



YARN MESH

User Manual:  
Yarn Mesh AI TrailCam

# User Manual: Yarn Mesh AI TrailCam



**“See what’s happening, where it’s happening, right now.”**



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## 1 Getting Started

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**.

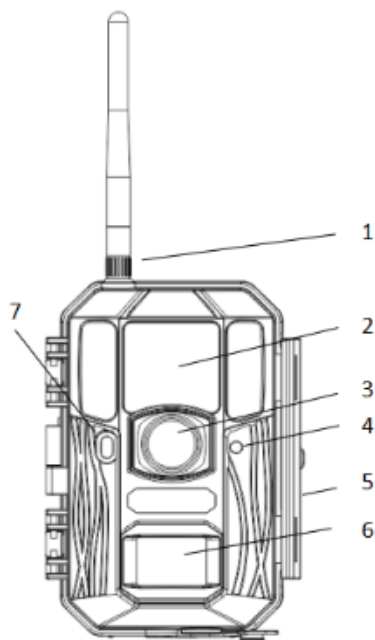


Figure 1 - Inner Panel View

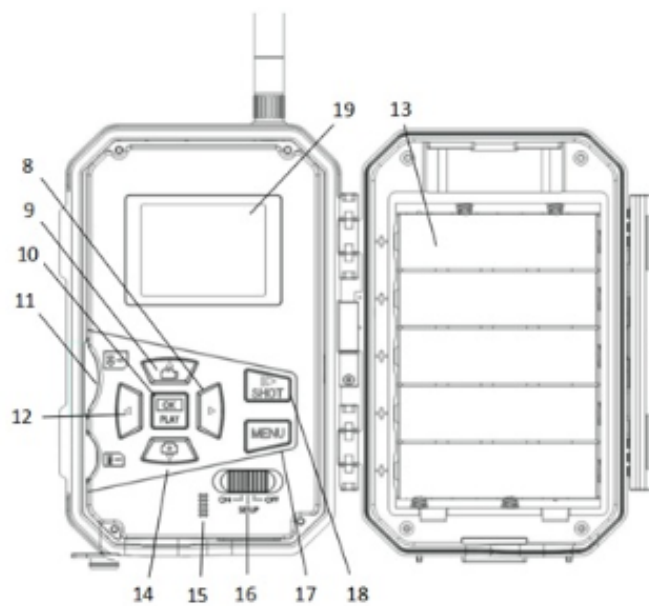


Figure 2 - Front View

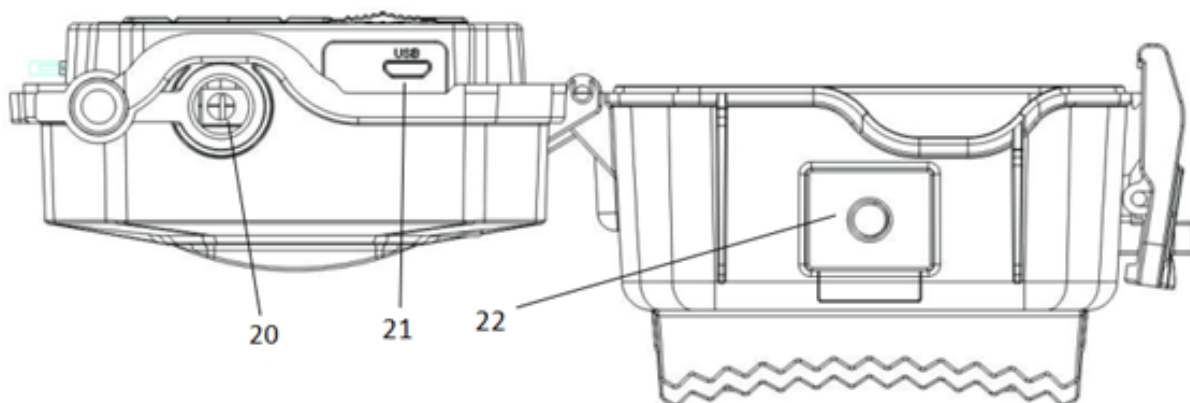


Figure 3 - Bottom View



## 1.1 Component Guide

Please refer to the figures above to identify the following components¹:

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 Camera Operations

### 2.1 Power Supply

The camera requires a power source to operate. You can use internal batteries or an external power adapter.

#### 2.1.1 Internal Batteries

The camera uses 18650 Li-ion 3.7V button top batteries.

**18650 Batteries:** Install **5 x 18650 batteries**.

- a. **Important:** You must use **Button Top** (Pointed Head) 18650 batteries.
- b. **Charging:** These batteries can be charged inside the camera using an external power supply (USB-A to USB-C cable via the USB-C port, DC adapter or Solar Panel via the DC port).

#### 2.1.2 External Power Supply

You can power the camera using a **DC 6-Volt, 2A external power supply adapter** (not included) connected to the DC-IN port.

### 2.2 SD Card Information

**Note:** The camera has no built-in memory and will not function without an SD card inserted.

- **Card Type:** Secure Digital High Capacity (SDHC) PRO cards are recommended for speed and durability.
- **Capacity:** Supports up to **32GB** SD cards.
- **Installation:**
  - Ensure the camera is switched **OFF**.
  - Unlock the SD card (if applicable).
  - Insert the card into the slot.
- **Troubleshooting:** If the card is not recognized, reformat it using the "Format SD" option in the camera settings.

### 2.3 Camera Modes

The Power Switch controls the three operational modes:

1. **OFF Mode:** The camera is powered down. Use this mode when changing batteries or SD cards. *Note: A small amount of power is still consumed; remove batteries during long-term storage.*
2. **ON Mode (Surveillance):** The camera is active. Upon switching to ON, the red indication LED will blink for approximately **10 seconds**. This allows time to position the camera. Once blinking stops, the camera automatically detects motion or follows time-lapse schedules.



3. **SETUP Mode:** The LCD screen is on. Use this mode to customize settings, view media, or manually test the camera. The camera will automatically shut down after a few minutes of inactivity.

## 2.4 Manual Image Capturing

To verify camera function:

1. Switch to **SETUP** Mode.
2. Press the **SHOT** button to manually capture a photo.

## 2.5 Managing Images and Videos

To view or delete media:

1. Switch to **SETUP** Mode.
2. Press **OK / PLAY** to enter Playback/Preview mode. The latest image will appear on the LCD.
3. **Navigate:** Press **▲ (Up)** or **▼ (Down)** to scroll through images.
4. **Delete:** Press the **DEL** key. Press **OK** to confirm deletion, or **MENU** to cancel.

## 2.6 Trigger Modes

The camera utilizes three trigger methods, controlled by the *PIR Trigger*, *PIR Interval*, and *Time Lapse* settings <sup>16</sup>.

1. **PIR Trigger / Sensitivity:** The camera activates when the Passive Infrared (PIR) sensor detects motion. If set to **OFF**, the camera will not respond to motion.
2. **Time Lapse:** The camera activates at a specific preset time interval, regardless of motion.
3. **Combined Mode:** If both *PIR Trigger* (Sensitivity not OFF) and *Time Lapse* (Interval not zero) are set, the camera will capture images when motion is detected **AND** at the scheduled time intervals.

**PIR Interval:** This setting defines how long the PIR sensor is disabled *after* a trigger event. During this "cool down" period, the camera will not react to motion or time-lapse schedules.

## 2.7 Password Setup

You can secure your camera with a 4-digit numeric password. This function is **OFF** by default.

**To Enable:**

1. In the menu, select *Password*.
2. Use **▲ / ▼** to adjust numbers (0-9) and **▶** to move to the next digit.
3. **Important:** You must enter the same password **twice** to confirm.
4. Once set, you will be required to enter this password every time the camera is booted. *If you forget the password, please contact support.*



## 3 Remote Display & Settings

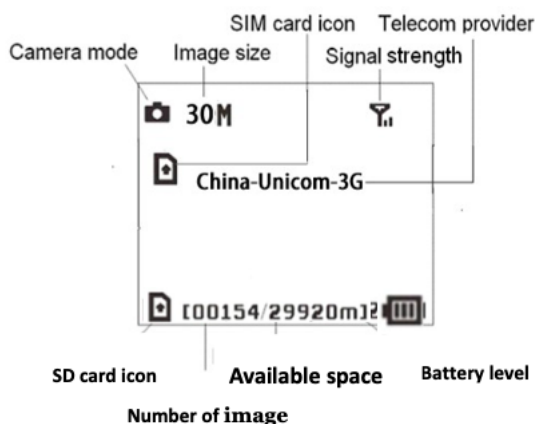
### 3.1 Basic Key Functions

In **SETUP** Mode, use the following keys to navigate <sup>21</sup>:

- **MENU**: Enter/Exit the settings menu.
- **▲ / ▼ / ◀ / ▶**: Navigate menu options.
- **OK / PLAY**: Save settings or enter Playback mode.
- **DEL**: Delete images in Playback mode.
- **SHOT**: Manually capture a photo/video.

### 3.2 LCD Display Icons

When in **SETUP** mode, the screen displays status information:



- **Camera Mode** (Photo/Video)
- **Image Size** (e.g., 30M)
- **SIM Card Icon** (Network status)
- **Telecom Provider**
- **Signal Strength**
- **Battery Level**
- **SD Card Icon**
- **Number of Images / Available Space**

### 3.3 Mesh Communication

This camera is designed to operate on the Yarn Mesh network. It can receive and respond to commands sent via Yarn Mesh.

### 3.4 Camera Setup Options

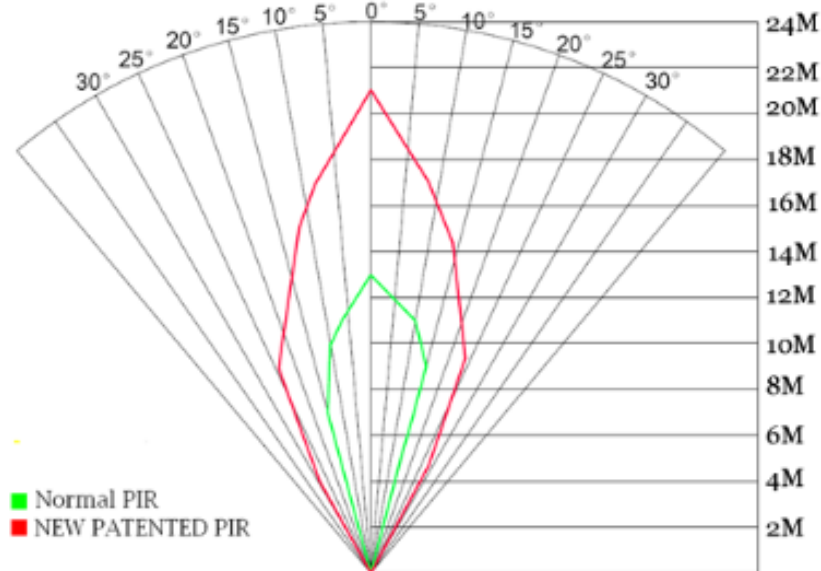
To access the menu, press **MENU** in **SETUP** Mode. Use **▲/▼** to select options and **▶** to change them. Press **OK** to save each change.



Menu Option	Description	Default
Photo Quality	Choose image resolution: Low, Medium, High.	Low
Set Clock	Set Date (MM/DD/YYYY) and Time (HH:MM:SS). Valid years: 2023–2050.	-
Picture Type	<b>White LED:</b> Color images/video at night. <b>940nm:</b> Black & White images/video at night (Invisible IR).	B&W
PIR Sensitivity	Adjust sensor sensitivity: High, Normal, Low, OFF. <i>Tip: Use HIGH for warm/stable environments. Use LOW to reduce interference.</i>	Normal
PIR Interval	The delay time the sensor is disabled after triggering (Range: 0 sec – 1 hr). Prevents rapid-fire images of the same subject.	10 Sec
Language	Select language: English, Suomi, Deutsch, Svenska, Dansk, Norsk, Czech, Russian, Italian, French.	English
Beep Sound	Enable/Disable menu navigation beeps.	On
Format SD	Erases all data on the SD card. <b>Back up data before using.</b>	-
Default Settings	Restores all camera settings to factory defaults.	-
Version	Displays Firmware Version and IMEI/Control Code.	-
Password	Set a 4-digit security PIN.	OFF

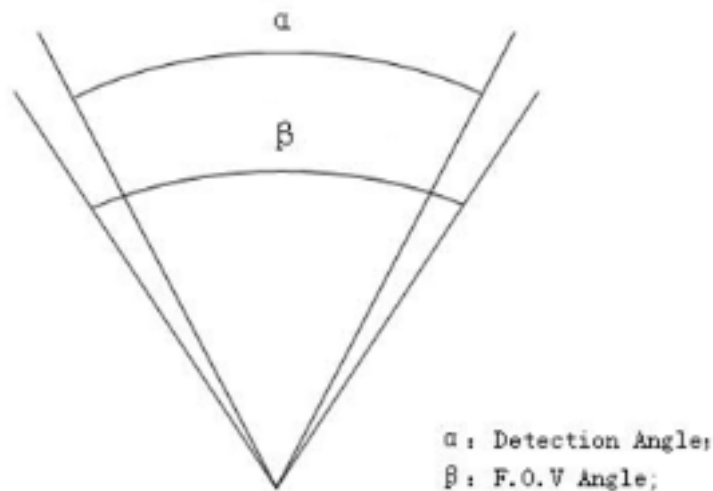


## 4 PIR Detection Zone



The camera features a patented PIR design where the **Detection Angle ( $\alpha$ )** is slightly narrower than the camera lens **Field of View ( $\beta$ )**.

- **Benefit:** This ensures that any subject triggering the sensor is captured well within the frame, reducing "empty" shots where the subject has not yet fully entered the view<sup>25</sup>.
- **Range:** Up to 24 meters (70 ft) in open environments.





## 5 Technical Specifications

Feature	Specification
Detection Range	2-15m (optimum). 30m (max).
Illumination Distance	2-15m (optimum). 30m (max).
Aperture	f/ 2.4
Memory Card	Max 32GB
Display Screen	Built-in 2.0" LCD
Operating Temp	-20°C ~ +60°C
Relative Humidity	5% to 90% Non-condensing
Dimensions	145.1 x 103.8 x 82 mm
Unit Weight	0.40 Kg
Power Supply	5x 18650 Button Top Batteries, OR 6V/2A External DC Power USB-C charging (using USB-A to USB-C cable only)
Standby Power	<0.3mA (<7mAh/Day)
Compliance	RCM, CE, RoHS

Table 1 – Technical Specifications

## 6 Parts List

Please verify that your package contains the following items:

1. **Camera** (x1)
2. **USB Cable** (x1)
3. **Mounting Belt** (x1)
4. **Mounting Bracket** (1)
5. **Antenna** (1)



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