AStarBox Connections

This document describes both the electrical connections on the AStarBox and the base plate that allows the AStarBox to be securely mounted on your telescope.

Figure 1 shows the location of the male XT60 12v power input socket for the AStarBox, as well as the microSD card slot.

WARNING: Do NOT connect your AStarBox directly to the mains. This is dangerous, will destroy your AStarBox and Raspberry Pi 5 and will invalidate your warranty.

Figure 1. Location of 12v power input and microSD card slot below the ventilation holes.

The case is designed to allow access to all the Raspberry Pi controls and sockets. When the power is connected, you can see the LED status light through the rightmost ventilation hole. Using a thin tool such as a screwdriver, you can access the push on/off switch through the second on the right ventilation hole (Figure 2).

Figure 2. The LED status light is visible through the rightmost ventilation hole. You can access the push on/off switch through the second on the right ventilation hole using a thin tool such as a small screwdriver.

Turning the box counterclockwise reveals three female XT60 power connectors (Figure 3). These will provide 12v to your accessories at up to 5A each. The maximum total current available from the AStarBox is 30A but this will likely be limited by the capacity of your 12v power supply. The power for each socket can be controlled by AStarBox software.

In the recessed area below are the Pi USB-C socket and twin micro hdmi sockets. The USB-C socket can be used to provide power to the Raspberry Pi but will **not** power the 12v sockets. The micro hdmi sockets may be useful to connect to a monitor during initial software installation but are unlikely to be used when imaging.

Figure 3. Three female XT60 connectors that can supply 12v at up to 5A to your devices. In the recess, there is the Pi USB-C socket and twin micro hdmi sockets.

Turning the AStarBox counterclockwise once more reveals a further female XT60 power socket and two dew heater outputs (Figure 4). Again, these can be controlled by AStarBox software.

Figure 4. Final female XT60 power socket and the two dew heater outputs. Below these are the ethernet socket, twin USB 3 sockets (in blue) and twin USB 2 sockets (grey).

Below these are the final Raspberry Pi sockets. From left to right these are the ethernet socket, twin USB 3 sockets (blue) and twin USB 2 sockets (grey). Note that the indicator lights for the ethernet socket are deliberately blanked off to avoid distraction if used at e.g. a star party.

Underneath the AStarBox a circular aluminium base plate (Figure 5). The holes have the same dimensions as the mounting plate on the ASIAir Pro and Plus. In the centre is a ¼" thread, while the outer four holes have M4 threads.

Figure 5. Base plate of the AStarBox. The centre hole has a ¼" thread whilst the four outer holes have M4 threads.

The AStarBox can be secured to your telescope using the ¼" thread or the mounting solutions for an ASIAir. These include the Dove Air which will allow a connection to a Vixen dove tail, or the many solutions offered by BuckeyeStargazer. Failing those, Velcro is your friend!