DATA SHEET

The NanoULTRA-Matrix+ allows you connect multiple wireless sensors to the CDLSmartHub $^{\text{TM}}$ allowing measurement of temperature, humidity, CO2, Voltage, current, vibration and much more. The battery powered sensors have excellent penetration within buildings making for a quick and easy set up process, this is complimented by 5+ Years battery life for a truly fit and forget experience.

The data is sent via the gateway and then transmitted to our secure IoT cloud platform, the CDLSmartHub™, where the 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 and visualise data. Investing in the NanoULTRA - Matrix+ and CDLSmartHub™, gives you access to a fully integrated end-to-end IoT solution to effectively manage your assets.

MEASUREMENTS

Machinery up time • Temperature/Humidity monitoring • Outdoor temperature/Humidity • • Dust • Light levels • Water leak detection • Air quality • Vibration levels • Pulse counter inputs for energy/flow meters • Voltage/current levels • Activity timers • CT current sensors • CO2 • Occupancy sensor and more.....



KEY FEATURES

- Up to 5000m line of sight and 2000m indoor sensor range
- Seamless communication to the CDLSmartHub™
- Extensive range of sensors available
- Simple set up, simply plug in and log onto web, no custom software to install
- Battery powered for 5 Years+
- Long range wireless sensors allowing for minimal disruption during installation
- No reliance on local IT networks to transmit data

APPLICATIONS





2000m line of sight sensor range



Email and SMS Alerts

Wooden construction • Leak detection • Smart Construction site • Modular buildings • Machinery status and activity • Room temperature/Humidity • Workplace environmental control • Industrial coatings • Condensation/mould monitoring and control • Greenhouse conditions • Temporary climate control • Food production • Refrigeration/cold rooms • Legionella • Electronic production clean rooms • Agri/horticulture • Smart buildings • Concrete curing

Multi-tier User Admin



- The CDLSmartHub™ allows you to create multiple customer levels and departments
- Ability to name devices and sort them by customer/department
- Set different user types overall and within departments
 - -Administrator
 - -User
 - -Read only user

Measurements & Sampling

- Hardware seamlessly integrates with the SmartHub to display monitored inputs
- Attach personalised measurement input label for easy identification
- Select required sampling and reporting rate
- Convert inputs into meaningful data by setting ranges and measurement unit type (°C, RH, P PM,kWh)
- CDL calculator feature rovides the ability to work out equired multipliers and offsets*

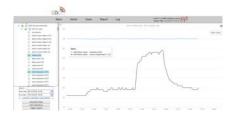
Last Measured Values @ 2018-12-20 15:36:45

Enable	Name	Range	MX/Multiplier	B/Offset	Value	Unit	5
8	Temperature	0 - 10 🔻	15	0	58.97167875	*C	
8	RH	0 - 33 •	1	0	-0.616599	pH	
8	Dew point	0 - 33 •	1	0	0.00125325	uS	
8		0 - 33 •	1	0		mA	

Control of Assets*

- Switch machinery on and off
- Control machinery set points such as temperature/ humidity etc

Reporting



- View data over selected date and time frame
- Graph multiple devices to allow easy multi-site comparison*
- Interactive graphing allows you to zoom in specific events and view more detailed data*
- Download data in various formats, including CSV, PDF, Jpeg and more



Alarming

- User-configurable alarm thresholds
- Visibility of alarming inputs*
- Send alarms via SMS and/or email
- Select alarm recipients and contact type from list of users available to that device
- Full searchable alarm audit trail





Asset Location

- Via on board GPS*
- Via cellular mast look up (for GSM units and when GPS is not available)
- Set location via QR code or manually on the CDLSmartHub™

Cloud Based

- Resilient
- Secure
- Scalable
- Rapid deployment

API Integration

- Agile integration with third party SaaS packages
- Integration with existing business systems

Multi-Lingual

- Access to add new translations to predefined phrases
- Change quickly and easily via flag icons on the SmartHub
- Time zone based on user lo cation

Logged in as paul Feedback Logout Server Time: 20/12/2018 16:17:11

* Please note some of the features documented are specific to certain hardware products in the NanoULTRA range. If these are required please see our Custom Build Factsheet.

art code	Description	Potential applications	Picture	Approva
003-ACJ-001	LoRaWAN gateway for indoor use. 3G/4G connectivity. 12Vdc 1A PSU.			CE/FCC
003-ACK-001	LoRaWAN gateway for indoor use. 3G/4G connectivity. 12Vdc 1A PSU. Complete with battery back up.		As above	CE/FCC
003-ACL-001	LoRaWAN gateway for indoor use. Ethernet connectivity. 12Vdc 1A PSU.		As above	CE/FCC
003-ACM-001	LoRaWAN gateway for indoor use. Ethernet connectivity. 12Vdc 1A PSU. Complete with battery back up.		As above	CE/FCC
040-AAB-001	Moisture sensor. Ambient RH, sensor options for temperature, WME (resistance/moisture content), Leak detection rope, 5mm temperature and RH probe		WHITE CATTORISA COD	CE
002-AAE-001	Leak detection rope - 3m (shown attached to sensor)			CE
002-AAB-002	Moisture content cable with ring crimp connectors. (WME) 50cm			CE
003-AAD	5mm Temperature and RH probe. Compatible with NUL-SEN. 0 - 100% RH (+/-2% RH accuracy) & -40 to +125°C. Supplied on 2 m cable.			CE
003-AAV-001	Door/Window Sensor	Built environment, machine acitivity notifications		CE/FCC
003-AAW-001	Activity Detection Sensor. Vibration detection and alerting.	Built environment, machine acitivity notifications		CE/FCC
003-AAZ-001	Activity Timer. Duration of movement or vibration is logged.	Security, machine/asset operation performance monitoring		CE/FCC
003-ABA-001	Light Sensor. Detection of ambient light conditions. 1 \sim 3000LUX	Built environment		CE/FC
003-ABB-001	Water Leak Detector. 2* leak detectors each on 300mm of wire.	Built environment		CE/FC0

Part code	Description	Potential applications	Picture	Approvals
003-ABC-001	Emergency Button. For use in mobile applications, can be worn on person. Alerts can be sent to configured personnel via SmartHub when button is pressed	Security, built environment, lone worker		CE/FCC
003-ABD-001	Temperature and Humidity Sensor for indoor use. Operating range 20°C - 55°C, 10%RH - 90% RH. Clip mounting	HVAC, warehouse/cold room monitoring, pest elimination auditing, general built environment		CE/FCC
003-ABE-001	Outdoor Temperature and Humidity Sensor. Working temperature -10°C ~ 50°C	HVAC monitoring, environmental control		CE/FCC
003-ABF-001	Industrial temperature and Humidity Sensor. Operating range -20°C – 55°C, 10% RH – 90%RH. Clip mounting. IP64	HVAC, warehouse/cold room monitoring, general built environment		CE/FCC
003-ABG-001	2-Gang K Type thermocouple sensor. Suppled with 2* Probes on 1m cable	Environmental chamber monitoring, concrete curing monitoring, furnace/boiler/chiller monitoring		CE/FCC
003-ABH-001	Vibration Sensor. Alerts triggered when vibration starts/stops	Predictive maintenance, machine acitivity notifications		CE/FCC
003-ABI-001	Reed Switch Sensor	Security, built environment		CE/FCC
003-ABJ-001	Industrial light level sensor. 3 LUX-220 KLUX	Built environment		CE/FCC
003-ABK-001	Pulse Counter Interface	Energy/flow monitoring, built environment	6	CE/FCC

Part code	Description	Potential applications	Picture	Approvals
003-ABL-001	2-Input Pulse Counter sensor	Energy/flow monitoring, built environment	0	CE/FCC
003-ABM-001	0-5V ADC Sampling sensor. Fitted with 1m cable	Instrumentation/sensor connectivity	5	CE/FCC
003-ABN-001	Dual Input 0-5V ADC Sampling Interface. Fitted with 1m cables	Instrumentation/sensor connectivity	O O	CE/FCC
003-ABO-001	Digital input sensor. Will report when input changes state and/or on the natural report rate	Securtiy, machine monitoring		CE/FCC
003-ABP-001	Dual input digital input sensor. Will report when input changes state and/or on the natural report rate	Securtiy, machine monitoring	0	CE/FCC
003-ABR-001	Indutrial activity detection sensor (IP67). Vibration detection and alerting.	Built environment, machine activity notifications		CE/FCC
003-ABS-001	Industrial. Activity Event Counter. Based on vibration events	Built environment, machine activity notifications		CE/FCC
003-ABT-001	Industrial activity timer. Duration of movement or vibration is logged.	Built environment, machine acitivity notifications		CE/FCC

Part code	Description	Potential applications	Picture	Approvals
003-ABU-001	1-Phase Current Meter 30A. Solid core CT	Energy. Machine performance. Built environment		CE/FCC
003-ABV-001	1-Phase Current Meter 75A. Split core CT	Energy, Machine performance. Built environment		CE/FCC
003-ABW-001	3-Phase Current Meter 3x60A. Solid core CT	Energy. Machine performance. Built environment		CE/FCC
003-ABX-001	3-Phase Current Meter with 3 x 150A Clamp-On CT	Energy. Machine performance. Built environment		CE/FCC
003-ABY-001	3-Phase Current Meter with 3 x 250A Clamp-On CT	Energy. Machine performance. Built environment	86	CE/FCC
003-ABZ-001	3-Phase Current Meter with 3 x 630A Clamp-On CT	Energy. Machine performance. Built environment		CE/FCC
003-ACA-001	3-Phase Current Meter 3 x 75A	Energy. Machine performance. Built environment		CE/FCC

Part code	Description	Potential applications	Picture	Approvals
003-ACB-001	Water Leak Detector. Industrial package. One sensor on 1m of cable	Built environment	6	CE/FCC
003-ACC-001	Water Leak Detector with Rope Sensor. 3m rope length	Built environment	50	CE/FCC
003-ACD-001	CO2 (0-5000 ppm)/Temperature/Humidity Sensor	Built environment		CE/FCC
003-ACE-001	PM2.5 (Dust) / Temp / Humidity Sensor	Built environment		CE/FCC
003-ACF-001	Wireless Plug-and-Play Power Outlet with Consumption Monitoring, UK Type. 10 Amp capacity	Built environment. Machinery control	17A 250 240 V C C C C C C C C C C C C C C C C C C	CE/FCC
003-ACG-001	Wireless Liquid Level Sensor (DC-powered)	Built environment		CE/FCC
003-ACH-001	Emergency Push Button (battery)	Built environment. Security		CE/FCC
003-ACI-001	Occupancy/Light/Temperature Sensor	Built environment. Security		CE/FCC

Part code	Description	Potential applications	Picture	Approvals
003-ADA-001	Minimalistic environmental sensor - Temperature, Humidity, Acceleration, Water Leak and Door Switch - Enclosure size 21.2 x 74.9 x 20.8mm	Built environment		CE/FCC
003-ADB-001	Lite Temperature & Humidity LoRa Sensor - Enclosure size 86 x 86 x 28mm	Built environment		CE/FCC
003-ADC-001	Temperature Humidity & Light LoRa Sensor - Enclosure size 21.2 x 74.9 x 20.8mm	Built environment		CE/FCC
003-ADD-001	Industrial Sensor Input Transceiver - RH, Temperature, Modbus (RS 232/422/485). 1 digital input, 2 analogue inputs (1x 0-10V, 1x 4-20mA), 2 digital outputs. Supplied with lithium D cell. Enclosure size 90 x 90 x 60mm			CE/FCC