

PRODUCT DATASHEET

CHESTER Meteo

A complete weather station for remote and off-grid sites — wind, rain, temperature, humidity, and pressure, running for years on battery or solar.

REFERENCE NUMBER HPD.260706.12-R1 DATE July 6, 2026

**0.28 mm**

rainfall resolution

0.33 m/s

wind speed resolution

±0.2 °C

temperature accuracy

7 700

mAh battery capacity

Why integrators pick it

■ Complete weather station

Measures wind speed, wind direction, rainfall, temperature, humidity, and barometric pressure from a single deployment — one installation instead of a rack of instruments.

■ Durable outdoor design

IP67-rated enclosure with industrial connectors — built to stay out in the weather it measures, year after year.

■ Off-grid operation

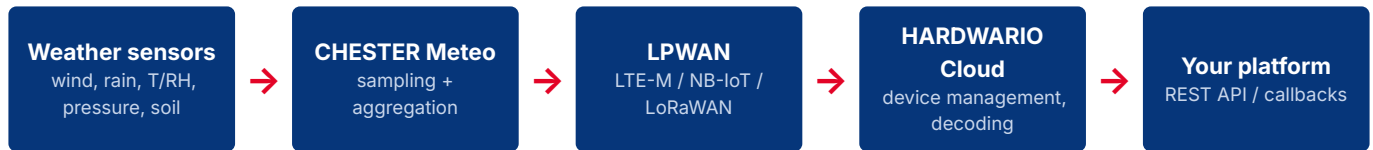
Runs on primary batteries or solar power for years of autonomous operation in locations without grid electricity — fields, ridgelines, construction sites.

■ LPWAN data delivery

Transmits weather data via NB-IoT, LTE-M, or LoRaWAN — ideal for agricultural fields, construction sites, and remote infrastructure with no site network.

Where it fits

CHESTER Meteo turns hyperlocal weather into a production data feed: microclimate data across fields and vineyards for smarter irrigation and frost warnings, real-time wind speed for safe crane operations and documented work-stop compliance on construction sites, inputs for flood-warning and environmental-monitoring networks in smart cities, and bankable wind and solar data for renewable-energy site assessment.



From the mast to your client's dashboard — each station samples, aggregates (min/max/average/median), and reports in configurable batches.

The station samples every sensor on a configurable period, aggregates the samples locally, and transmits timestamped batches — wind speed is measured continuously between samples, so every report carries accurate minimum, maximum, and average wind figures. 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

MEASUREMENT

Wind speed	Resolution 0.33 m/s — measured continuously between samples
Wind direction	0 to 360°
Rainfall	Resolution 0.28 mm
Temperature	−20 to +80 °C, accuracy ±0.2 °C (from 0 to 65 °C)
Humidity	0 to 100 %, accuracy ±2 % (from 10 to 90 %)
Atmospheric pressure	External barometer — reported in pascals
Soil sensors	HARDWARIO soil probes — moisture and temperature
External sensors	1-Wire temperature probes; wireless BLE temperature/humidity tags

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 3.6 V, 7 700 mAh
Battery life	Up to 3 years on a single lithium cell
Solar / DC (Meteo Z)	DC 6 V to 28 V or solar panel with rechargeable Li-ion backup battery
Operating voltage range	2.0 V to 5.25 V
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
Station dimensions	300 × 450 × 700 mm

Ordering information

Two application variants cover the common deployment scenarios: **CHESTER Meteo** runs fully on its primary battery; **CHESTER Meteo Z** adds the backup module for solar or DC powering with a rechargeable backup battery. The meteorological sensor assembly and an external barometer complete the station; variants with a pyranometer input (Meteo P) and Modbus weather sensors (Meteo M) are available on request.

Ordering code	Description
CHESTER-M-BCGLS	CHESTER mainboard — LTE-M/NB-IoT, LoRaWAN, BLE, GNSS
CHESTER-X0B:A	Input module (4 channels), slot A
CHESTER-S2	External hygrometer
CHESTER-Z1	Backup module — DC 6–28 V or solar input + rechargeable Li-ion cell (Meteo Z variant)
CHESTER-E10-P	IP67 enclosure with SMA antenna pigtail

COMPLIANCE

CE

UKCA

CHESTER Meteo 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.260706.11

Scope a weather-monitoring pilot

A CHESTER Meteo station reports live weather from your client's site to your platform in an afternoon. Tell us about the application — the variables that matter, power available on site, connectivity — and we will configure a pilot station that matches it, including integration support for your first deployment.

- [Explore CHESTER Meteo 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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