

# 2012C Neon Remote Module – Satellite



- Internet enabled
- Global coverage
- Integrated status display and operating buttons
- Compact case with simplified external wiring
- Up to 5 years battery life depending on reporting schedule
- Built-in logger with 8mb on-board non-volatile flash memory archive
- Almost unlimited data storage in on-board non-volatile flash memory archive
- Expandable via the Starlogger interface
- SDI-12 interface for connection to a wide range of low-power instruments
- On-board digital and analogue interfaces for direct connection to sensors / instruments

The NRM Satellite is a small self-contained unit which connects to sensors in the field, collects readings from those sensors, and transmits the collected data to a central server via satellite.

The Neon central server system is provided on a Neon Data Service basis and on a Neon Client System basis and provides a central computer system to monitor and receive data from many Neon NRM units in the field.

The NRM Satellite is designed to automate collection of remote data from environmental monitoring, industrial measurements, and utility metering via the international Globalstar LEO Satellite network from any location on the globe, except the Arctic, Antarctica, and Africa.

Fully bi-directional communications are possible via the Neon server. Data can be collected directly and the NRM-Satellite can be programmed from any internet connection.

The NRM Satellite supports integrated logging or automated collection of data from an external datalogger.

The NRM Satellite's built-in modem supports packet data, switchboard circuit data, and SMS communications. Long battery life and low operating costs are made possible through use of advanced microcontroller technology and an efficient protocol that takes advantage of Globalstar's packet transfer capability.

## Physical specifications

|                        |  |
|------------------------|--|
| Material:              | Polycarbonate  |
| Size:                  | 220 mm x 165 mm x 85 mm (HxWxD)                                      |
| Weight:                | 850 grams (including battery pack)                                   |
| Operating temperature: | -20 °C to 60 °C. Not affected by humidity                            |
| Antennae:              | External conical dielectric resonator 103 mm x 63 mm (DxH), 1m cable |

## Electrical specifications

|                   |  |
|-------------------|--|
| Battery:          | 10.8V 13Ah lithium (non-rechargeable)  |
| Battery life:     | 5 years (based on daily schedule)  |
| External power:   | 10.5 to 16V DC input available if required   |
| Instrument power: | 5V unregulated supply nom (5mA max) plus 2.5V ref (5mA max)  |
| I/O:              | 4 x analog inputs – 12 bit resolution<br>1 x counter input – 16 bit/3kHz, 3–5V DC signal (included)<br>3 x counter inputs 8 bit/300Hz, 3–5V DC signal (option)<br>1 x open collector output<br>1 x HSIO (16 x 16 bit bi-directional, synchronous data) channel |
| SDI-12:           | SDI-12 V1.3 recorder (1200 baud smart instrument channel)  |

## Integrated logger specifications

|                 |  |
|-----------------|--|
| Storage memory: | 15 000 readings – non-volatile flash memory                                  |
| Time clock:     | Crystal regulated, +/- 10 seconds/month – automatically network synchronised |
| Scan rates:     | Programmable from 1 second to 5 minutes                                      |
| Log intervals:  | Programmable from 1 second to 24 hours                                       |



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