

# Nextriv Weather Pro

Wireless 6-in-1 weather station

NX-WE-WEATHER6

Nextriv Weather

A professional wireless 6-in-1 weather station: temperature, humidity, wind speed and direction, barometric pressure and rainfall measured by a piezoelectric sensor with 0.01 mm resolution. Wind is measured ultrasonically with no moving parts, and the sensor module operates in an aluminium-alloy housing resistant to UV and salt spray — from -40 to 85 °C. The kit is powered by a 15 W solar panel with buffer batteries, and a memory of over 19,000 records with retransmission keeps the measurement series continuous. Data reaches the Nextriv platform over long-range radio — up to approx. 15 km in open terrain.



**6**

measured parameters

**0.01 mm**

rainfall resolution

**~15 km**

open-terrain range

**15 W**

solar panel with battery backup

## Key features

- Six atmospheric parameters in one device: temperature, humidity, wind speed and direction, barometric pressure, rainfall
- Piezoelectric rain gauge with 0.01 mm resolution (0–1,000 mm range) — no tipping bucket, nothing to clog
- Ultrasonic wind measurement up to 60 m/s — no moving parts, no mechanical wear
- Sensor module in an aluminium-alloy housing (IP65), resistant to UV and salt spray; operation from -40 to 85 °C
- Energy autonomy: a 15 W solar panel with 2 × 2,550 mAh buffer batteries — at least a week of operation without sun [1]
- Local memory of over 19,000 records with automatic retransmission — gap-free history after connectivity outages
- Configuration over NFC from a smartphone or over USB-C from a computer
- Radio range up to approx. 2 km in built-up areas / approx. 15 km in open terrain — station in the field, gateway back at the buildings

## Technical specification

| Measurement — temperature |             |
|---------------------------|-------------|
| Measuring range           | -40...85 °C |
| Accuracy                  | ±0.3 °C     |
| Resolution                | 0.1 °C      |
| Sensing element           | thermistor  |

#### Measurement — relative humidity

|                 |                            |
|-----------------|----------------------------|
| Measuring range | 0...100 % RH               |
| Accuracy        | ±3 % RH                    |
| Resolution      | 0.5 % RH                   |
| Sensing element | capacitive humidity sensor |

#### Measurement — wind speed

|                 |                                         |
|-----------------|-----------------------------------------|
| Measuring range | 0...60 m/s                              |
| Accuracy        | ±0.3 m/s or ±3 % (whichever is greater) |
| Resolution      | 0.1 m/s                                 |
| Sensing element | ultrasonic, no moving parts             |

#### Measurement — wind direction

|                 |                             |
|-----------------|-----------------------------|
| Measuring range | 0...360°                    |
| Accuracy        | ±3°                         |
| Resolution      | 0.1°                        |
| Sensing element | ultrasonic, no moving parts |

#### Measurement — barometric pressure

|                 |                                         |
|-----------------|-----------------------------------------|
| Measuring range | 500...1,100 hPa                         |
| Accuracy        | ±0.5 hPa                                |
| Resolution      | 0.1 hPa                                 |
| Sensing element | piezoresistive absolute pressure sensor |

#### Measurement — rainfall

|                 |                                                       |
|-----------------|-------------------------------------------------------|
| Measuring range | 0...1,000 mm                                          |
| Accuracy        | ±0.5 mm (< 10 mm); ±5 % (> 10 mm)                     |
| Resolution      | 0.01 mm                                               |
| Sensing element | piezoelectric (vibration sensing) — no tipping bucket |

## Radio connectivity

|                      |                                                                         |
|----------------------|-------------------------------------------------------------------------|
| Technology           | long-range, low-power radio (LPWAN)                                     |
| Radio band           | EU868 (EU); regional variants: US915, AU915, AS923, IN865, KR920, RU864 |
| Tx power             | up to 16 dBm (EU868); up to 22 dBm (US915)                              |
| Receiver sensitivity | down to -137 dBm                                                        |
| Antenna              | internal (in the base unit)                                             |
| Sensor-gateway range | up to approx. 2 km in built-up areas / approx. 15 km in open terrain    |
| Communication        | two-way — readings to the platform, remote configuration via downlink   |

## Kit composition and interfaces

|                |                                                                 |
|----------------|-----------------------------------------------------------------|
| Kit components | 6-in-1 sensor module, radio base unit, solar panel with bracket |
| Connectors     | M12 (A-coded): 1× 2-pin power (15 V), 1× sensor-module data     |
| USB            | 1× USB-C (internal) — configuration and console                 |
| Button         | 1× power / reset (internal)                                     |
| Indicators     | 1× status LED (internal)                                        |

## Device features

|                  |                                                                           |
|------------------|---------------------------------------------------------------------------|
| Local buffer     | over 19,000 records; automatic retransmission after a connectivity outage |
| Data retrieval   | remote retrieval of logged readings from the device memory                |
| Threshold alarms | on-device thresholds + alert rules in the Nextriv platform                |
| Configuration    | mobile app over NFC or PC software over USB-C                             |
| Power on / off   | NFC, PC software (USB-C) or button                                        |

## Power

|                       |                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System power          | 15 W (1 A) solar panel + 2× 2,550 mAh buffer batteries (rechargeable 18650 lithium-ion cells)                                                                       |
| Solar panel           | monocrystalline silicon; max power 15 W ( $\pm 5\%$ ); rated voltage 15 V ( $\pm 0.3$ V); open-circuit voltage 18 V ( $\pm 0.3$ V); rated current 1 A ( $\pm 5\%$ ) |
| Power cable           | 1× 50 cm with a 2-pin M12 (A-coded) connector                                                                                                                       |
| Operation without sun | at least a week on the buffer batteries [1]                                                                                                                         |

## Enclosure and operating environment

|                                       |                                                      |
|---------------------------------------|------------------------------------------------------|
| Sensor module — housing               | aluminium alloy, white; UV- and salt-spray-resistant |
| Sensor module — ingress protection    | IP65                                                 |
| Sensor module — environment           | -40...85 °C; 0...100 % RH, non-condensing            |
| Sensor module — dimensions and weight | ø160 × 263 mm (ø73 mm base); 2.15 kg                 |
| Sensor module — mounting              | pole mounting                                        |
| Base unit — ingress protection        | IP67                                                 |
| Base unit — environment               | -20...60 °C; 0...95 % RH, non-condensing             |
| Base unit — dimensions                | 116 × 116 × 45.5 mm (connectors excluded)            |
| Base unit — mounting                  | screw mounting                                       |
| Solar panel — operating temperature   | -20...80 °C                                          |
| Solar panel — dimensions and weight   | 343 × 283 × 16.5 mm; 1 kg (2.2 kg with bracket)      |
| Solar panel — mounting                | pole mounting                                        |

## Compliance and approvals

|               |         |
|---------------|---------|
| Approvals     | CE, FCC |
| Environmental | RoHS    |

## Ordering information

|                    |                                                                                 |
|--------------------|---------------------------------------------------------------------------------|
| Product code (SKU) | NX-WE-WEATHER6                                                                  |
| Kit contents       | 6-in-1 sensor module, radio base unit, solar panel with bracket and power cable |
| System requirement | a Nextriv Hub gateway (e.g. NX-GW-MINI, NX-GW-PRO)                              |

[1] Operating time without solar recharge determined under typical conditions — indicative value; the actual time depends on the reporting interval, temperature and battery condition.

Specifications are subject to change without notice. The latest document versions are available in the download centre: [nextriv.com/files](https://nextriv.com/files). Questions: [nextriv.com/contact](https://nextriv.com/contact).