

Excap Full-Body Motion Tracker User Manual

Product Overview

Welcome to Excap, the next-generation full-body motion tracking system that combines IMU (Inertial Measurement Unit) and optical tracking technology for ultra-smooth, drift-free VR experiences. Designed for VR enthusiasts, creators, and streamers, Excap delivers stable, simplified tracking with no need for frequent recalibration.

Package Contents

Item	Quantity
Excap Tracker (Mini)	8 pcs
Camera Module	1 pc
2.4G Receiver	1 pc
Charge Dock	1 pc
Charging Cable	1 pc
Camera Cable	1 pc
Straps (Long x2, Medium x2, Short x4)	6 pcs
Position Stickers	1 sheet

Specifications

Feature	Specification
Tracking Technology	IMU + Magnetometer + Optical Vision
Tracker Weight	25g
Tracker Size	28mm × 40mm × 23mm
Battery Life	Up to 50 hours (without vibration/RGB)
Wireless Protocol	2.4G proprietary protocol
Transmission Method	(tracker → receiver)
Power Supply	Headset or external power source
Haptic Feedback	Yes (preset vibration patterns)
Compatibility	SteamVR, VRChat, OSC, VMC, SlimeVR
Update Frequency	Up to 100 FPS
Calibration Time	Auto-calibrate in ~1 second

How It Works

Excap uses a hybrid tracking system combining inertial sensors and edge computing vision technology:

Each tracker contains an IMU + magnetometer for real-time orientation. The camera module captures visual markers on trackers for optical correction. Excap Vision performs edge computation to eliminate drift and enable auto-calibration. Data is sent wirelessly via 2.4G protocol to the receiver connected to your PC. Integrated haptic feedback provides tactile cues during calibration or errors.

Setup & Usage Guide

Step 1: Install Software & Drivers

Download Excap Studio Install CH340 USB driver (recommended even if already installed) Launch Excap Studio and wait for automatic SteamVR driver setup

Step 2: Connect Hardware

Plug the 2.4G receiver into your PC’s USB port. Power the camera module via your VR headset or external power. Attach the camera module to your headset using the included mount.

Step 3: Power On Trackers

Press and hold the button on each tracker for 1 second to turn it on. RGB light will blink slowly when powered. Wait until all 8 trackers are detected in Excap Studio.

Tip: Lightly tap or move each tracker to confirm recognition.

Step 4: Wear the Trackers

Use the provided straps and position stickers to attach trackers correctly:

Position	Recommended Placements
Chest	Front center of chest
Waist	Front center of waist
Left Thigh	Front side, mid-thigh
Right Thigh	Front side, mid-thigh
Left Calf	Front side, lower leg
Right Calf	Front side, lower leg
Left Foot	Top side, foot
Right Foot	Top side, foot

Ensure switches face upward and trackers are securely fastened.

Step 5: Calibrate Your Body

Option A: In Excap Studio (Recommended)

Click “Auto Reset” or “Manual Reset” (input height if needed). Stand in A-Pose: feet shoulder-width apart, arms raised sideways like “A”. Press the chest tracker button briefly (<1s) or click “Reset with A-Pose”. Wait for confirmation in software.

Option B: In VRChat (FBT Calibration)

Enter VRChat. Press Left Hand Y Button → Open menu → Select Calibrate. Or press both trigger buttons simultaneously. Follow on-screen prompts to complete FBT (Full Body Tracking) calibration.

Step 6: Start Using

Once calibrated: Launch your VR apps. Enjoy smooth, drift-resistant full-body tracking. Use haptic feedback for enhanced immersion.

Tips & Best Practices

Charge before use: Fully charge all trackers using the dock. Re-calibrate after long sessions or if drifting occurs. Avoid strong magnetic fields (e.g., speakers, metal surfaces). Clean tracker surfaces regularly to maintain optical accuracy. Let trackers rest flat for 1 minute after booting to stabilize IMU. Use anti-slip strips to prevent slipping during intense movement.

Troubleshooting

Issue	Solution
Tracker not recognized	Reboot tracker; ensure USB receiver is plugged in
Drift or jitter	Re-run A-Pose calibration; check battery level
No haptic feedback	Enable in Excap Studio settings
Camera not working	Check power connection; restart camera module
Connection drops	Move away from Wi-Fi routers/Bluetooth devices

FCC WARNING :

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 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

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

The device has been evaluated to meet general RF exposure requirement, the device can be used in portable exposure condition without restriction