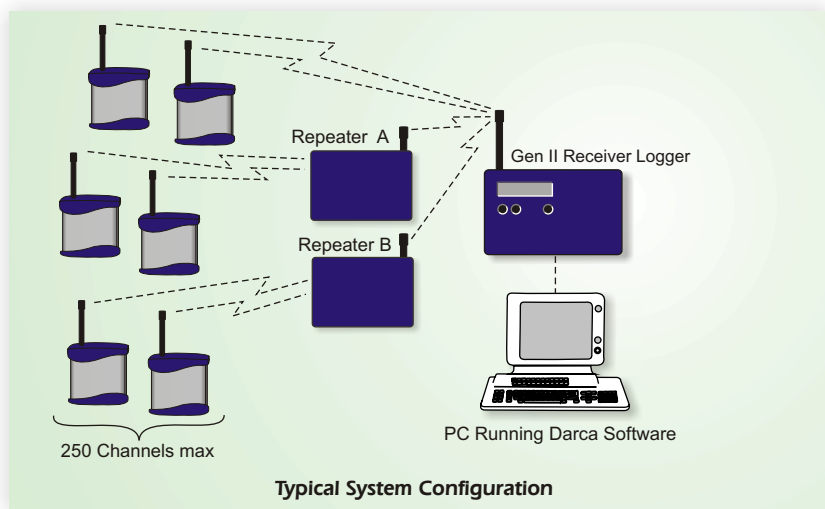


GenII Radio Systems DATA LOGGERS

The Etek GenII series is a new range of telemetry products distributed by Grant Instruments that provide reliable radio data logging for a wide range of users and applications. Sensors can be located almost anywhere with reliable and secure collection data assured.

Radio Telemetry offers a cost-effective, flexible and practical alternative to hard-wired data logging systems without forfeiting system reliability or security. The GenII telemetry system does not compromise on the range of sensor types that can be connected, measurement accuracy or metering capability. Consistent performance in a range of environments is ensured by using only the very highest quality licence exempt FM low power radio modules.



Radio Telemetry Logging System Features

- UHF
- Wireless connection of sensors
- 12 bit resolution for high accuracy
- 250 channel, 125 Transmitter system capability
- Easy system design and installation
- Flexible configurations for permanent and temporary installations
- Complete turnkey system solution
- Range easily extended by Repeaters
- Options for use in extreme ranges of temperature and physical environments
- Tamperproof indoor or outdoor wall mounting bracket

Transmitter Features

- High performance crystal controlled transmitter compliant to EN-300-200-1
- Up to 12 Channel capability for each transmitter
- Wide range of sensor types
- Sensors can be integral, external or a combination of both
- Inputs available for Voltage, Current, Temperature, Pulse, Digital or Light
- On-site programming enables optimised performance
- Battery operation allows flexible and rapid installation
- Powered by standard alkaline batteries
- 5 - 10 year typical battery life
- Compact size and light weight
- Unobtrusive rugged aluminium customised case



Receiver Logger Features

- Data Logger with integral receiver
- Models available with additional 8 wired-in sensors
- Alarm and GSM text output
- Built-in standby battery
- 247K readings expandable to 2M readings
- Transmitter battery alarm
- Display and keypad for "on line" metering
- RS232 PC connection
- Darca setup, graphing and data export software

Repeater Features

- Contains high performance Receiver and Transmitter compliant to EN-300-200-1
- Extends range of individual transmitters many fold
- Antenna socket permits use of external antenna to improve performance in difficult conditions
- Multiple repeaters can be used within the system
- Mains powered with built-in rechargeable battery back up

GenII Radio Systems DATA LOGGERS



What is radio Telemetry?

Simply the transfer of information using radio as the bearer.

What are its advantages over wired or cabled-in systems?

Wireless systems offer an almost unlimited freedom to site sensors. Information is collected by the sensors and periodically transmitted to the Receiver Logger for PC analysis or real time metering.

Transmitting over the Licence-exempt Low Power Radio (LPR) spectrum means no annual licence fee, and the use of standard system modules allows rapid systems design, installation and expansion.

Where is it currently used?

The Eltek Radio Telemetry System is designed as a total system solution. Existing installations include environmental monitoring, the storage of sensitive chemicals and drugs and the monitoring of manufacturing processes. Customised thermal barriers are available for through-process measurement in extreme temperatures.

Eltek Support

Eltek's Technical help line is there to assist from project conception to completion. A three year warranty is standard.

System Specification

Common Features	GenII – Radio data logging system
UHF Frequency	434.225MHz (Europe and countries where applicable)
Compliant to	EN 300-220-1
Transmitter	Type GC, GS or TR
Resolution	12 bit – 16 bit
Transmission Interval	Programmable: 1 sec to 4 hours
Channel options	Standard: 1, 2, 4 and 8 Special combinations available on request
Integral Sensors	Digital Temperature and Humidity (Temperature $\pm 0.4^{\circ}\text{C}$ accuracy) (RH $\pm 2\%$) Digital Temperature (0.5 $^{\circ}\text{C}$ accuracy and resolution) Thermistor Temperature ($\pm 0.2^{\circ}\text{C}$ accuracy) UV and Visible Light (Littlemore Scientific)
Input types	Vaisala Humitter RH/temp probe, Rotronic Hygroclip RH/temp probe, "U" type thermistor, K/T type thermocouple, RTD type Pt100 (4 wire), Pulse/Event, Voltage, Current, High impedance sensors e.g. pH
Ambient Temperature	-10 to +55 C
Humidity	Up to 95% (non condensing)
Power Supplies	6V: 4 x AA Alkaline cells
Battery Life	>5 years (at 5 min. transmit interval)
Case Dimensions (excluding antenna)	Compact, including probe turret: D41mm x W80mm x H99mm Standard: D 41mm x W 80mm x H 104mm "Squirrel" D 60mm x W 180mm x H 120mm
Construction	Anodised aluminium with ABS/PC end caps
Antenna connector	SMA 50 ohm female
Antenna Dimensions	UHF Standard: 166mm/Compressed: 67mm
Weight inc. batteries and antenna	Compact: 260g Standard: 300g
Wall bracket	Built in "joggle" fixing
Indicator	Status LED
Test switch	Accessed through case back
Radio Repeater	Type RP250
Ambient Temperature	-10 to +55 C
Humidity	Up to 95% (non condensing)
Power supplies	External: 12VDC at 500mA Internal: 6 x AA Ni Mh battery
Backup battery life	>8 hours – dependant upon charge / discharge duty cycle
Dimensions	D 60mm x W 180mm x H 120mm
Weight	1Kg inc. batteries
Receiver	Crystal controlled
Antenna connector	SMA 50 ohm female

Accessories	
External antenna	Light weight dipole
Receiver Logger	Type RX250
Number of channels	Up to 250 channels (up to 125 transmitters)
Ambient Temperature	-10 to +55 C
Humidity	Up to 95% (non condensing)
Power supplies	External: 12VDC at 500mA Internal: 6 x AA Ni Mh battery
Backup battery life	Typically 8 hours
Memory	247K readings expandable to 2,000,000 readings
Clock Accuracy	1 second/day at 20 C
Dimensions	D 60mm x W 180mm x H 120mm
Weight	1Kg inc. batteries
Case material	Scratch resistant Noryl coated ABS
PC/modem interface	RS232C up to 38.4K Baud
Options	Alarms 8 local channels
Receiver	Crystal controlled
Sensitivity	UHF: 115db
Antenna connector	SMA 50 ohm female

Darca Plus Software

Downloading And Remote Control Application

- System set-up
- Data analyser
- Local connection to data logger via PC serial port
- Remote connection via modem
- Export to popular spreadsheets
- Intuitive use and Wizard for first time users
- Real time metering via bar/needle
- Real time metering via graph
- Graph display options include: 3D, zooming, custom axes, statistics including threshold
- Engineering units conversion on graphs
- Customise and save graphs
- Insert text/comments at points of interest on graph
- Graphing can be paged or scrolled
- "Shed" scheduling utility
- Settings can be password protected
- Transmitter low battery warning and "% Battery Remaining" display
- Set up transmitters from Darca
- SMS messaging using GSM modem
- Ethernet connectivity

FDA 21 CFR Part 11

Darca Secure is a version of the Darca Plus software designed in line with the recommendations as prescribed in FDA 21 CFR Part 11. It is primarily for the Pharmaceutical market and requires a special Data Logger type RX250SC.



Guarantee

Equipment manufactured by Eltek is guaranteed against faulty materials or workmanship for three years. For repairs carried out under guarantee, no charge is made for labour, materials or return carriage. Eltek and Grant operate a quality management system compliant with ISO9001:2000.