



WORKER-SAFETY WEARABLES

Smart Helmet & Wristband

An industrial smart wristband and helmet that watch over your front line — continuous heart-rate and skin-temperature monitoring, one-press SOS, and fall / G-force detection, relayed live to the cloud over a Bluetooth gateway. Built for confined spaces and high-risk sites.



Vitals monitoring

Continuous heart-rate & skin-temperature with anomaly alerts



One-press SOS

Distress signal + LED status for instant response



Fall / G-force

Detects falls & impacts and auto-alerts the team



Confined-space ready

IP65 wearable · live vitals in sewers & tanks

BUILT FOR

Construction sites

Confined spaces

Drainage & sewers

MEP / plant rooms

Lone workers

High-risk industry

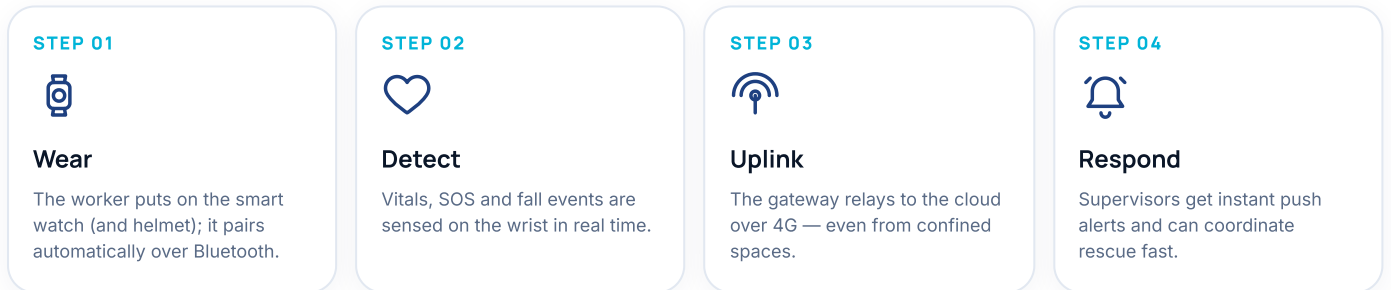
— HOW IT WORKS

Vital signs from the wrist – straight to the cloud.

Each worker wears an industrial smart watch (with optional smart-helmet integration) that streams heart-rate, skin-temperature, SOS and fall events over Bluetooth to an AC-RT-A3000 gateway, which backhauls to a cloud portal over 4G LTE. An extendable antenna pushes coverage down into confined spaces where it matters most.



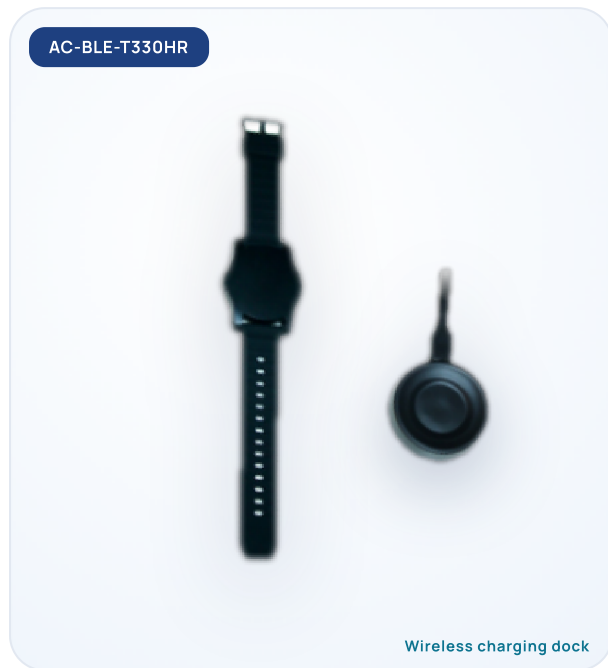
- 1 Wearables on the worker**
Industrial smart watch — heart-rate, skin-temp, SOS, LED status and fall / G-force — plus optional smart-helmet integration (two-way talk, positioning).
- 2 Bluetooth 5.0 gateway**
AC-RT-A3000 receives 20+ wearers per unit; Long-Range PHY reaches up to ~200 m in open field.
- 3 Battery backup & extendable antenna**
Built-in battery keeps logging through power cuts; a 10 m probe antenna reaches workers down in shafts and tanks.
- 4 4G uplink**
4G LTE (client SIM) — no fixed line or structured cabling required on site.
- 5 Cloud & instant alerts**
Web portal plus mobile / tablet push for heart-rate, skin-temperature, SOS and fall events.



— WHERE IT'S USED









| | | |
|---|---|--|
| Construction sites Front-line worker vitals | Confined spaces Shafts, sewers, tanks | Lone workers Solo / remote operation |
| Heat-stress zones Skin-temp early warning | MEP / plant rooms High-risk maintenance | Industrial sites Centralised safety view |

A safety watch on the wrist, a gateway on site.






Industrial smart watch — AC-BLE-T330HR

A rugged BLE wristband that monitors the wearer's vitals and raises the alarm the moment something is wrong — purpose-built for hazardous and confined-space work.

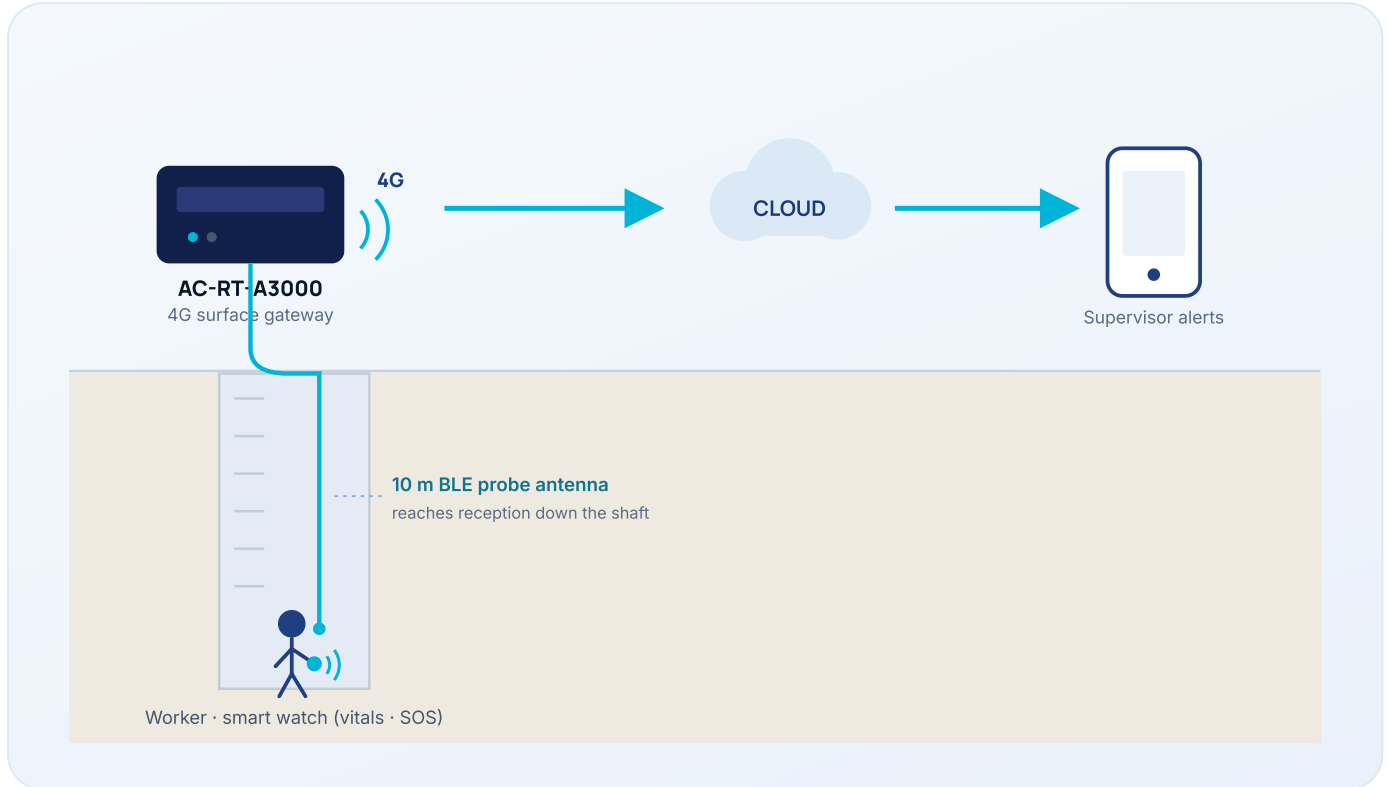
-  **Heart-rate sensor**
Continuous, with anomaly alerts
-  **One-press SOS**
Distress signal to the team
-  **Fall / G-force**
Detects falls & impacts
-  **IP65 · -25-75 °C**
Nordic nRF52840 · PC body
-  **Skin temperature**
Heat-stress / cold exposure
-  **LED status**
Visible emergency indication
-  **Bluetooth 5.0 / iBeacon**
Long-range BLE reporting
-  **300 mAh · wireless charge**
Rechargeable, dock-charged

THE SYSTEM

|  Smart watch |  Smart helmet (option) |  Receiver gateway |
|--|--|---|
| <ul style="list-style-type: none">● Model AC-BLE-T330HR · 45.5 × 44.5 × 14.6 mm · 48 g● Heart-rate & skin-temperature, real-time sync● SOS button + LED emergency status● Fall / G-force detection · IP65 · 300 mAh | <ul style="list-style-type: none">● Integrates two-way talk & positioning● Ties into the same site-safety workflow● Pairs with the wristband under one view● Helmet body & certification configured per project | <ul style="list-style-type: none">● Model AC-RT-A3000 · Bluetooth 5.0, up to 200 m● 20+ wearers per gateway · IP66● 4G LTE uplink (client SIM)● Extendable 10 m probe antenna for shafts |

Eyes on the worker – even 10 m down a shaft.

Confined-space entry is among the highest-risk work there is, and it's exactly where signals struggle to reach. A **10-metre BLE probe antenna** lowers reception down into the shaft to the worker's smart watch; the **4G BLE gateway** at the surface relays vitals and SOS to the cloud — so a supervisor topside sees heart-rate, skin-temperature and fall alerts in real time.



Live vitals below

Heart-rate & skin-temp from inside the shaft, in real time.



10 m probe reach

Extendable antenna delivers BLE down to the worker.



Instant SOS / fall

One-press distress and fall events alert the topside team.



4G – no fixed line

Surface gateway backhauls over 4G anywhere on site.

The outcome

Continuous worker-vitals and SOS coverage in the places where it matters most — surveyed, supplied and commissioned end-to-end by New Forward.



Set up & commissioned by NF

How it's set up: place the surface gateway at the entry point, lower the probe antenna to the work depth, fit each entrant with a smart watch, and bind vitals / SOS / fall thresholds in the web portal. Reach, runtime and alert behaviour depend on shaft depth, shielding, sampling rate and firmware; confined-space entry must always follow site safe-work procedures.

Full specification, supply & support.

Smart watch – AC-BLE-T330HR

| | |
|-----------------|--|
| Connection | BLE (Bluetooth) |
| Chipset | Nordic nRF52840 |
| Frequency | 2.4 GHz |
| Battery | Built-in 300 mAh |
| Charging | Wireless dock (48.5 × 48.5 × 12.3 mm · 17 g) |
| Sensors | Heart-rate · skin-temperature |
| Safety | SOS button · LED status · fall / G-force |
| Data sync | Real-time |
| Material | PC |
| IP rating | IP65 |
| Operating temp. | -25 °C to +75 °C |
| Size / weight | 45.5 × 44.5 × 14.6 mm · 48 g |
| Compatibility | iBeacon-compatible |

Receiver gateway – AC-RT-A3000

| | |
|--------------------|--|
| RF protocol | Bluetooth 5.0 · Long-Range PHY (Coded) |
| Reception range | Up to ~200 m, open field |
| Wearers / gateway | 20+ pcs |
| Uplink | 4G LTE (SIM by client) |
| Power input | 220 V AC · 10 m power cord |
| Antenna | Extendable 10 m probe (confined spaces) |
| IP rating | IP66 · UV-resistant |
| Operating temp. | -25 °C to +75 °C |
| Compatible beacons | AC-BLE-T330HR / T110 / T110S / T110F / T110T / T110G |
| Cloud | Web portal · iOS / mobile push |
| Smart helmet | Two-way talk & positioning — per project |
| Detailed specs | Per latest product datasheet |

TURNKEY SUPPLY & SUPPORT



Site survey & coverage

Assess confined-space reach, gateway and antenna placement.



Installation & commissioning

Fit wearables, mount gateways, set vitals / SOS thresholds.



Cloud & maintenance

Web-portal setup, account onboarding and ongoing support.

Why New Forward Technology



Licensed & certified

HK Security Company Licence No. 2327 — one-stop supply, install & maintain.



Site-safety track record

Wearable, confined-space and worksite monitoring delivered across HK.



One-stop integration

Wearables × IoT × CCTV under a single point of contact.

Protecting workers in confined or high-risk spaces?

Request a site assessment or a tailored wearable-safety plan — New Forward handles supply, installation, cloud setup and maintenance end-to-end.



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Bluetooth® is a registered trademark of Bluetooth SIG, Inc.; iBeacon is a trademark of Apple Inc. Model numbers (AC-BLE-T330HR, AC-RT-A3000) and specifications are indicative and subject to change without notice; figures depend on environment, configuration and firmware and are confirmed per the latest product datasheet. The smart helmet's body and any safety certification are selected per project; the 4G data SIM is provided by the client. Confined-space entry must follow site safe-work procedures. System configuration is tailored to each site. © 2026 New Forward Technology Limited.