

DATA SHEET

Before you read on if you don't see your exact requirements here please see our custom build factsheet or contact us directly



The NanoULTRA - Matrix allows you to connect up to 256 wireless sensors to a single base station measuring Temperature, Humidity, CO2 and WME. Battery-powered wireless sensors incorporate state-of-the-art sensing technology to accurately measure and monitor data, before transmitting it to the NanoULTRA - Matrix base station. Then to our secure cloud platform, the CDLSmartHub™, where the raw data can be turned into actionable insights.

From the CDLSmartHub™ you can configure and manage assets, set alarms, view audit trails, integrate and export data, view trends, visualise data and integrate 3rd party analytics. Investing in the NanoULTRA - Matrix and CDLSmartHub™, gives you access to a fully integrated end-to-end IoT solution to effectively manage your assets

KEY FEATURES

- Up to 500m line of sight sensor range
- Parameters measured: temperature, humidity, Wood Moisture Equivalent (WME) and CO2,
- Choice of sensors and inputs available
- Raise alarms when mains power fails AND when mains power comes back
- Low Voltage dc input power supply
- Simple set up, simply plug in and log onto web
- Force report button on front of base station
- Battery powered, long range wireless sensors
- Mains powered base station with battery backup for operation and continuous logging even when mains power fails
- Combination of GSM and licence free communications in one compact unit
- Seamless GSM communication to CDLSmartHub™



Cloud based IoT platform



Sensor Network



500m line of sight sensor range



Set alarms

APPLICATIONS

- Water damaged property
- Room temperature monitoring
- Workplace environmental control monitoring
- Condensation and mould monitoring and control
- Moisture and humidity monitoring and control
- Pest control monitoring
- Monitoring greenhouse conditions
- Temporary climate control
- Food production
- Refrigeration monitoring
- Legionella monitoring
- Agri/horticulture monitoring
- Building monitoring – smart buildings
- Stability monitoring
- Concrete curing monitoring

Physical
Case: Anodised Aluminium.
115x95x60mm
(453 Antenna length 115mm)

Power Supply
9-30Vdc

On Board FRAM Storage
Non-volatile buffer memory for locations with intermittent GSM coverage. Will last 48hrs with no coverage on a 15 second sample rate

Modem
2G, Quad-Band GSM
(850/900/1800/1900 MHz) connectivity with GPRS class 12 support

Antenna and Connector
Non-volatile buffer memory for locations with intermittent GSM coverage. Will last 48hrs with no coverage on a 15 second sample rate

FOTA
All firmware is FOTA enabled (firmware upgrade over the air)

LEDs and Button
Monitoring & Diagnostic LEDs and Button
GSM active/server handshake
SD card status
Sensor receive
General status Force report and SD card eject button
(dual function)

Environmental
-10 to +75 °C (operational)
-20 to +85 °C (storage)

Location
Geo-position is automatically enabled from GPS receiver. If there is no GPS reception, then location from GSM mast is triggered; exact position upload via QR code and smart phone.

Approvals
CE
Radio equipment directive (RED)

NanoULTRA - Matrix Configuration and Management

Log in performed to CDLSmartHub™ as soon as the NanoULTRA - Matrix is powered up.

Data is uploaded, and a new configuration is automatically transferred

to the NanoULTRA - Matrix.

Example settings include:-

Alarm levels

Logging rates

Reporting rates

SD card logging rates

Analogue input gain ranges (where appropriate)

CDLSmartHub™

For live examples of the CDLSmartHub please visit:-

<https://www.captiondata.com/products/cdlsmarthub/>

Web based configuration of remote NanoULTRA - Matrix

User management

Dashboards

Alarm management and audit trails

Trending of data

Audit Trails

Starter Kit - Standard

NUM-100 = Base unit

NUM-CSH = CDLSmartHub 12 month

Subscription (mandatory purchase with the base unit)

Sensors as required

Contact Info

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Matrix Sensors - Applicable to all

Physical

Plastic Enclosure

Antenna

On Board, no external antenna

Battery Life

Dependent on sample rate, temperature and range

Battery longevity of up to 3 years available depending on sensor

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-20 to +85 °C (storage)

LEDS and Button
FR button, transmit success LED

Sensor Range
500 metre LOS (Line of site)

Approvals
CE

NU-Matrix-HS
Physical
80x80x55mm

Measurement
Long Range wireless battery powered sensor. Measures ambient temperature, humidity, 2* high resistance moisture content inputs (WME), 2* Hygrostick inputs. Also compatible with slim, 5mm probes. Battery included.

Power supply
Battery included. AA Lithium

Inputs
2* Hygrostick inputs. Also compatible with slim, 5mm probes. 2* high resistance moisture content inputs (WME)

Nu-Matrix-DI
Physical
80x80x55mm

Measurement
Long Range wireless battery powered sensor. Measures ambient temperature, humidity and 8 Digital Inputs. Battery Included. Can connect to RDL//1000-5mm-probe-x

Power Supply
Battery Included

Inputs
8 Digital Inputs
Temperature/ Humidity
Can connect to NU-Matrix-SP-5mm-probe-x

NU-Matrix-Co2
Physical
80x80x55mm

Measurement
Long Range wireless sensor. Measures ambient temperature, humidity and CO2 sensor (0-5000ppm).

Power Supply
Mains powered via DC adaptor.

Indicative Battery Supply
Mains powered via included PSU

Inputs
Temperature, humidity and CO2 sensor (0-5000ppm)

NU-Matrix-AI
Physical
160x80x55mm

Measurement
Long range wireless sensor. Measures 8 analogue inputs and 8 digital inputs. Analogue inputs configurable as Voltage (0-1/0-10Vdc) or 0-20mA current inputs

Power Supply
Battery powered via AA battery, can be powered from a 5V DC supply

indicative Battery Supply
Dependent on sample rate, temperature and range
Battery longevity of up to 1 year available

Inputs & Outputs
Measures 8 analogue inputs and 8 digital inputs.
Analogue inputs configurable as Voltage (0-1/0-10Vdc) or 0-20mA current inputs

NU-Matrix-PT
Physical
80x80x85

Measurement
Long Range wireless battery powered sensor. Measures ambient temperature, humidity and up to 4 * 3 wire PT100 temperature sensors (not included supplied separately).

Power Supply
Half AA battery

Indicative Battery Supply
Dependent on sample rate, temperature and range
Battery longevity of up to 1 year available

Inputs & Outputs
Up to 4 * 3 wire PT100 temperature sensors (not included supplied separately).

NU-Matrix-VOC
Physical
80x80x55mm

Measurement
Long Range wireless battery powered sensor. Measures ambient temperature, humidity and VOC's (0-1000 ppb isobutylene equivalent VOCs)

Power Supply
Mains powered via DC adaptor.