

ACCUTECH 100361

129KHZ Crystal Unit | Centralized Wander Management Infrastructure Hub



PRODUCT OVERVIEW

The Accutech 100361 129KHZ Crystal Unit serves as a core hardware intelligence safety tag component within advanced wandering management and resident safety infrastructures. It is engineered to bridge the gap between physical perimeter sensors deployed at facility exits and localized control monitoring stations. By aggregating and processing automated safety tag connection metrics and frequency stabilization loops from monitored entry points, it eliminates the operational complexity of managing individual zones. This centralized topology ensures that large-scale senior care, nursing home, memory care, and hospital facilities maintain instantaneous, real-time situational awareness.

Deployed directly on at-risk patients who tend to wander, remove, or damage traditional monitoring equipment, the 100361 wristband structure channels non-latent tracking telemetry and active tamper-detection signals. This proactive routing method eliminates communication bottlenecks and guarantees that complex localized actions—such as authorized staff bypass, secure visitor access, and localized security overrides—are instantly synchronized with perimeter sensors. This active tracking processing ensures absolute protection across expansive hospital wings, long care facility corridors, and high-risk infant protection zones by safeguarding exposed external egress routes from environmental wear and unauthorized passage.

ARCHITECTS AND ENGINEERS (A&E) SPECIFICATION

- **System Infrastructure:** The contractor shall supply, install, and configure the Accutech 100361 129KHZ Crystal Unit to act as the primary external security access control and localized override node. The hardware must support direct integration configurations to synchronize active bypass states directly with peripheral zone controllers.
- **Perimeter Infrastructure Protection:** The wearable safety tag assembly shall incorporate a durable, commercial-grade waterproof structural design explicitly engineered to sustain continuous clinical exposure, operating reliably across extreme temperature variations, direct moisture impacts, and high-humidity environmental conditions.
- **Access and Control:** The device physical interface shall feature an integrated, monitored bracelet coupling layout to allow authorized clinical staff, security personnel, and facility supervisors to manage localized door bypass commands, tag status monitoring, and alarm resets directly at the security boundary.

- **Enclosure and Durability:** The electronics and resonant frequency crystal assembly shall be protected inside a ruggedized, tamper-resistant commercial-grade housing optimized for comfortable, non-removable patient wristband configurations.
- **System Interoperability:** The safety tag transmitter architecture must feature validated native compatibility for direct low-voltage radio frequency data connection with Accutech environmental safety platforms, ensuring non-latent signaling and secure credential validation across the facility's dedicated security network.

SYSTEM COMPONENTS

The 100361 129KHZ Crystal Unit incorporates several fundamental integrated sub-modules and physical connection layouts:

- **Conformal Waterproof Outer Enclosure:** The primary transmitter housing assembly sealed with protective medical-grade compounds to isolate internal electronic logic paths from moisture, clinical bathing, and fluid intrusion.
- **Commercial-Grade Monitored Bracelet Loop:** Ruggedized, high-durability tamper-sensing wristband strap featuring integrated conductive circuit traces dedicated to tracking physical band continuity.
- **129 kHz Internal Resonator Matrix:** Integrated low-drift clock and frequency-control crystal sub-assembly dedicated to stabilizing perimeter tag activation signaling and tracking reliability.
- **Low-Power RF Transmitter Backplane:** Internal micro-circuit board layout designed for clean, reliable wireless transmission of unique identification metrics and emergency alarm telemetry.
- **Extended-Life Internal Battery Node:** High-density integrated power cell configuration dedicated to driving continuous beaconing functionality over an extended operational life cycle.

FEATURES AND BENEFITS

- **Centralized Boundary Awareness:** Consolidates patient tracking status and perimeter sensor communication loops down to a single monitoring focal point, greatly simplifying hardware footprints and reducing response times for clinical teams.
- **Integrated Tamper Alert Circuitry:** Features a built-in monitored bracelet design engineered to send immediate telemetry updates to the central nurse's station if the band is opened, cut, or damaged.
- **Continuous Structural Security:** Sends active secondary backup signaling directly to perimeter door locking systems during a localized tamper event, maintaining continuous facility building security.
- **Prolonged Battery Autonomy:** Built using high-efficiency structural electronic components optimized for long-term battery lifespan, minimizing maintenance workloads and lowering overall care facility operation costs.
- **Validated Platform Interoperability:** Engineered for total compatibility out-of-the-box with established Accutech ResidentGuard systems, ensuring a unified approach to facility patient protection.

PRODUCT SPECIFICATION

Manufacturer	Accutech Healthcare Security Solutions
Product Model Name	129KHZ Crystal Unit Resident Safety Tag
Part Number / SKU	100361
Component Technology Type	Active Wearable RF Transmitter Tag / Frequency Controlled Oscillator
Nominal Operating Frequency	129 kHz High-Security Low-Frequency Wandering Band

Enclosure Protection Rating

Fully Waterproof Sealed Housing / Tamper-Resistant Band Structure

Interface Link Mechanism

Monitored Conductive Wristband Latches for Active Power and Tamper Loops

Wander System Compatibility

Accutech ResidentGuard Wander Management Environments

Chassis Construction

Heavy-Duty Industrial Commercial-Grade Lightweight Structural Polymer

Primary Target Environments

Dementia Care Units, Behavioral Health Wings, Skilled Nursing Facilities

COMPLIANCE AND CERTIFICATION

- **FCC Status:** Designed and certified to meet FCC Part 15 regulations regarding digital device shielding. This guarantees that multi-zone switching and active infrared transmission paths do not cause or sustain harmful electromagnetic interference with nearby diagnostic medical devices or critical patient networks.
- **UL Listing:** Engineered and assembled using components compliant with UL safety classifications for low-voltage signal appliances, exterior access control equipment, and healthcare facility alert instrumentation.
- **RoHS Compliance:** Formulated in alignment with environmental protection directives, ensuring that the assembly, internal structural materials, and electronic trace configurations restrict the use of lead, mercury, and other hazardous materials.