



WIRELESS IOT SAFETY MONITORING

BLN Wireless IoT Platform

An industrial Bluetooth 5.0 (BLE) receiving gateway that links wearables and safety sensors to the cloud over Wi-Fi or 4G — no fixed line on site. Battery-backed, IP66, with extendable antennas that reach into confined spaces. Built for construction, drainage and worker-safety monitoring.



Wi-Fi or 4G uplink

To the cloud over 4G LTE or 2.4 GHz Wi-Fi — no fixed line needed



Bluetooth 5.0

Long-Range PHY — reception up to 200 m across the site



Battery-backed

Built-in 12 V Li-ion keeps running through power cuts



IP66 · -25-75 °C

UV-resistant industrial build, plug-and-play 220 V

BUILT FOR

Construction sites

Drainage & sewers

Confined spaces

Property management

Warehousing & logistics

MEP / plant rooms

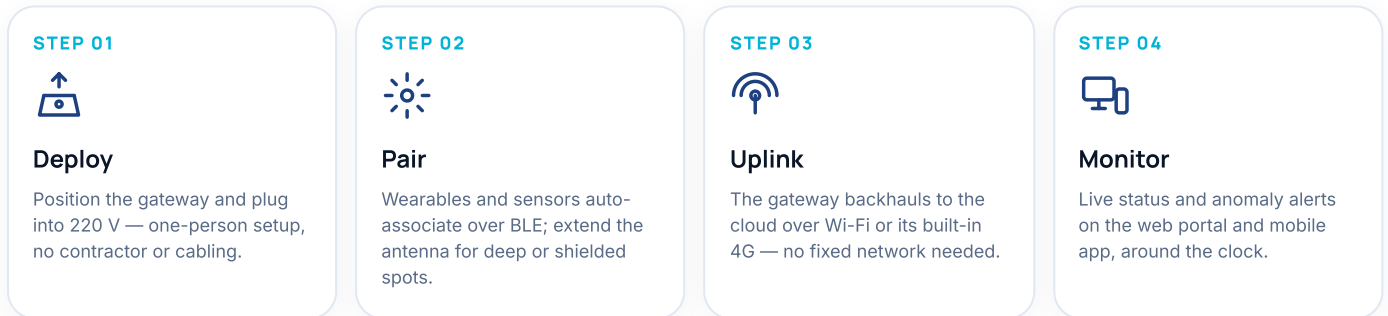
— HOW IT WORKS

Sensors to cloud – over one industrial gateway.

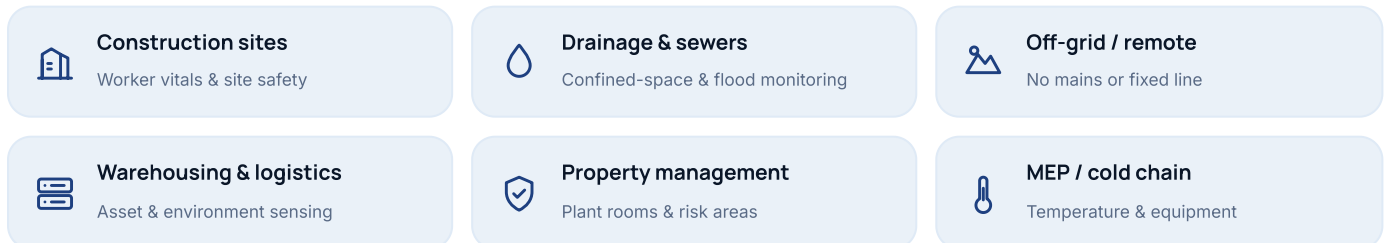
BLE wearables and safety sensors report to a single AC-RT-A3000 receiving gateway, which backhauls to a cloud web portal over Wi-Fi or 4G. No fixed line, structured cabling or on-site server is required — roll the gateway in, power it from 220 V and the site is monitored.



- 1 Wearables & sensors**
BLE beacons: smart watch (vitals / SOS), safety belt, helmet, flood and temperature — plus open IO for third-party devices.
- 2 AC-RT-A3000 gateway**
Receives 20+ sensors per unit; Bluetooth 5.0 Long-Range PHY reaches up to ~200 m in open field.
- 3 Battery backup & extendable antenna**
Built-in 12 V Li-ion keeps logging through power cuts; the antenna extends into tunnels, manholes and cabins.
- 4 Wi-Fi or 4G uplink**
2.4 GHz Wi-Fi or 4G LTE (client SIM) — no fixed line or structured cabling required on site.
- 5 Cloud & instant alerts**
Web portal plus mobile / tablet push for body-temperature, heart-rate and flood anomalies.



— WHERE IT'S USED



One rugged gateway. A family of safety sensors.

AC-RT-A3000



Receiving gateway – AC-RT-A3000

An all-in-one industrial BLE/BT5.0 receiver: aggregates 20+ sensors, backhauls over Wi-Fi or 4G, and keeps logging on battery through outages — IP66 rated for the field.



Wi-Fi or 4G uplink

Cloud without a fixed line



20+ sensors / gateway

One unit covers a zone



Extendable antenna

Into manholes & tanks



Plug-and-play 220 V

Relocate & re-zone fast



Bluetooth 5.0 · 200 m

Long-Range PHY reception



Battery backup

12 V Li-ion through outages



IP66 · -25-75 °C

UV-resistant ABS build



Open IO / integration

Third-party sensors & systems

COMPATIBLE RF BEACONS (IBEACON-COMPATIBLE)



Smart watch

AC-BLE-T330HR

Heart-rate · body-temp · SOS



Safety belt

AC-BLE-T110S

Fall-from-height detection



Safety helmet

AC-BLE-T110

Wear & presence sensing



Flood / water

AC-BLE-T110F

Water-ingress alerts



Temperature

AC-BLE-T110T

Environment monitoring

Where wired monitoring can't reach.

Sewers, tanks, lift pits and remote works rarely have a fixed network or reliable mains. The **AC-RT-A3000** needs neither: it backhauls over **4G LTE** (client SIM) or Wi-Fi, an **extendable antenna** pushes reception down into manholes and cabins, and a built-in **12 V Li-ion battery** keeps logging and alerting through power cuts.

No fixed line, no mains – the gateway still reports to the cloud



CONFINED / OFF-GRID

AC-RT-A3000 + sensors
battery · extendable antenna

INTERNET

CLOUD & MOBILE

web portal · operators
push alerts to phone / tablet

RESILIENCE

field-ready

Battery backup

12 V Li-ion logs through power cuts

+

Extendable antenna

reaches into manholes, tanks & cabins



No fixed line

4G LTE or Wi-Fi uplink — deploy where there's no broadband.



Battery backup

Built-in 12 V Li-ion keeps logging and alerting through outages.



Extendable antenna

Pushes BLE reception into deep or shielded confined spaces.



Web + mobile alerts

One portal; instant push for vitals, flood and temperature.

The outcome

Worker-safety and environment monitoring on sites that have no network and no power — surveyed, installed and commissioned end-to-end by New Forward, from gateway to cloud portal.



Set up & commissioned by NF

How it's set up: position one or more gateways for coverage (extend antennas for deep spots), insert the client 4G SIM or join Wi-Fi, pair the wearables / sensors, and bind alert thresholds in the web portal. Reception range, sensor count and battery endurance depend on site layout, shielding, sampling rate and firmware.

Full specification, supply & support.

Receiving gateway – AC-RT-A3000

RF protocol	Bluetooth 5.0 · Long-Range PHY (Coded)
Reception range	Up to ~200 m, open field
Sensors / gateway	20+ pcs
Uplink	Wi-Fi 2.4 GHz or 4G LTE (SIM by client)
Power input	220 V AC · 10 m power cord
Backup battery	Built-in 12 V Li-ion (logs through outages)
IP rating	IP66 · UV-resistant
Enclosure	ABS
Operating temp.	-25 °C to +75 °C
Antenna	Extendable for confined spaces
Expansion	Open IO / third-party protocol
Cloud	Web portal · iOS / mobile push
Install	Plug-and-play, relocatable, zonable

Compatible RF beacons

Smart watch	AC-BLE-T330HR · heart-rate, body-temp, SOS
Safety belt sensor	AC-BLE-T110S
Safety helmet sensor	AC-BLE-T110
Flood / water sensor	AC-BLE-T110F
Temperature sensor	AC-BLE-T110T
Compatibility	iBeacon-compatible BLE
Power	Built-in battery (model-dependent)
Smart-watch build	Rechargeable · wireless charging dock
Alerts	Vitals / fall / flood / temperature thresholds
Open IO	Third-party sensors on request
Detailed specs	Per latest product datasheet
Selection	Sensor mix tailored by NF per site

TURNKEY SUPPLY & SUPPORT



Site survey & coverage

Assess coverage, confined-space reach and gateway placement.



Installation & commissioning

Mount gateways, pair sensors, set thresholds and test alerts.



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.



IoT & site-safety track record

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



One-stop integration

IoT × CCTV × access control under a single point of contact.

Need worker-safety or confined-space monitoring where there's no network?

Request a site assessment or a tailored sensor 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-RT-A3000, AC-BLE-T330HR / T110S / T110 / T110F / T110T) 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 4G data SIM is provided by the client. System configuration (gateway count, sensor mix, antenna and coverage) is tailored to each site. © 2026 New Forward Technology Limited.