Nano ULTRA-Shock

TRANSPORTATION & LOCATION CLOUD SOLUTION

CDLSmartHub
IOT ASSET MANAGEMENT PLATFORM

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In transit vibration exceeds parameter

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

Managing the tracking and condition of assets on the move has never been easier. NanoULTRA - Shock is a battery powered, web based, real time monitoring system that tells you where your shipment is whilst in transit, and what shock loadings and environmental conditions your goods are subjected to. This data is then transferred seamlessly and securely to the CDLSmartHub.

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 - Shock and CDLSmartHub™, gives you access to a fully integrated end-to-end IoT solution to effectively manage your assets.

KEY FEATURES

- Ultra-low power consumption. Monitor for up to 1 year with daily reports from a single battery pack
- Measure vibration events up to ± 200g at 50Hz & know when and where they happened
- Monitor & report Temperature and Relative Humidity from inside the case
- Monitor & report the wood moisture equivalent of the case
- Use the on-board SD card as a "black box flight recorder" for extra data granularity and when out of GSM range
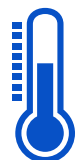- Track location of events via GPS tracking

Cloud based
IoT platform

GPS for
accurate tracking

APPLICATIONS

- International tracking via global GSM connectivity
- Embedded solutions for logistical capability
- In transit temperature and humidity monitoring
- Wood moisture content tracking
- High speed vibration capture

On the move
vibration monitoring

Temperature and
Humidity monitoring

Physical
156mm x 178mm x 75mm
Weight 1.5kg
Aluminium case IP66 rated

Power Supply
4 x Lithium D cells

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

Standard On-board Inputs
3x Axis Accelerometer +200g
Ambient Temperature & Humidity
Multiple Wood Moisture
Measurement points
Acceleration; 3 axis +200g, 16 bit
Relative Humidity;0-100%rh (+2%)
Wood Moisture Equivalent; 2 sensors
Each 6-100% WME
Battery Voltage;
Tilt; derived from accelerometer
SD card; % capacity availability

On Board SD Card Storage
Standard 4GB installed (Can support
cards up to 32GB)
Sampling rate set via CDLSmartHub™ at
rates from 15 seconds. (For Analogue
and Digital Data)
Can provide storage for up to 10 years
at a 15 second sample rate for 4
analogue inputs
Logs data in a standard, CSV file format
(no special software needed to view)

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
850/900/1800/1900 MHz
GPRS class 12 support
Supplied with fully roaming,
Un steered managed SIM

Antenna and Connector
Puck style antenna

LEDs and Button
GSM active LED
SD card status LED
General Status LED
System triggered (e.g. vibration event)
On/off switch
Force report button

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

Location
Global Position; from GSM cell mast(s),
if GPS not available

Approvals
CE
Radio equipment directive (RED)

NanoULTRA – Shock Configuration and Management
Log in performed to CDLSmartHub™ as
soon as the NanoULTRA – Shock is
powered up.
Data is uploaded, and a new
configuration is automatically
transferred
to the NanoULTRA – Shock
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 – Shock

High Low alarms for:
• Battery voltage, acceleration,
temperature,
• Humidity, moisture content inputs 1&2
• Unlimited alarm recipients with
associated sms
• And email information
• Audit trail of events with quick links to
• Graphing within the CDLSmartHub

Starter Kit
NUS-GPS = NanoULTRA – Shock

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