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SafetyPulse | Outdoor Install Guidance

Overview

This document provides general guidance for installing our TrackMix Plus 2 camera outdoors on your site.

For Indoor Installation: see relevant document.

Safety Pulse Outdoor Installation Guide:

The **Reolink TrackMix WIFI** is a 4K 8MP dual-lens PTZ camera with auto-tracking, well-suited for indoor work sites. It features an IP65 weatherproof/dust-resistant rating, making it durable in dusty or humid indoor environments like warehouses.

Camera Specifications to Consider:

These features guide placement decisions to maximize coverage, reliability, detection accuracy, and longevity in harsh construction conditions:

- **4G LTE connectivity**: Requires locations with good cellular coverage. Elevated, unobstructed positions improve signal strength. No WiFi or Ethernet needed.
- **Solar-powered**(30W) with 92Wh rechargeable battery: Enables wire-free deployment. Solar panel needs clear daily sunlight. USB-C (5V/2A) adapter as backup.
- **IP65 weatherproof** rating and -10°C to +55°C operating temperature: Suitable for rain, snow, dust, and extreme outdoor conditions common at construction sites. Avoid direct heavy spray if possible, but rated for typical exposure.
- **355° pan + 90° tilt** with **auto-tracking and auto-zoom** (dual-lens: wide-angle ~102° horizontal FOV + telephoto zoom): One camera can cover large areas effectively. Mount to allow full rotation without obstructions (poles, scaffolding, machinery).
- **PIR motion detection** (15m range) + smart person/vehicle/animal detection.
- **ColorX night vision** (low-light color) + spotlight + IR (30m): Effective for 24/7 monitoring of dark sites.
- **Wall/Column Mounting** with template + bracket (camera cannot be installed upside down to maintain waterproofing): Versatile for poles, walls, or temporary structures. Secure mounting resists wind/vibration.

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Specific Installation Guidance for Outdoor Construction Sites:

Prioritize elevated positions (ideally 10–15 ft) for overview, theft/vandalism protection, better LTE signal, and reduced tampering. Use the included mounting template if necessary.

Feel free to ask the SafetyPulse team to confirm LTE connectivity, Solar charge and Image upload after initial installation.

- Choose central **elevated** locations (on poles, light towers, or building frames) for maximum 355° pan coverage of large open areas.
- Mount perpendicular to **common movement paths** (e.g., walkways, drive paths) to optimize PIR detection reliability.
- If installing at distance and not overhead, it is recommend to put a shim or spacer behind the bottom of the mounting points to give the mounting arm a 10-15 degree incline.
- **Secure mounts** to withstand wind, vibration, and construction activity — use pole-mount adapters if needed for temporary poles.
- Target **active work zones** (excavation pits, scaffolding, framing, concrete pouring areas) to monitor safety compliance, falls, or hazards.
- Ensure **clear line-of-sight** for LTE signal and solar panel — avoid trees, buildings, or metal structures that block cellular reception or sunlight.
- **Option to install** at main entrances, gates, and access roads to track worker/vehicle arrivals, deliveries, and potential incidents.
- **Option to install** to cover equipment yards, tool storage, and high-value machinery areas to detect theft, vandalism, or improper use.
- **Option to position** over material stockpiles, lumber, rebar, or inventory zones to watch for improper stacking, theft, or access violations.
- For multi-camera setups, **create overlapping coverage at critical zones** (entrances, storage) for continuous monitoring.

This guide leverages the camera's solar/LTE design for rapid, low-maintenance deployment on construction sites. If you need the full step-by-step mounting procedure, solar panel integration details, diagrams, or site-specific customizations then don't hesitate to ask.

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Guidance on Installation Distance:

The Reolink TrackMix LTE Plus 2 features a dual-lens system:

- Wide-angle lens: 102° horizontal FOV – used for broad overview and initial detection.
- Telephoto lens: 37° horizontal FOV – provides zoomed-in detail when auto-tracking a person/vehicle.

The table below for installing the camera at distance shows:

- Recommended distances required for the wide-angle lens to fully cover the listed worksite viewing area.
- What width the telephoto lens covers when the camera is placed at those same distances.

Designated Viewing Area (Width)	Recommended Install Distance	Telephoto Viewing Width at Rec Dist.
50 ft	24–25 ft	17 ft
75 ft	36–38 ft	25 ft
100 ft	49–50 ft	34 ft
125 ft	61–62 ft	42 ft
150 ft	73–75 ft	50 ft
200 ft	97–100 ft	67 ft

Note: The “Designated Viewing Area” is the section of the Jobsite you want a camera to monitor.

Questions?

Contact your CompScience representative or email helpdesk@compscience.com.