DATAssure™

Laboratory wireless
alarm & monitoring system

PLANER

PRESERVE / PROTECT / NURTURE

Wireless alarm & monitoring system

A new monitoring generation

The DATAssure™ wireless monitoring system is used across a broad range of market sectors meeting the most stringent standards to assist customers to comply with HACCP, BRC, FDA and MRHA legislative requirements.

The system is standalone and connects directly to your business IT network with no need for any dedicated PC, server or specialist installed software. Data from the base station can be viewed direct on the colour touch screen or via a standard web browser.

The base station allows multiple secure connections and data can be viewed on multiple devices from PCs to tablets to mobile phones though its simple to use and intuitive web based interface.

No server or dedicated pc	No ongoing cloud costs or licencing fees.	Fully web based – no software installation necessary	Inbuilt reporting and graphing tools	Long range wireless sensors	User replaceable 5 year battery	Vast array of sensors types	Battery and data-backup for complete data security

System Overview

A typical system comprises of a base station, wireless sensors and where necessary wireless signal repeaters (range extenders). The wireless sensors are paired with the base station to form a secure communication network. If the wireless sensor is not in range of the base station, an optional wireless signal repeater can be added to increase the distance.

Multiple repeaters form a mesh network allowing the base station and sensors to communicate over long distances and in complex structures.

Each wireless sensor monitors the sampled factor (eg. temperature, humidity, pressure) and sends the reading each minute over the wireless network to the base station. The base station reviews the data against pre-set warning and critical alarm parameters as defined by you to generate alarm notifications.

All readings are stored in a secure tamperproof format for later review and creation of reports.

Temperature	Humidity	Energy	Door Contact	Pulsed	Concentration (ppm)	Digital Input	Linear (0-10 V, 4-20 mA)

The DATAssure™ Base Station

The base station collects data from the wireless network. It incorporates a colour touch screen display allowing both real time data and alarm notifications to be viewed.

An internal sounder and high brightness LED provide local alarm indication while two configurable volt free contacts provide connections for auto diallers, remote beacons and red care monitored lines.

The base station connects direct to your IT network via a standard CAT 5 Ethernet connection. Its in-built barracuda web server interface provides secure controlled access for multiple users across different platforms.

Interface access

The web server interface enables 24/ 7 permission based user access. User management is controlled by one or more system administrators. Each user is automatically allocated a unique electronic signature which along with their details are recorded against each action they make providing total accountability.

The web interface provides access to real time data, alarm notifications, full audit trails, analytical graphing tools and a report generator all via any standard browser.

Monitored devices can be organised into groups. The status page provide real time data together with their operational settings and current status. A tabbed section provides quick view sorted lists enabling the user to quickly highlight potential issues and devices in alarm from a single click.

Alarms and notifications

If the received data falls outside the defined parameters the base station activates an alarm notification. The software can be configured to generate audible warnings, email, SMS text, trigger beacons and auto diallers and send alarm notifications over IP to 3rd party alarm companies.

Users acknowledge alarms using their secure passcodes and can add multiple notes to each alarm to detail any actions that have been taken. All alarm notifications, user acknowledgements and actions notes are time stamped and recorded to provide a full audit trail.

Data analysis and reports

A powerful graphing tool allows data from different sensors to be overlaid and viewed over different time periods. Data can also then be printed or exported to a csv file. In addition to the graphing tool, the system can provide reports to aid with legislative requirements. Reports are created in a PDF format which can be printed and saved.

All reports and exported data are date stamped and carry the users name and electronic signature. The system can produce reports including an overview report which list all the sensors or detailed reports showing each sensor, maximum and minimum values reached, tabular and graphical representation of the data and any alarm notifications for that period.

Data security

For added data security the DATAssure™ has daily automatic data back-up to an integrated industrial grade micro SD card providing 100% data back-up. Both normal and back-up data can be viewed seamlessly within the system.

In addition the DATAssure™ has an internal battery back-up as standard to provide up to 12 hours operation in case of a power loss protecting against any loss of data.

DATAssure™	
Software designed compliancy standard	FDA 21 CRF Part 11 requirements for electronics records*
Data & Data Storage	
Internal Memory Storage Period	150 sensors 6 months, 75 sensors 1 year, 30 sensors** 2 years
Data Back-Up Media	Integral – 8 Gb Micro Industrial HD MMC
Back-Up Memory Storage Period	150 sensors 4 years, 75 sensors 8 years, 30 sensors** 10 years+
Back-Up Frequency	Automatic – daily
Manual Back-Up	Via Micro USB connection to a USB connected storage device
Battery Back-Up	Yes
Operating Time on Battery Back-Up	Up to 12 hours during normal system operation
Display - Resistive Full Colour Touch Screen	Yes
Maximum Number of Sensor Inputs	150 wireless or hardwired sensors per base station***
Resolution of the Sensor Readings	Integer to 3 decimal places as required
Wireless Frequency	
433 Mhz (Europe)	Yes
2.4 Ghz (ROW)	Yes
Wireless Transmission Distance (open field)	
433 Mhz	1 km (typically 250 meters in buildings)
2.4 Ghz	100 m (typically 30-50 meters in buildings)
Range Extender available	Yes
Users & Security	
Max Number of Users	20
Network Connectivity	Yes
Security	
Username & Passcodes	Yes
Passcode Expiry	Yes
Multiple User Levels	Yes
Data Storage Rate	Automatic – daily
Browser Security	HTTPS Capable
Email	SSL Encryption Capable
System Alarms	
Set Points	Upper & Lower Warning & Critical Alarm Set Points
Alarm Delays	User Defined
Audible Alarm	Yes
Alarm Email	Yes
Alarm Acknowledge	Yes
Alarm Notes	20 notes per alarm

Relay Outputs	2
Alarms over IP	Up to 3 IP Address
Inputs / Outputs	
Micro USB Output	Yes
Mini Din Input for External Hard-wired Hardware	Yes
Universal 5 v DC power adaptor - 110 to 240 v Power Supply	Yes

Technical Specification	
Height, Width, Depth	175 mm (max), 157 mm, 40 mm (including wall plate)
Weight	317 grams (including wall plate & battery back-up)
Operating Temperature	0 °C to +40 °C
Storage Temperature	0 °C to +50 °C
Power Supply	5 V dc via an external universal power brick (supplied), discrete push button on/off function on base station
Operating System	Embedded
Internal Memory	1 Gb high speed data flash
Back-up Memory Media	8 Gb industrial grade micro MMC
Display	Full Colour 480 x 272 Resistive Touch Screen
LED	Solid Green (main power, no alarms), Solid Red (mains power, with alarms), Flashing Green or Red (on battery back-up, with or without alarms)
Sounder	Built-in buzzer (can be switched off in software)
USB	Micro USB 2.0 (for manual data back-up)
Ethernet	Built-in (2 meter cable supplied with unit)
Relay Outputs	Relay 1: Volt free relay output providing NO & NC contacts Relay 2: Mossfet Switch
Mini Din Socket	For connection to proprietary external hardware
Low Power Radio Module	Yes
Frequency	433 Mhz (UK/Europe), 2.4 Ghz (ROW) – licence free bands
Power	10 mW maximum (433 Mhz), 14dbm maximum (2.4 Ghz)
Communications	Bi-directional
Protocol	Proprietary (433 Mhz), 802.15.4 Proprietary (2.4 Ghz)
Battery Back-Up	Yes
Type	Plug connection lithium ion rechargeable
Power Voltage	3.7 V
Capacity	2050 mA
Recharge Time	2.5 hours (from flat)
Test Cycle	Advise monthly by removing system power

* Meets the standard for storage and review of data when used in conjunction with user defined procedures for FDA21 CRF Part 11 requirements
** Based on the average volume of sensors per system version sold in 2016
*** Existing Planer DATAcentre sensors are compatible with the equivalent DATAssure™ base station

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PLANER
PRESERVE / PROTECT / NURTURE

Planer PLC
110 Windmill Road
Sunbury-On-Thames
Middlesex TW16 7HD
United Kingdom

Tel: +44 (0)1932 755 000
Fax: +44 (0)1932 755 001
enquiries@planer.com

www.planer.com

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