Technical Specifications: Yarn Mesh AI TrailCam

"See what's happening, where it's happening, right now."

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1 Overview

The Yarn Mesh AI TrailCam is the "eyes" of the Yarn Mesh wireless sensor network. It is a rugged, solar-powered trail camera that sends images in near real-time from remote locations—like native bush or back paddocks—directly to the customer's phone or computer (via Yarn Manager, IMS, or Faarm).

It eliminates the need for manual SD card checking, provides immediate situational awareness, and is "AI-ready," with automated species classification continuously rolling out from **October 2025**.
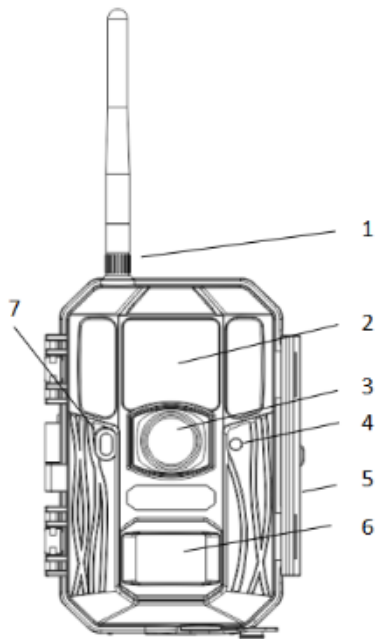
1.1 Component Guide
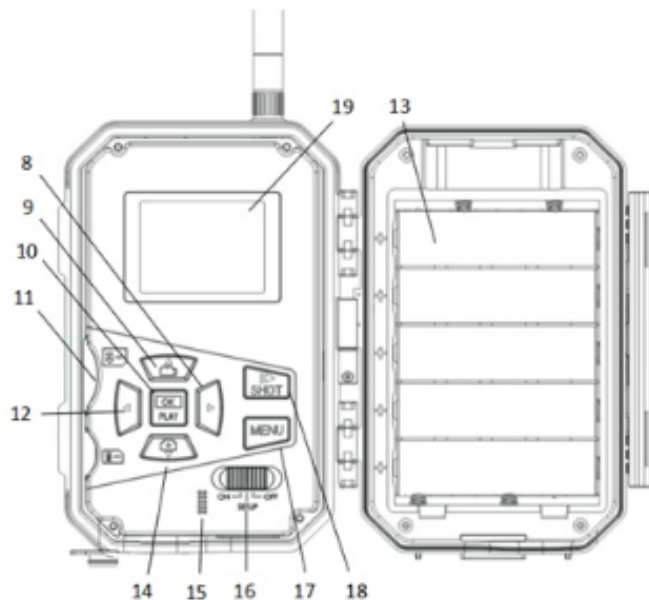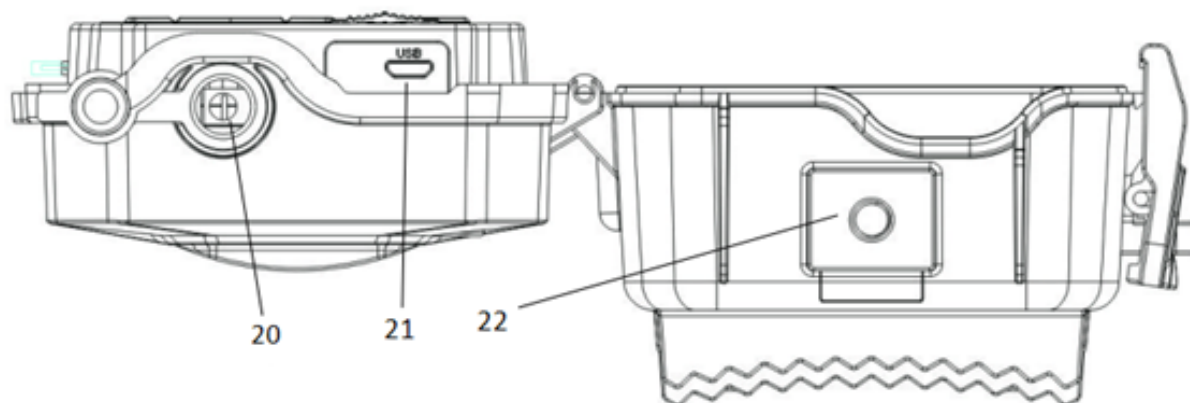

Figure 1 - Inner Panel View   *Figure 2 - Front View*

Figure 3 - Bottom View

Please refer to the figures above to identify the following components[1]:

No.	Component	No.	Component
1	Antenna	12	Left Button
2	White LED / Infrared LED	13	Battery Tray
3	Lens	14	Down / Photo Button
4	Microphone	15	Speaker
5	Lock Latch	16	Power Switch
6	PIR Sensor	17	Menu Button
7	Indication LED	18	Shot Button
8	Right Button	19	LCD Display
9	Up / Video Button	20	DC Input
10	OK / Play Button	21	USB Port
11	SD Card Slot	22	Screw Hole (Tripod Mount)

2 General

- Detection Range: 100 ft (30 m)
- Illumination Distance: 100 ft (30 m) ˜2-10m recommended
- Image Sensor Lens Aperture: ƒ/2.4
- Built-in Display: 2" Colour LCD
- Camera Dimensions: 145.1 x 103.8 x 82 mm
- Camera Weight: 0.40 kg

3 Power Options

- Battery Power:
  - o Camera 5 x 18650 Rechargeable Batteries: ˜15000mAh battery capacity inside the camera. (Pointed Head type; externally rechargeable via DC or solar panel)
  - o Solar Panel Charger: 8 x 18650 Rechargeable Batteries: ˜24000mAh battery capacity in 10W Solar Panel housing. (Pointed Head type; externally rechargeable via DC or solar panel) .
  - o Total combined battery capacity: ˜39000mAh = ˜39Ah (camera and solar panel)
- External Power: DC 6V, 2A via 10W solar panel (adapter cable comes with supplied 10W solar panel charger)
- Standby Power Consumption: <0.3 mA (approx. <7 mAh/day)

4 Memory & Connectivity

- Memory Storage: Comes with 32 GB Class 10 SD card.
- Wireless connectivity:
  - o Yarn Mesh: Long range communications. Operating in the 2.4Ghz ISM wireless bands (open spectrum)
  - o Bluetooth 5.x: Short range communications for configuration. Operating in the 2.4Ghz ISM wireless bands (open spectrum)
- Communication Protocols:
  - o Yarn Mesh: IP over IEEE 802.15.4 (Yarn Mesh)
  - o Bluetooth: Bluetooth 5.x (BT and BLE)

5 Image & Video Features

- Image Resolution: Up to 8MP high-quality images (stored locally on SD card)
- Trigger Modes:
  - o PIR (motion-triggered)
  - o Time Lapse (interval-triggered)
  - o PIR + Time Lapse combined
- Night Mode: 4 Å~ White LEDs for colour images; 4 Å~ 940 nm Infrared LEDs for invisible night vision (B&W)
- Burst Mode: 1–3 images per trigger (adjustable)
- GPS Location: Camera location can be requested to update GPS coordinates in management platform.
- Images timestamped;

- Event-based Alerts: triggers for event based alerts (species detected) can be set in the management platform and sent via email or SMS.

6 Advanced Connectivity & Remote Management

- Real-Time Data Transfer: Automatically transmits images/videos wirelessly via Yarn Mesh network
- Remote Management: IMS Enviro Manager, Faarm or Yarn Manager cloud platforms
- Firmware & AI Model Updates: Automatically pushed wirelessly over-the-air (OTA) via Yarn Mesh
- Camera Alerts: Battery status, connectivity, device performance notifications for proactive maintenance

7 Environmental & Physical Characteristics

- Operating Temperature: -20°C to +60°C (-4°F to 140°F)
- Humidity Tolerance: 5% to 90% RH (non-condensing)
- Rugged Design: Waterproof (IP-rated), durable camouflage housing suitable for harsh outdoor conditions
- Mounting Options: Belt with mounts for mounting on trees or wooden posts (included), tripod-compatible screw mount (for standalone mounting)

8 Included Accessories

- Antenna
- Mounting Belt
- Adjustable Tree & Post Mounting Bracket
- USB-A to USB-C Cable

Figure 4 - What's in the Box: Yarn Mesh AI TrailCam

- Solar Panel Charger (plugs into TrailCam for continuous operation), package separately with its own mounting and charging accessories.

9 Ideal Applications

- Predator-free initiatives

- Agricultural monitoring
- Wildlife conservation
- Forestry management
- Remote security surveillance

Contact our sales team to learn more or place an order:

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