

Portable Through-Wall Radar System

High-Precision Life Detection & Motion Sensing Equipment

1. Product Overview

The Portable Through-Wall Radar System is an advanced detection device developed using ultra-wideband (UWB) radar technology. It is designed to detect motion and human presence behind walls or obstacles within a certain range.

The system enables rapid non-contact detection in complex environments, helping operators improve situational awareness during emergency response, search and rescue, disaster assessment, building inspection, and security operations.

It features portability, fast deployment, and intuitive operation, making it suitable for field applications where visibility is limited.

2. Working Principle

The system uses ultra-wideband electromagnetic pulse signals with strong penetration capability to pass through non-metallic barriers such as walls and debris.

By transmitting radar signals and analyzing reflected echoes from moving objects, the device applies advanced signal processing algorithms to identify motion or human presence behind obstacles.

This enables fast detection of hidden movement and supports decision-making in environments where direct visual access is unavailable.

3. Key Features

Accurate Motion Detection

Detects movement and human activity behind walls or obstacles with high sensitivity.

Ultra-Wideband Radar Technology

Adopts advanced UWB radar technology for strong penetration and reliable signal processing.

Portable & Lightweight Design

Compact structure for convenient carrying and rapid field deployment.

Real-Time Monitoring

Provides instant detection feedback to improve operational efficiency.

User-Friendly Operation

Simple interface and intuitive controls for quick learning and easy use.

Reliable Performance

Designed for stable operation in complex indoor and emergency environments.

4. Application Scenarios

- Emergency Search & Rescue
 - Disaster Response & Building Assessment
 - Structural Inspection Assistance
 - Personnel Presence Detection
 - Safety Monitoring in Hazardous Environments
 - Indoor Situation Awareness
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5. Technical Parameters

Radar System

Item	Specification
Technology	Ultra-Wideband Radar (UWB)
Detection Type	Motion / Human Presence Detection
Operating Mode	Real-Time Detection
Deployment	Portable / Handheld

Wearable Alert Device (Vibration Wristband)

Item	Specification
Alert Method	Vibration Notification
Connectivity	Wireless Communication
Purpose	Detection Feedback & Alert

Technical specifications can be customized according to product configuration.

6. Product Advantages

- Fast detection response
- Portable and field-ready design
- Real-time situational awareness
- High sensitivity signal processing
- Easy deployment and operation
- Suitable for emergency and inspection environments