick

A USB stick is highly recommended for backup. We suggest this should be 32 GB, to match the SD or microSD card.