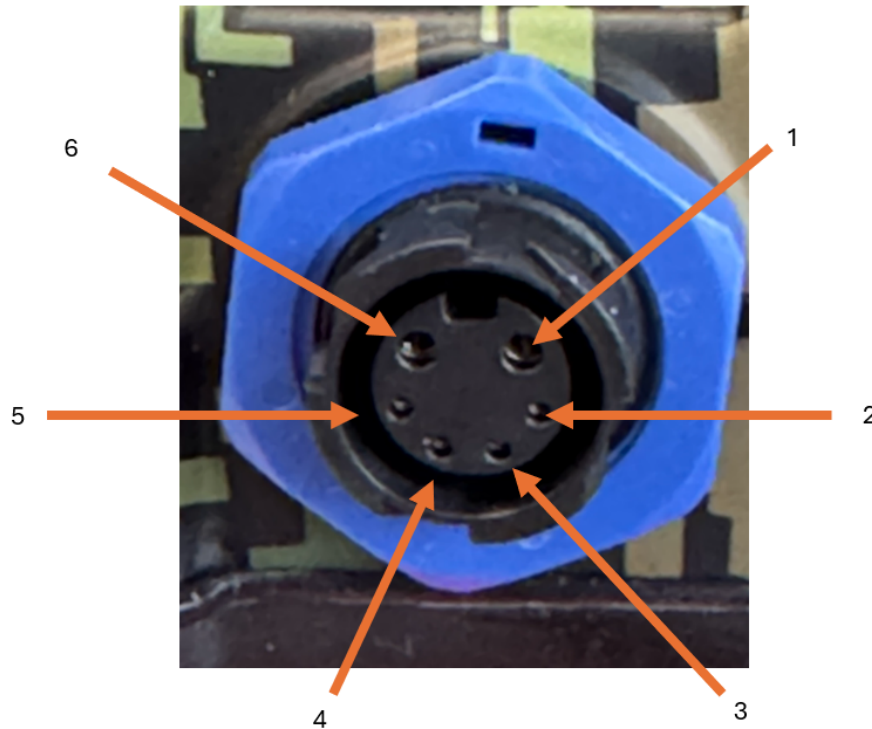


Equipment

- Camera (currently needs to be setup on the test branch)
- Camera Power supply
- Aux to USB (for testing with computer)
- Aux cable (for wiring up) (Black: GND, Red: Power, Green: RPi_RX, White: RPi_TX, Yellow: Speaker +ve, Orange: Speaker -ve)



- - 6: Black GND
 - 5: Green: RPi_RX
 - 4: White: RPi_TX
 - 3: Yellow: Speaker +ve
 - 2 Orange: Speaker -ve
 - 1: Red: Power
- Aux LED plug (for testing simple output)

Setting up camera for AI classification

- 1) Setup the camera and connect through sidekick.
- 2) Disable low power mode
- 3) Navigate to the camera's advanced options. (On the Genera Tab, click advanced, then select Advanced from the menu)
- 4) Open the Setting page (by clicking Config)

- a) In the "Thermal Motion" section enable:
 - i) Do tracking on PI
 - ii) Run classifier
 - iii) Tracking events
- b) Press "Save Thermal Motion Config"
- c) In the "Comms port":
 - i) Enable to true
 - ii) comms type to "simple" or UART
 - iii) Trap Species to a JSON of what are the target species and the confidence that is required, example: `{"possum":80, "cat":80}`
- d) Press "Save Comms Config"
- 5) Restart camera for changes to take effect

Testing Classification

- 1) Setup the camera on a wifi network that you can also connect to via a computer (this can be done with a phone but need to open the page on your phones browser, not through the app, this should be fixed in the future)
- 2) Find the cameras IP address using sidekick, Sidekick -> Open camera -> General Tab -> Advanced -> Advanced (again) -> Network. From there you should see what the IP address is for wlan0.
- 3) Open up that page on a browser on your computer (or phone) then open the Camera page.
- 4) Upload a test recording by pressing Choose File, select a .cptv file (can download them from browse) and press Upload Test Recording. For initial testing you probably don't want a long recording and make sure that the AI confidence was greater or equal than what was set in the config earlier for that species.
- 5) Should now see that recording from a dropdown, select it and press Play.
- 6) The video livestream will stop and the camera will process that recording using it's AI model (preview of the live CPTV recording as it is being processed is something in the works, so we just get a blank view for now)
- 7) Depending on what you configure the type of output to be you can check if it is working from the instruction below.

Testing Simple Output

- Make sure the configuration comms type was set to "simple"
- Attach the LED test plug, this will light up when it has seen a target species with a high enough confidence.

Testing UART Output

- 1) Make sure the configuration comms type was set to "UART"


```

        confidence = data.get("Confidence",
"Unknown")

        print(f"Type: {message_type}")
        print(f"Species: {species}")
        print(f"Confidence: {confidence}")
        print("-" * 40)

    else:
        print("Unknown message type")
        print(f"Type: {message_type}")
        print(f>Data: {data}")
        print("-" * 40)

    except json.JSONDecodeError:
        print("Invalid JSON received:", line)

except KeyboardInterrupt:
    print("\nExiting...")
finally:
    ser.close()

if __name__ == "__main__":
    main()

```

Output example:

None

Type: classification

```
Species: {'false-positive': 9, 'possum': 90, 'sheep': 1}
Confidence: 90
```

```
-----
Type: classification
Species: {'possum': 100}
Confidence: 100
```

Other settings

- Trap Default State - If the trap will be enabled or disabled by default (enabled by default means that it will stay enabled until it sees a "Protect Species" then will disable)
- Bluetooth Enabled - We don't have this working at the moment. Just something we will add in the future. (WIP)
- Power Output - If the power from the battery will be output through the AUX port (WIP)
- Power On Duration - When powering on, how long will it stay powered on for (WIP)
- Trap duration - when seeing a species to trap how since it last saw it will it keep the trap enabled for
- Protect Species - List of species that will disable the trap
- Protect Duration - When seeing a species to protect, how long since it last saw it will it keep the trap disabled for.