![Yawarra Tiny Computers logo]

APU 1

Quick Start Guide

Thank you for purchasing an APU 1 computer.

Your package should contain:

❑ APU 1 board

Optional Extras

❑ Case
❑ SD card
❑ miniPCIe card(s)
❑ Pigtail(s) and antenna(s)
❑ Power supply

Please read the following instructions to begin using your APU 1.

Things you will need

Tools

- Anti-static wrist strap
- 2mm hex key (supplied)
- SD card reader (optional)
- Null modem cable (optional)

Materials

If you don't have them already, you'll need:

- Case
- SD Card
- miniPCIe cards (optional) e.g. wireless adapter
- Power supply
- Operating system image for the APU 1

Instructions

Safety Note

The APU 1 board, like all electronic equipment, is sensitive to damage from static discharge. To avoid damage caused by static discharge, we strongly recommend that you use an anti-static wrist strap when handling the board.

Step 1   Remove the case (APU 1 server)

To install the SD and/or miniPCIe cards into the APU 1, you will need to remove the board from the case.

1. Disconnect power and all cables.
   Note: The SD socket on this machine is not hot-swappable.
2. Remove the four screws from the end plate on the rear of the case (the end with the ethernet and serial ports).
3. Holding the board by the serial port, carefully slide the board out from the case.
   Note: You do not need to remove the end plate from the board to set up your APU 1 box. To remove the end plate from the board, remove the serial port screws.

Step 2   Configure and install an SD card

To use your APU 1, you will need to have an SD card with a suitable operating system installed in the SD socket on the APU 1 board.

If your SD card does not already have an operating system installed, you can either mount the SD card in another machine (e.g. via a flash card reader) and copy a boot image onto it, or network boot the APU 1. The APU 1 supports many operating systems including BSD, Linux and a number of proprietary operating systems.

Installation

Insert the SD card into the socket on the front right hand side of the board, label up. Ensure the SD card is fully engaged in the socket. The card should not extend past the edge of the board.

Removal

To remove the SD card from the APU 1 board, grasp the SD card firmly between thumb and index finger and pull straight out, taking care not to lift or twist the card as this may damage the connector pins.

Step 3   Install the SIM card (optional)

From the front of the board, gently slide your SIM card into the slot, connector side up, notched end first. Push firmly until you hear a small click. Release pressure and the card will spring back slightly and stop. To remove, push firmly until you hear a small click and the card will slide out so that it can be grasped between thumb and forefinger and pulled out.

Step 4   Install the miniPCIe card(s) (optional)

Insert your miniPCIe card into the miniPCIe slot at an angle of about 45° to the board. Ensure that the card is firmly seated in the slot and then lay it onto the board, pressing down until the locking tabs on either side of the card click into place.

If you are installing a wireless card, please note that like all electronic equipment, they are sensitive to damage from static discharge, especially the RF switch and the power amplifier. To avoid damage caused by static discharge, we strongly recommend that you do the following when installing a wireless radio card.

*   Touch your hands and the bag containing the wireless card to a ground point on the board (for example one of the holes in the corner of the board). This will equalize the potential of the wireless card and board.
*   Insert the radio card into the miniPCIe slot on the board.
*   Install the bulkhead end of the pigtail into the case. This will ground the pigtail to the case.
*   Touch the u.fl end of the pigtail to a ground point on the board to discharge any static, then attach the u.fl end to the connector on the wireless card.

Step 5   Install the pigtail(s) (optional)

Remove the rubber blanking plug from the punchout in the end plate and insert the SMA pigtail. Screw the pigtail retaining washer and nut onto the pigtail to secure it to the case.

Attach the u.fl end of the pigtail to the connector on the wireless card.

Step 6   Reinstall the board into the case (APU 1 server)

Before you can begin using your APU 1, you will need to reinstall the board into the case.

1. Slide the board, with end plate attached, back into the case, ensuring that the edges of the board are inserted into the slots in the sides of the case.
2. Insert the end plate screws and tighten.

EMC Compliance

Please note that in order to comply with ACMA emissions regulations, the APU 1 board must be housed in a suitable metal enclosure.

Step 7   Attach the antenna(s) (optional)

Screw the antenna onto the pigtail and position as required.

Step 8   Connect to the serial console (optional)

If you want to configure your operating system via the console, you will need to connect to the serial port via a null modem cable.

Your terminal emulator should be set to 115200 baud, 8 bits, no parity, 1 stop bit, no flow control.

Step 9   Apply power

Plug the power supply into the DC jack on the APU 1. The APU 1 boards run on 12V DC, and use about 6-12W (excluding miniPCIe cards and peripherals). You'll need a power supply with a 2.5mm internal, 5.5mm external, centre positive plug.

The APU 1 will go through its boot up cycle, which you can watch if you are connected to the serial console.

Your APU 1 is ready to use!

More information

For more detailed instructions on using your APU 1, please visit our website at www.yawarra.com.au and download the manufacturer's user guide.

Contact us

Please feel free to contact us if you have any queries regarding your APU 1.

Yawarra Tiny Computers
Website   www.yawarra.com.au
Email   enquiries@yawarra.com.au
Phone   1300 859 799
Mail   PO Box 606, Boronia VIC 3155, Australia