

# 2022

## NEON REMOTE TERMINAL INMARSAT BGAN M2M SATELLITE, USB AND 3G/4G



neon



### MODEL F



The 2022 Neon Remote Terminal NRT is self-contained data logger/rtu in a compact aluminium case which connects to sensors in the field, collects readings from those sensors and transmits the collected data to a central Neon server using least cost routing between cellular 3G/4G network and Inmarsat Satellite Network. Available USB port provides support for additional optional accessories.

All Neon data logger/ rtu units routinely collect and log sensor data and periodically connect to a central Neon comms and web server via an IP network using 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 or customers can purchase 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 and notifications via several mediums. Alarm set points can be set up on the Neon data logger/ rtu units as well as the Neon central server and 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 Neon data logger/ rtu.

The Neon system has fully bi directional communications between the Neon data logger/ rtu units and the central Neon server. This allows for remote diagnosis, remote programming and remote firmware updating for operation of the remote equipment and thereby reducing costly site visits. Neon data logger/ 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

PHYSICAL SPECIFICATIONS	
MATERIAL:	Powder Coated Aluminium Enclosure
SIZE:	200mm x 112mm x 50mm (LxWxH)
WEIGHT:	850 grams (including three batteries)
OPERATING TEMPERATURE:	-20°C to 60°C. Not affected by humidity
MODEM 1:	Sierra HL7650 / Quectel EC21-AU
MODEM 2:	Inmarsat Satellite Modem 9502 BGAN M2M
ANTENNA 1:	Stub SMA antenna, optional whip SMA antenna
ANTENNA 2:	External Flat Fixed Mount Inmarsat BGAN M2M Antenna with 10m of Cable
ELECTRICAL SPECIFICATIONS	
BATTERY:	3 x 3.6V 13Ah lithium (non-rechargeable) batteries
BATTERY LIFE:	up to 5 years (based on daily schedule)
EXTERNAL POWER:	10.5V to 24V DC input available if required
INSTRUMENT POWER:	5V unregulated supply (5mA max) plus 2.5V ref (5mA max)
SDI-12:	SDI-12V 1.3 recorder (1200 baud smart instrument channel)

MODBUS:	Optional RS485 RTU Protocol, 19200 baud max, Functions 01, 02, 03, 04, 05/15, 06/16
ETHERNET	1 standard Ethernet port
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 8 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 1 x RS232C port / private leased line port
INTEGRATED LOGGER SPECIFICATIONS	
STORAGE MEMORY:	30kB/15,000 readings – non-volatile flash memory
MEMORY EXPANSION:	8MB/4,000,000 readings – non-volatile flash memory
SCAN RATE:	Programmable from 1 second to 5 minutes
LOG RATE:	Programmable from 1 second to 24 hours
TIME CLOCK:	Crystal regulated, +/- 10 seconds/month – automatically network synchronised
CPU:	16 Bit, Ultra Low Power