2016D Neon Remote Terminal – 3G/WCDMA

- **Internet enabled**
- **Up to 5 years battery life depending on reporting schedule**
- **Expandable via the Starlogger interface**
- **Modbus RS485 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 and other instruments**
- **Built in logger with optional 8Mb on-board non-volatile flash memory archive**

The 2016D NRT 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 a cellular telephone network.

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 NRT units in the field.

The 2016D NRT terminal is designed to automate collection of remote data from environmental monitoring, industrial measurements, and utility metering via 3G/WCDMA/GPRS cellular networks from any location within the cellular network coverage area.

Fully bi-directional communications are possible via the Neon server. Data can be collected directly and the 2016D NRT can be programmed from any internet connection.

The 2016D NRT supports integrated logging or automated collection of data from an external datalogger.

Inputs include analog, digital and SDI 12 datalogger interface standard. There is also Modbus support, a partial implementation of the Modbus protocol which allows for extract data (get) and place data (put) from/to a specific register within the Modbus RTU on an RS485 connection.

(Further details on request)

Supports GSM 850/ 900/ 1800/ 1900Mhz and 3G 850/ 900/ 1900/ 2100Mhz.

Physical specifications

Material:	Anodised aluminium
Size:	103 mm x 70 mm x 83 mm (HxWxD)
Weight:	400 grams (including battery pack)
Operating temperature:	–20°C to 60°C. Not affected by humidity
Antennae:	External stubb, optional external whip antenna

Electrical specifications

Battery:	3.6V 13Ah lithium (non-rechargeable)
Battery life:	5 years (based on daily schedule)
External power:	6V to 24V DC input available if required
Instrument power:	5V unregulated supply (5mA max) plus 2.5V ref (5mA max)
I/O:	4 x analog inputs – 12 bit resolution
	1 x counter input – 16 bit/3kHz, 3–5V DC signal (included)
	3 x counter inputs 16 bit/300Hz, 3–5V DC signal (option)
	1 x open collector output, 250mA maximum
	1 x HSIO (16 x 16 bit bi-directional, synchronous data) channel
Serial Comms:	RS-232C (300 to 38 400 baud)
SDI-12:	SDI-12 V 1.3 recorder (1200 baud smart instrument channel)
Modbus:	RS485 RTU Protocol, 19200 baud max, Functions 01, 02, 03, 04, 05/15, 06/16

Integrated logger specifications

Storage memory:	30kB/15,000 readings – non-volatile flash memory
Optional storage memory:	8MB/4,000,000 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