



Managing a network of field assets has never been easier with the NanoULTRA – III. It has the flexibility of up I/Os, option of integrated SD card and communication via mobile phone networks. Its high-resolution data transfer happens seamlessly and securely from multiple assets 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 - III and CDLSmartHub™, gives you access to a fully integrated end-to-end IoT solution to effectively manage your assets.

Key Features

- Seamless cellular communication with the CDLSmartHub™ asset cloud platform.
- Simple installation and configuration, achievable at scale with non-technical employees
- RS485/232 communication with toolset to quickly set up Modbus communications (one off configuration charges apply – see price list)
- On board Wi-Fi and Ethernet connectivity
- Digital and Analogue i/o's available (CDL also offer wide range of expansion modules)
- Worldwide accreditations offering a truly global, enterprise grade solution
- GPS location and tracking capabilities
- Integrated SD card storage for mass storage of granular data sets
- Firmware Over The Air (FOTA) for agile innovation and system management



Cloud based IoT platform



Email and SMS alerts

Application Examples

Single and multi-site installations • nationally and internationally • Embedded solutions for original equipment manufacturers (OEM) • Energy & carbon management systems • Voltage optimisation • Water quality instrumentation • Process monitoring and control • Corrosion monitoring • Clean renewable & Hybrid power • Portable generators • UPS & emergency power systems • Smart building controls • Smart grid transformer monitoring

Nano ULTRA-III

UNIVERSAL ASSET TO CLOUD SOLUTION

TECHNICAL SPECIFICATION



Physical

- Aluminium housing, plastic panels
- 100 x 110 x 50mm
- Weight 287g
- Supplied with DIN rail adapter

Standard On-board Inputs and Outputs

- 3 x Inputs
- (Digital, Digital galvanically isolated,
- Analog) + 1 Digital Input on power connector
- 2 x Outputs (30 V, 250 mA digital open
- output / 24 V, 4 A SPST relay output)
- + 1 Digital O.C. Output on power connector

Communication connectivity

- RS232
- RS485
- Enhanced tool set for Modbus register mapping

Power Supply

9 – 30 VDC (4 pin industrial socket), reverse polarity protection; surge protection >31 VDC 10us max. < 2 W idle, < 7 W Max

Environmental

-40 °C to 75 °C, 10% to 90% non-condensing (operational)

Connectors

- 4 pin DC connector
- 1 x 4 pin DC
- 4 x Ethernet
- 2 x Mobile SMA
- 2 x WiFi RP-SMA
- 1 x GPS SMA
- 1 x RS232
- 1 x 6 pin RS485
- 1 x 10 pin I/O
- USB 2.0

LEDs and Button

- 1x Power
- 1 x bi-colour connection status
- 5 x connection strength
- 4 x LAN status

Expansion signal conditioning module options

- 8* Relay output
- 16* Digital input
- 8* Analogue input (0-10V), 2* analogue o/p (0-10V) 4*DO
- 8* Analogue input (4-20mA/thermocouple/thermistor)
- 4*DI

Modem

2G/3G/4G

4G (LTE Cat1) – Cat 4 DL up to 150 Mbps, UL up to 50 Mbps; DC-HSPA+; UMTS; TD-SCDMA; EDGE; GPRS

On board Ethernet

4 x RJ45 ports (1xWAN, 3xLAN), 10/100 Mbps

On board ethernet for routing ethernet based devices to the CDLSmartHub e.g. Matrix+

Other communications

Wi-Fi, Ethernet

Approvals

CE/RED, FCC, IC/ISED, EAC, RCM, PTCRB, RoHS, WEEE, Wi-Fi Alliance CE/RED, FCC, IC, PTCRB, RCM, EAC, CCC, RoHS, WEEE, IP rating, Anatel, GCF, REACH, E-mark, DNV GL, ECE Regulation 118, Morocco ANRT, Thailand NBTC, Ukraine UCRF, SDPPI (POSTEL), WiFi Certified, MODBUS Conformance AT&T, Verizon Vehicle- ECE R10 (E-mark), ECE R118



TECHNICAL SPECIFICATION



Modem

Resilient and scalable FOTA

Location

- Can be tracked with GPS
- Cell mast location if GPS not available collector

Sim

2* External SIM holders

Antenna and Connector

2 x SMA for LTE, 2 x RP-SMA for WiFi, 1 x SMA for GNSS

Stub antenna included with unit

GPS antenna ordered separately

Modbus handling

Resilient, scalable and reliable modbus handling via CDLSmartHub™.

Supports block and singular register reads.

Modbus register maps stored and provisioned via CDLSmartHub™.

Gateway diagnostics

Comprehensive diagnostic capabilities.

Live interrogation of field-based unit

SD Card

- SD card non-volatile data storage

Software CDLSmartHub™ IoT platform connectivity

Expansion signal conditioning module options available

Part codes - 050-EAA

