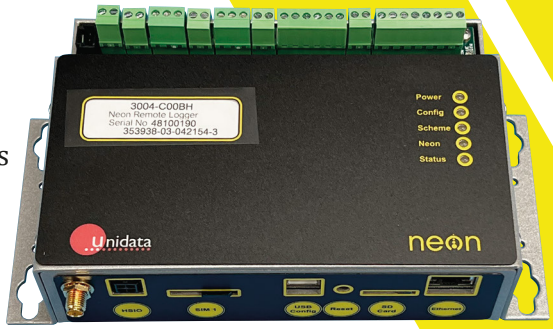
3004

NEON REMOTE LOGGER

The 3004 Neon Remote Logger NRL is a small self-contained data logger/RTU with 4 to 6 high-resolution analog channels in a compact case that connects to sensors in the field, collects readings from those sensors and either transmits the collected data to a central server via either cellular 3G/4G/LTE, Cat M1 and NBIoT, Iridium SBD, Iridium Certus, Inmarsat BGAN or Ethernet networks, or it can be used as a stand-alone datalogger/RTU.



All NRL/RTU units routinely collect and log sensor data. NRLs then periodically connect to a central Neon comms and web server via an IP network and use a push data model to upload the logged data. The central Neon server can be cloud-hosted, virtual, or physical. The Neon server is offered as a Neon data hosted service using a Unidata Neon server for a monthly fee. Otherwise, customers can purchase a Neon server license and run the Neon software on their own server. The Neon system receives, processes, displays, stores, and reports collected data in many ways. The Neon system also can issue control commands based on pre-set algorithms and issue alarms/notifications via several mediums. Alarm setpoints can be set up on the NRL/RTU unit itself as well as on the Neon central server. The alarm notifications can be sent via several methods, including email and SMS text messages. Alarm triggers can initiate physical actions in the field, such as turning pumps on and off or activating other control functions based on the internal program within the NRL/RTU.

The Neon system has fully bi-directional communications between the NRL/RTU units and the central Neon server. This allows for remote diagnosis, remote programming and remote firmware updating for the operation of the remote equipment, thereby reducing costly site visits. NRL/RTU units can be configured to read sensors, log data internally to local memory and push data to the central Neon server at user-settable intervals such as once a minute, every few minutes, every hour, once a day. Data to be viewed on the Neon Web server in near real-time from any browser and can be reported to other systems using email, FTP, and web services.

SPECIFICATIONS

MATERIAL	Powder Coated Aluminium Enclosure
SIZE	L182mm x W110mm x H46mm, 400g
OPERATING TEMPERATURE	-20°C to 60°C. Not affected by humidity
ANTENNA	Model dependant
SCAN RATE	Programmable from 1 second to 5 minutes
LOG RATE	Programmable from 1 second to 24 hours
TIME CLOCK	Battery Backed Real Time Clock, Accuracy ±10 sec/month (non-Neon version), locked to server time clock (Neon)
CPU	16 Bit, 20MHz, Ultra Low Power
STORAGE MEMORY	7.5Mbytes Flash (non-volatile), 3.75 Million log data points
EXTERNAL POWER	9 to 30V DC
EXTERNAL BATTERY	Optional: AUX BAT connector to suit non-rechargable 6910A Battery Pack
CURRENT DRAW	<1mA Standby, Max 500mA Active
RTC BACKUP BATTERY	3V Li Coin Cell (5 year life)
CONFIGURATION PORT	USB B Port and SD Micro Card
LCD	Optional 240 x 320, Colour, Resistive Touch Panel
ANALOG CHANNELS	Default: 4 Single-ended (max) or 2 Differential (max), Different configurations on request, 24-bit resolution, 4 user-selectable gain ranges

COUNTER CHANNELS	2 x 16 bit, DC to 20kHz potential free contacts or 0 to 5V DC digital input (C0/C2); 2 x 16 bit, DC to 300Hz potential free contacts or 0 to 5V DC digital input (C1/C3), Different configurations on request"
INSTRUMENT POWER	5V regulated 100mA fused
SDI-12	Single Channel, SDI V1.3 Compliant instrument and recorder modes supported
MODBUS	Single Channel, RS485 RTU or ASCII protocol, 57600 baud (max) Functions 01, 02, 03, 04, 05/15, 06/16
HSIO	Yes, High speed serial interface, bi-directional
DIGITAL OUTPUT	Single - Open Drain FET 30VDC 250mA max
ETHERNET	Yes, 10/100 Mbit
ACCELEROMETER	Yes, Senses changes in logger orientation
BAROMETER	260-1260hPa Absolute, resolution: 0.1 hPa
SOLAR CONTROLLER	Yes - Suitable for 12V up to 20W Solar Panels 12V 14Ah SLA Battery or smaller, 1A charge current limit
BLUETOOTH	Yes
RELAY	1 x Normally Open and Normally Closed Contacts 1A 30VDC, 0.5A 125VAC
MODEM OPTIONS	- Cellular 3G/4G/LTE - NBIoT - Satellite Iridium SBD - Satellite Inmarsat BGAN Hughes 9502 - Satellite Inmarsat BGAN Sabre Ranger - Satellite Certus Iridium RockRemote - Satellite Certus Iridium SkyLink