

PRODUCT DATASHEET

CHESTER Motion

Occupancy and foot-traffic data from any space — dual-PIR directional counting, deployed in minutes without wiring, running for years on battery.

REFERENCE NUMBER HPD.260706.13-R1 DATE July 6, 2026


2

PIR sensors

3 m / 80°

detection range

±0.2 °C

temperature accuracy

3+ yrs

battery life

Why integrators pick it

■ Dual-PIR directional detection

Two PIR sensors detect human movement and track its direction — arrivals vs. departures — for accurate foot-traffic analysis, not just presence.

■ Instant alerts

Triggers immediate notifications on motion detection — for security applications and restricted-area monitoring where the response time matters.

■ Event counting

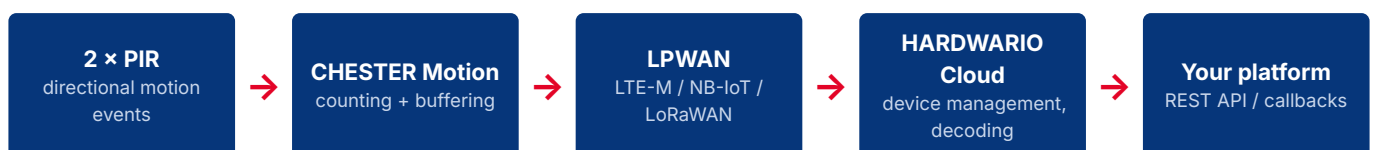
Counts motion events over configurable intervals, with lifetime totalizers that persist across reports — ideal for foot-traffic analysis and occupancy trending.

■ Battery powered

Years of autonomous operation on primary batteries. Deploy anywhere without electrical installation — including remote or difficult-to-access locations.

Where it fits

CHESTER Motion turns how a space is actually used into data: measured meeting-room and desk usage to right-size an office footprint, usage-based cleaning and restocking of restrooms — proven to cut facility costs by 20 % — instant cloud alerts on entry into restricted areas at storage facilities and construction sites, and zone-level foot traffic in retail that shows which displays and layouts convert. The same device also tracks passage in factory aisles, train stations, and protected natural areas.



From passage to your client's dashboard — each device counts directional events, buffers samples, and reports in configurable batches.

Detection is interrupt-driven and continuous: when one PIR channel fires, a 750 ms window pairs it with the opposite channel to record a directional left-to-right or right-to-left event. Events are counted into buffered samples and reported on a configurable interval, with sensitivity presets (low, medium, high, or individual tuning) to match the environment. Local commissioning and firmware updates run over Bluetooth Low Energy from a phone with HARDWARIO Manager; fleets are managed remotely through HARDWARIO Cloud with data handover via REST API or HTTP callbacks to any platform you run.

Technical specification

DETECTION

PIR detectors	2 (left and right channels, CHESTER-S3 module)
Detection range	Up to 3 m
Measurement angle	Max 80°
Directional counting	Left-to-right / right-to-left events, 750 ms pairing window
Sensitivity	Presets low / medium / high, or individual parameter tuning
Sample buffer	Up to 30 motion samples per reporting period; lifetime totalizers persist

ONBOARD SENSORS

Temperature	-20 to +65 °C, accuracy ± 0.2 °C (0 to 65 °C)
Humidity	0 to 100 %, accuracy ± 2 % (from 10 to 90 %)

CONNECTIVITY

Cellular	LTE-M / NB-IoT (Nordic nRF9160)
LoRaWAN	Class A, EU868 (Murata Type ABZ, LoRaWAN 1.0.2)
Local access	Bluetooth Low Energy — configuration and firmware updates via HARDWARIO Manager
Antenna	Internal, or external via SMA pigtail

POWER

Primary battery	Lithium cell Saft LS26500, 3.6 V, 7 700 mAh
Battery life	3+ years of autonomous operation
Idle consumption	< 180 μ A
Peak consumption	< 250 mA

ENVIRONMENT & MECHANICAL

Operating temperature	−20 to +60 °C
Storage temperature	−30 to +70 °C
Ingress protection	IP67
Enclosure	ASA plastic, 130 × 175 × 45 mm

Ordering information

CHESTER Motion ships as a single application variant, delivered ready to mount — the enclosure carries the two PIR sensor windows and a light pipe for the status LED.

Ordering code	Description
CHESTER-M-BCGLS	CHESTER mainboard with C battery holder — LTE-M/NB-IoT, LoRaWAN, BLE, GNSS
CHESTER-S3	Extension board with two PIR sensors
CHESTER-E23-LP	Enclosure with two PIR sensor holes, SMA antenna pigtail, and light pipe
SAFT LS26500	Primary lithium cell, 3.6 V, 7 700 mAh

COMPLIANCE

CHESTER Motion conforms to the Radio Equipment Directive 2014/53/EU — including the EN 18031-1 cybersecurity requirements mandatory since August 2025 — and the RoHS Directive 2011/65/EU, and to the equivalent UK statutory requirements. The built-in radio modules additionally carry FCC certifications for the US market.

Declaration of Conformity: HDC.260706.12

CE
UKCA

Scope an occupancy pilot

A CHESTER Motion evaluation unit counts real foot traffic at your client's site and reports to your platform in an afternoon. Tell us about the application — spaces, mounting positions, alerting needs — and we will configure a pilot kit that matches it, including integration support for your first deployment.

- [Explore CHESTER Motion in the HARDWARIO store](#)
- [Read the developer documentation](#)

ABOUT HARDWARIO

HARDWARIO a.s. designs and manufactures industrial IoT devices in Liberec, Czech Republic. Founded in 2016 and listed on the Prague Stock Exchange, the company does more than 80 % of its business through its partners.

HARDWARIO a.s.

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