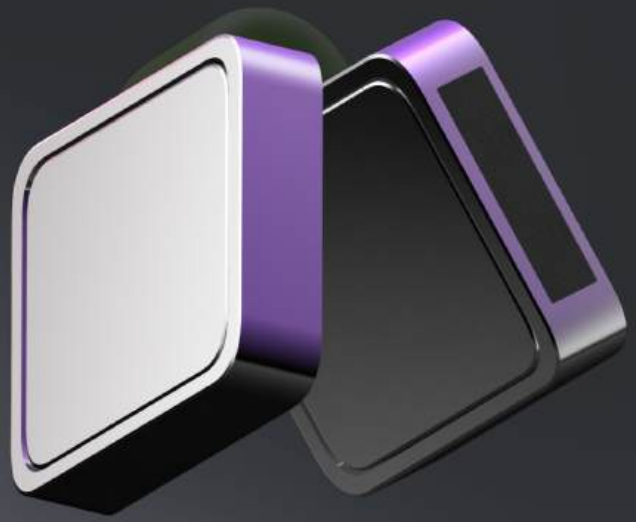
UNBDPIN_V1

Unbound Autonomy UAB



REAL-TIME SOLDIER STATUS

Hands-free during missions and ultra detailed after. Rewind to any moment to review mistakes, or track progress.

PROCESSING ON THE EDGE

No access to network required - all AI processing and computation happens on device, minimizing the message payload and improving connectivity robustness.

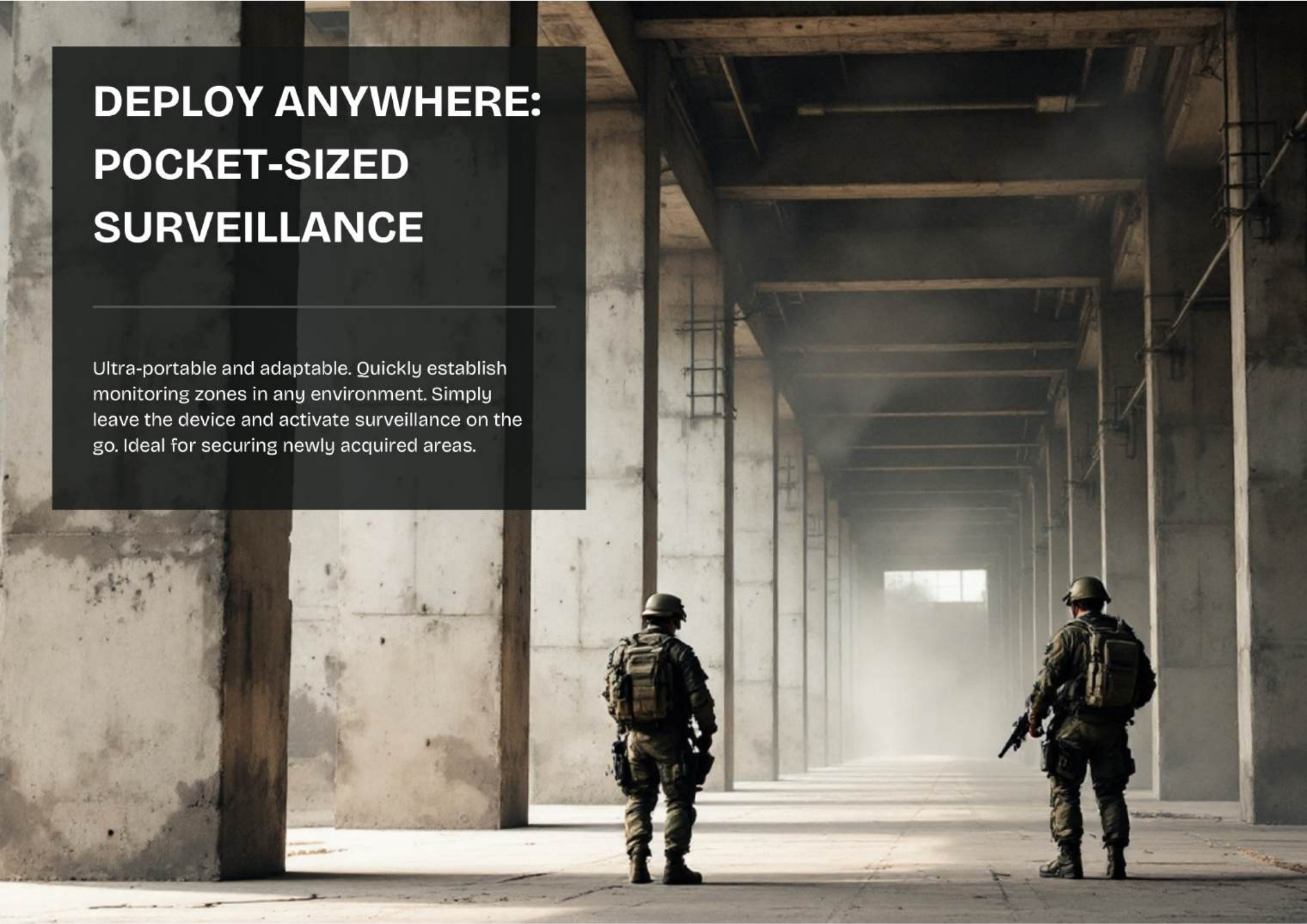
REALTIME VISIBILITY FROM BASE

Track how your mission is going, and adapt to the ever-changing scenario immediately. See data such as soldier inventory, stamina levels, location.

Be the first to know when a problem occurs.

ZERO-EFFORT COMMS: INTELLIGENCE SHARING ON AUTOPILOT

Streamline communication and minimize distractions. Our system automatically relays crucial information, allowing soldiers to remain fully engaged in the mission at hand.



DEPLOY ANYWHERE: POCKET-SIZED SURVEILLANCE

Ultra-portable and adaptable. Quickly establish monitoring zones in any environment. Simply leave the device and activate surveillance on the go. Ideal for securing newly acquired areas.

UA-PIN FEATURES

REAL-TIME SOLDIER TRACKING

Precisely track soldier movements on a live map, enhancing situational awareness and coordination.

SOUND CLASSIFICATION

Advanced AI algorithms detect and classify a wide range of sounds, providing critical audio intelligence.

ENHANCED BY CLOUD

When available, leverage cloud processing for data analysis, storage, and advanced features, maximizing system potential.

ENEMY FIRE LOCALIZATION

Pinpoint the origin of enemy fire, enabling rapid response and threat neutralization.

FULL OFFLINE FUNCTIONALITY

Maintain core functionalities offline with onboard processing, ensuring operability in disconnected environments.

SECURE, ENCRYPTED COMMUNICATION

Ensure secure communication channels, protecting sensitive information from interception.

ULTRA REALIABLE COMMS

Reliable communication even in challenging environments with ULF radio technology.

BIO-METRIC STATUS MONITORING

Monitor vital signs like heart rate and breathing to assess soldier status and fatigue.

ZERO-EFFORT DEPLOYMENT

Rapid and user-friendly deployment, minimizing setup time and maximizing operational readiness.

HANDS-FREE USABILITY

Voice control and intuitive design allow for hands-free operation, freeing soldiers to focus on the mission.

TAK COMPATIBLE

Seamless integration with the TAK ecosystem for enhanced data sharing and interoperability.

DETAILED MISSION REWIND

Review detailed mission logs, including sensor data, user actions, detected events, and communication records.

PLANNED UA-PIN SPECS

System	
Weight (AI Pin only)	0.15 lbs (70g)
Weight (AI Pin + Battery)	0.25 lbs (110g)
Pin Dimensions (WxDxH)	45mm x 15mm x 48mm
Battery Type and Life	Rechargeable Lithium Polymer Battery, 12+ hours operational
Sensors	Microphone, Accelerometer, Gyroscope, GPS
Connectivity	Ultra Low Frequency Radio, GPS, Bluetooth
Compute	
Processor	Quad-Core ARM Cortex-A53
AI Engine	Dedicated Neural Processing Unit (NPU) for on-device inference
RAM	2 GB LPDDR4
Storage	16 GB eMMC Flash
System Capabilities	
Deployment Time	Instantaneous
Operating Temperature	-20°C to +60°C
Environmental Protection	MIL-STD-810H Water-proof and Dust Resistant
Encryption	AES-256

Features	
Real-Time Soldier Tracking	✓
AI-Powered Sound Detection & Classification	✓
Enemy Fire Localization	⏳
Bio-metric Status Monitoring (e.g., out of breath)	⏳
Secure, Encrypted Communication	⏳
Ultra Low Frequency Radio Communication	⏳
Offline Functionality with Edge Processing	⏳
Cloud Integration for Enhanced Capabilities	
Zero-Effort Deployment	⏳
TAK Compatible	⏳
Hands-Free Usability	⏳

System Performance	
Radio Range (LOS)	Up to 10km
Sound Classification Accuracy	95%
Location Accuracy (city)	Within 0.5 meters
Location Accuracy (forest)	Withing 3 meters
Data Latency (to base)	< 1 second