# ClairWav U24

## 24GHz Tunnel Radar Detector

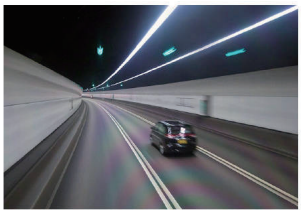
## Overview

The ClairWav-U24 tunnel radar is a specialized radar designed for tunnel scenarios, employing technologies such as MIMO antenna arrays, super-resolution angle estimation algorithms, and AI machine learning algorithms to enhance its ability to combat multipath effects comprehensively and improve radar detection accuracy. It performs real-time detection of vehicle position, speed, density, etc., through built-in algorithms, offering functionalities like continuous tracking of target trajectories, detection of traffic incidents within seconds, traffic data analysis, and safety alert reporting. It is suitable for various scenarios including circular, square tunnels, and tunnels with curved lanes.

## Key Features

- MIMO configuration to combat multipath effects
- Capability to track up to 128 targets
- Detection range of up to 400 meters
- Lane distance positioning up to 150 meters
- All-weather operation, adaptable to various harsh weather conditions
- Wide detection area with a 90° horizontal detection range
- Simple installation and configuration, low maintenance costs
- IP67 protection, long service life

## Application Scenarios



- Tunnel Status Monitoring
- Target Trajectory Tracking
- Abnormal Event Detection

## Specification

| Model | ClairWav-U24 |
|---|---|
| **Operating Frequency** | 24GHz |
| **Maximum Detection Distance** | 400m (1312ft) |
| **Non-motorized Vehicle/Pedestrian Detection Distance** | 150m (492ft) |
| **Detection Speed Range** | ±220Km/h |
| **Number of Lanes** | 2 |
| **Maximum Supported Cross-section Count** | 64 |
| **Simultaneously Detected Objects** | 128 |
| **Vehicle Flow Detection Accuracy** | ≥95% |
| **Average Vehicle Speed Detection Accuracy** | ≥95% |
| **Queue Length Detection Accuracy** | ≥95% |
| **Frame Rate** | 20fps |
| **Dimension** | 210*154*58 (mm), 8.27*6.06*2.28 (inches). |
| **Weight** | 2Kg |
| **Communication** | 100Mbps RJ45 Ethernet port<br>RS485 |
| **Power Supply** | DC24V (DC21.6V-32V) |
| **Power Consumption** | 20W |
| **Operating Temperature** | -40 to 74°C (-40 to 165°F) |
| **Storage Temperature** | -45 to 85°C (-49 to 185°F) |
| **Humidity** | ≤95% |
| **Protection Class** | IP67 |
| **MTBF** | 10 Years |

## Ordering Information

| Model | Description |
|---|---|
| **ClairWav-U24** | 24GHz, tunnel radar detector, the detection distance ranges up to 400m |