
TrolMaster Grow Camera (TC-2) User Manual



OVERVIEW

The TrolMaster Grow Camera (TC-2) is engineered for comprehensive grow room surveillance, providing live video monitoring. The TC-2 features a 2K6MP high-definition image sensor and supports diverse connectivity, including 2.4G and 5G wireless Wi-Fi and RJ45 wired Ethernet. TC-2 is compatible with the HCS-1, HCS-2, HCS-3, TCS-1, and GCS-1 controllers. It delivers low-latency internet live footage, accessible through the complimentary TrolMaster TM+ Pro mobile application. For local video storage, an integrated MicroSD card slot accommodates cards up to 256GB, facilitating extensive recording. With support for multiple mounting configurations, including vertical wall-mounted and ceiling installation, the TC-2 is designed for optimal installation flexibility.

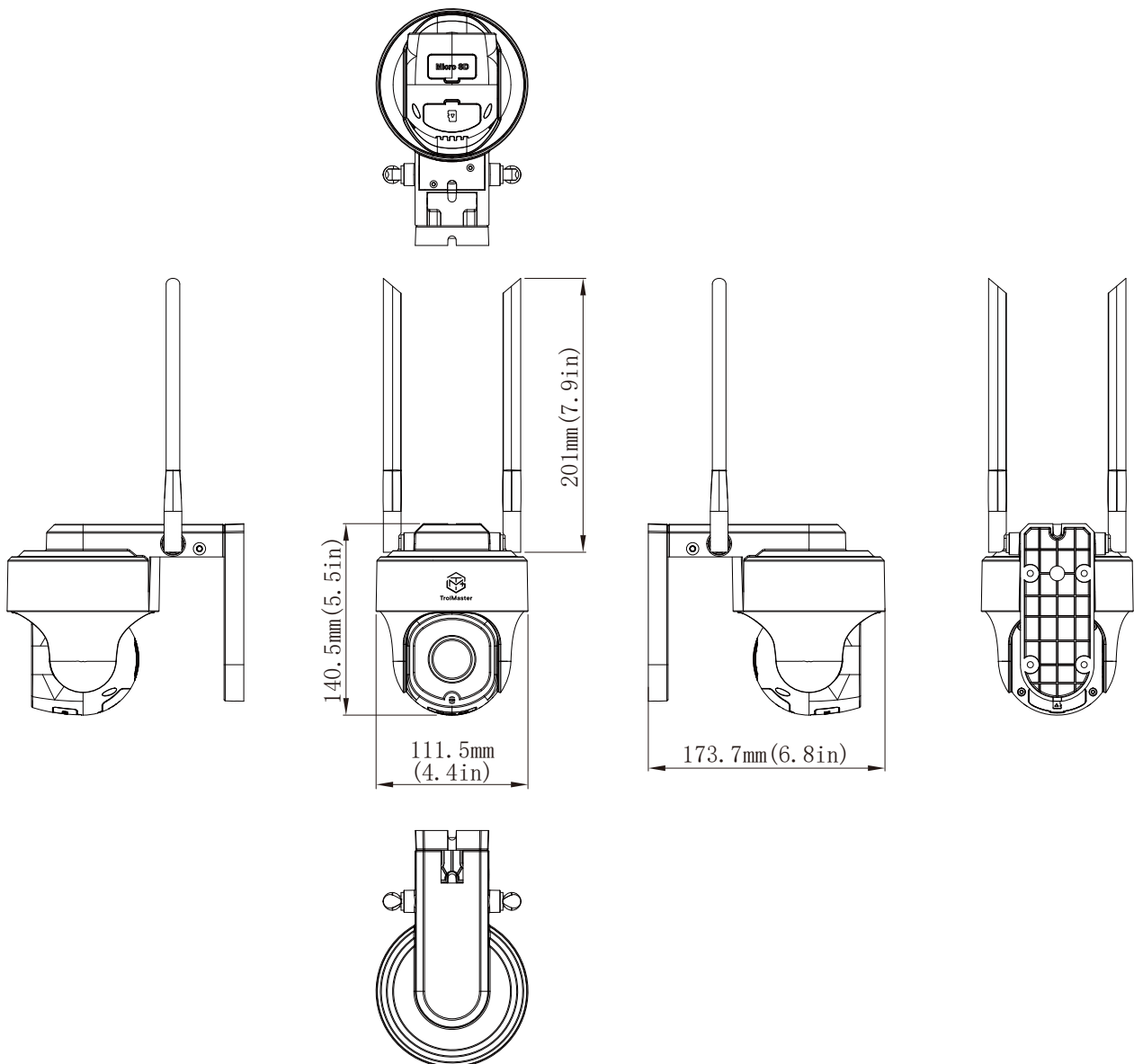
FEATURES

- 2K6MP High-Definition Image Sensor
- IP65 water-resistant
- Low-Latency Internet Live Footage
- Multiple Mounting Configurations

PACKAGE CONTENTS

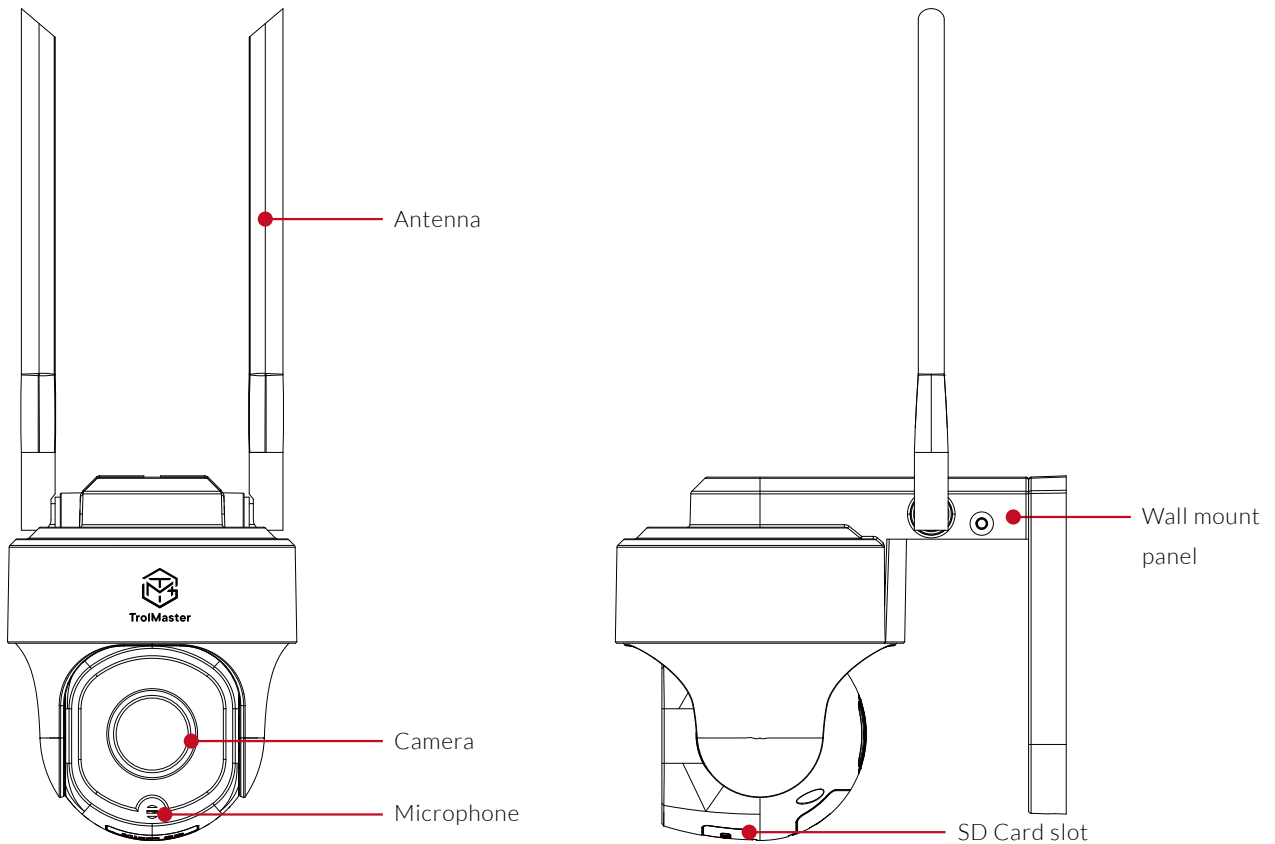
- 1 x TC-2 Grow Camera
- 1 x Power Adapter
- 1 x Water-resistant Cap Set
- 1 x Wall Mount Screw Set

PRODUCT DIMENSION



SPECIFICATIONS

Input Voltage	100-240V~, 12V= 1A
IP Rating	IP65
Image Sensor	1/3 2K6 Megapixel CMOS CV6001
Video Compression	H.264
Network Protocol	DHCP
Wireless Connectivity	WIFI IEEE 802.11B/G/N, 2.4G & 5G
Working Environments	Temperature: 32~122°F (0-50°C)
	Humidity: ≤90% RH
Package Dimensions	175mm(L) x 4.49mm(W) x 7.68mm(H)
Weight	1.61lbs / 0.73kg



CONTROL



Internet Access

The TrolMaster Grow Camera requires an internet connection in order to be able to view live footage using the TrolMaster apps. The connection can be established with either wired Ethernet, 2.4GHz, or 5GHz Wi-Fi.

Mobile App

With TrolMaster's complimentary TM+ Pro smartphone app, you can remotely control and monitor your grow room from any location at any time. By integrating the TC-2 camera into your grow room system, you gain a real-time "window" into your grow room, also accessible directly from your phone.

Video Recording

TrolMaster's Grow Camera also has a built-in micro SD-card slot for video recording, with compatible storage up to 256GB.

OPERATION INSTRUCTIONS

To operate your TrolMaster Grow Camera (TC-2), follow these instructions for setup, connection, and use with the TM+ Pro App.

[Powering On and Initial Setup]

- 1. Connect Power:** Connect the TC-2 to a standard power adapter (DC 12V 1A) included in the accessories. Ensure the power cord is not deformed or damaged.
- 2. Download and Install the TM+ Pro App:**
 - Search for "TM+ Pro" in your mobile app store.
 - Download and install the latest version of the app.
(If you have an older version, consider updating for the latest features.)
- 3. User Registration/Login:** Open the TM+ Pro App. If you are a new user, register for an account. If you have an existing account, log in.

[Connecting the TC-2 to the Network]

The TC-2 supports multiple connection methods: Wireless Network Configuration or Wired Ethernet Connection. Before connecting, ensure your mobile device is connected to your Wi-Fi network. Turn on location permission on your mobile device for Wi-Fi recognition.

Choose one of the following methods to connect your device:

A. Wireless Network Configuration

1. Ensure your phone's Bluetooth is enabled.
2. Open the TM+ Pro App.
3. Select your preferred controller for linking the camera, then proceed to the "Camera List" screen.
4. Click the "Add Camera" button.
5. Choose "Wifi" as your preferred linking method, then click Next.
6. The app will display nearby devices. Select the TC-2 from the search results and click "Add Camera".
7. Enter your current Network Name & Wi-Fi password, then click Next to proceed linking.
8. A "Add successfully" message will appear upon completion.

B. Wired Ethernet Configuration

1. Connect an RJ45 Ethernet cable from your router to the TC-2's Ethernet port.
2. Ensure your phone and the TC-2 are on the same local network for the app to find the device.
3. Open the TM+ Pro App.
4. Select your preferred controller for linking the camera, then proceed to the "Camera List" screen.
5. Click the "Add Camera" button.
6. Choose "Ethernet" as your preferred linking method, then click Next.
7. The app will display nearby devices. Select the TC-2 from the search results and click "Add Camera" .
8. The device will connect, and "Added Successfully" will appear.

[Using the TM+ Pro App]

Once connected, you can control and monitor your TC-2 Grow Camera via the TM+ Pro App.

- **Live View:** Access real-time video footage of your grow area.
- **Pan/Tilt Control:** Use the app to remotely control the camera's horizontal rotation (355°) and vertical tilt (120°) to adjust your viewing angle.
- **Video Recording:** The TC-2 supports continuous 24-hour recording to a TF card (up to 256GB). You can also view recorded footage via the app. The TF card slot is located under the water-resistant rubber cap.
- **Image Flip:** If the camera is installed upside down, you can set the "flip screen" option in the app to correct the video orientation.

MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your TC-2 camera.

- **General Care:** Always read the general precautions carefully before installation, powering on, or performing any daily maintenance.
- **Power Safety:** Never power on the device if the power cords are deformed or damaged. Always disconnect the power and unplug the adapter before performing any maintenance actions.
- **Physical Protection:**
 - Avoid striking the device with external force.
 - Do not place heavy objects on the packaged product to prevent bumps or drops.
 - Ensure the product's outer casing does not crack or deform.
- **Environmental Considerations:**
 - The working environment ambient temperature should not exceed 40 °C. While the operating range is wider, prolonged exposure to temperatures above 40 °C may lead to damage or shorten the product's lifespan.
 - Do not use the camera in explosive or corrosive environments.
- **Transportation:** The device must be transported in its original packaging to prevent deformation or damage during transit.
- **Modifications:** Do not arbitrarily modify the product or create any new holes. Opening the camera will void the warranty.
- **Installation Compliance:** Ensure that the installation of the camera complies with the current mechanical and electrical codes and specifications of your country.
- **Security:** You are responsible for maintaining strong passwords for your account and applying recommended firmware updates to ensure device security.

TROUBLESHOOTING

If you encounter any issues with your TC-2 camera, refer to the following troubleshooting steps:

Connection Problems

- Device cannot connect to the server or is disconnected:
 - a. **Verify Network Connection:** Ensure your network connection is stable and working properly.
 - b. **Check Router Settings:** Verify DNS configuration for your router and check if your router has any "whitelist" settings that might be blocking the camera.
 - c. **Reboot:** Try rebooting the camera. If the problem persists, try resetting the device by pressing the reset button for 5 seconds and then reconfigure the network.
 - d. **Proximity to Router:** If issues persist, try moving the camera closer to your Wi-Fi router to ensure a strong signal.
- Device cannot connect to Wi-Fi / Wi-Fi is not recognized during configuration:
 - a. **Wi-Fi Frequency:** The TC-2 supports both 2.4G and 5G Wi-Fi. If your router is dual-frequency, ensure you choose the appropriate network (or enable dual-frequency mode and select the 2.4G signal if having issues).

- b. Signal Strength: Make sure the Wi-Fi signal is within range of the camera.
- c. Wi-Fi Name (SSID): If your Wi-Fi name contains special characters or non-English coding, try changing it to English for better compatibility.
- d. Location Permission: Ensure that location permission is turned on for the TM+ Pro App on your iOS or Android mobile device.
- e. Reset for Network Configuration Failure: If network configuration fails, press the reset button for 5 seconds and wait for the device to restart before attempting to reconfigure.

Operation Problems

- Camera footage appears upside down:
If the camera is hung upside down, you can set the "flip screen" option within the TM+ Pro App to correct the orientation.
- Noise during live preview:
Try to keep your mobile device away from the camera during preview to minimize potential interference.
- Pan/Tilt (PTZ) control is not working:
Try rebooting the TM+ Pro App or rebooting the camera itself.
- No sound when checking video or unable to hear voice from the camera:
 - a. Camera Microphone: First, ensure the microphone on the camera is turned on.
 - b. App Speaker: Check that the speaker function is enabled within the TM+ Pro App.
 - c. Mobile Sound Settings: Confirm your mobile device is not muted or on a low volume setting.
 - d. App Permissions: Verify that the TM+ Pro App has the necessary microphone and speaker permissions enabled in your mobile phone's system settings (e.g., Privacy settings on iOS; Application management, Mobile phone manager, or Security center on Android).

Account Problems

- "Camera has been registered" message during registration:
This means the camera is already registered to another user account. Remove the ownership to reset.
- Unable to log in to the TM+ Pro App:
 - a. Network Connection: Ensure your mobile device's network connection is working well. Try switching between mobile data and Wi-Fi to test connectivity.
 - b. DNS Issue: If login failure persists, it might be a DNS resolution problem with your network. Try rebooting your mobile device or changing your network connection.
- Forgot App password:
Click the "Forgot Password" option in the app and follow the prompts to reset your password using a verification code.

FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. This transmitter must not be co-located or operate in conjunction with any other antenna or transmitter.

WARNING: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

ISED CANADIA STATEMENT

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de classe B est conforme à la norme CES-003 du Canada.

This device contains licence-exempt transmitter(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

ISED CANADIA STATEMENT

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS-102, and compliance with RSS-102RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS-102 et la conformité à l'exposition de RSS-102rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operate in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co- placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.



WARNING: DO NOT let the TC-2 be exposed to water or excessive heat. **DO NOT** open, attempt to repair or disassemble the camera, as there are no user-serviceable parts inside. Opening the camera will void the warranty.



AVERTISSEMENT: NE laissez PAS le TC- 2 être exposé à l'eau ou à une chaleur excessive. **NE PAS** ouvrir, tenter de réparer ou de démonter l'appareil photo, car il ne contient aucune pièce réparable par l'utilisateur. Louverture de la caméra annulera la garantie.

For any issues or concerns with our products, DO NOT return them to the store. Please contact our tech support department at support@trolmaster.com or call 877-420-9876.

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