

Wireless, multi-unit data acquisition, delivering 24/7 real-time monitoring for industrial environments

INNOVATIVE MONITORING SOLUTIONS



DataNet is an essential hardware and software solution that can empower any organization to monitor their environment using the ZigBee wireless network.

The DataNet comprehensive real-time data logging solution is COM. directed by event-driven security policies. DataNet delivers a truly worthy data logging solution by leveraging the power of ZigBee www.fourtec. wireless, 2.4 GHz telemetry protocol. Supporting up to 65,000 units per network, with fast, cable-free installation for instant setup.

- Wireless data logging for processing, transportation and storage
- Multiple network management from single workstation or via LAN for long • range monitoring
- Internal sensors for site-specific humidity/temperature monitoring
- Multiple models measuring 4 to 20 mA, 0 to 1 V, Pulse Counter, PT100 2-wires, . NTC, Thermocouple J, K and T, Contact inputs
- Fully reliable real-time wireless monitoring network •
- Multiple alarms via SMS, email and external siren •
- Worldwide license-free 2.4 GHz band •
- Operating keypad and LCD display
- API for integrating DataNet hardware with proprietary systems



PHARMACEUTICAL Monitoring environments in labs, fridges, freezers and culture rooms



WAREHOUSING Chemical, industrial and perishables storage



COLD STORAGE Optimizing temperature in refrigerated warehousing



HOSPITALS Medical alert monitoring, sterilization, blood products storage and transport



COLD CHAIN **Ensuring quality** products throughout the cold chain process



The DataNet solution comprises a range of loggers measuring a variety of inputs, including internal temperature and humidity sensors. From 5-6 input models down to the more cost-effective single or dual input Mini DataNet models, we offer a comprehensive solution for every application.

The DataNet multi-unit data acquisition solution is geared towards 24/7 real-time data logging for mission critical organizations. The DataNet's comprehensive online solution is directed by event-driven security policies. The DataNet product family supports onboard temperature and humidity sensors, as well as the following industry standard inputs: 4 external channels for 4 to 20 mA, 0 to 50 mV, 0 to 1 V,PT-100, Thermocouple, Contact, Pulse Counter and Frequency.

Logging units function in a wireless mesh network configuration, allowing for 65,000 units in each network. This enables real-time monitoring of multiple test points in a single operation.

DataNet system offers a broad selection of logger models meeting a wide variety of industry applications needs.

- Internal sensor housing LCD Screen **Menu Button** Scroll/On **Button** DataNet Data Logger External Inputs (4) 12V Excitation Mini USBConnector AC Socket
- **DNR900 Receiver/Repeater** the heart of the system controls and collects the data from the end units. Also suitable for extending the system range.
- DNL910 and DNL920 loggers with internal temperature and/or humidity.
 Supports four external inputs: 4 to 20 mA, 0 to 1 V, 0 to 50 mV, PT-100 2 wires,
 Thermocouples (J, K and T), Contact, Pulse Counter and Frequency
- DNL910 PA and DNL920 PA loggers with integrated power amplifier for extended range. Same supported external and internal sensors as DNL910 and DNL920.
- DNR800 Mini Repeater –cost-effective unit for extending the system range.
- DNL804-BXT, DNL808-BXT, DNL810-BXT cost-effective loggers supporting up to two inputs, measuring temperature, humidity and current (4-20 mA). Includes up to four AA 3.6 V for 3-year battery life.



DataNet Solution

DataSuite Software for DataNet

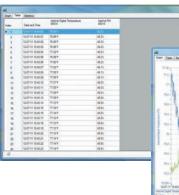
Supported Operating Systems: Windows® XP SP3 / Vista / 7 (32 and 64 Bit)

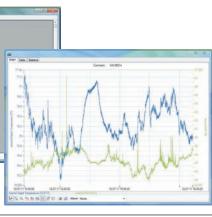
Minimum Hardware Requirements: Pentium 4, 2 GHz Processor or better, 512 MB RAM, 250 MB available disk space

The DataSuite Software provides security for your products with online monitoring and control of multiple networks supporting the entire intelligent DataNet data logging solution via LAN.

Data View Features

Real-time data in multiple displays (Graph, Table, Statistics)





Sensor View

Real-time sensor- specific data view with alarm status



FDA Title 21 CFR Part 11 Compliant

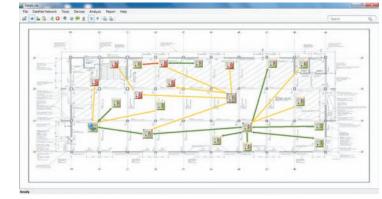
DatPass

DatPass is a user administration software which supports the assignment of passwords and operating privileges for all fourtec industry application software ensuring CFR compliancy. CFR is a Food and Drug Administration (FDA) issued regulation (Title 21 Code of Federal Regulations, Part 11).

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Map View

- International date format
- Ability to rename every logger and external input
- Map View displaying unit location, signal path and signal strength to the PC



Alarm Features

Alarm level setup with email & SMS notifications. Four alarm levels, allowing for programming of separate parameters, including alarm delay and duration

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Report Module

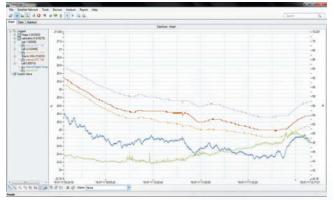
The Report module provides the DataSuite user with an intuitive interface for creating and generating reports which have many parameters garnered from the DataNet units and software. Each report can be emailed to a selected distribution list, at pre-defined time intervals, in PDF and Excel format

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Analysis Features

Dew point analysis, FO Pasteurization, histogram, MKT, statistics with export to Excel and CSV formats

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Specifications

Length and Temperature specifications are provided in Metric and Celsius units

INPUT TYPES

DNL910, DNL920, DNL910-PA, DNL920-PA

4 to 2	20 mA
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•	Range:	4 to 20 mA								
•	Resolution:	4.76 μΑ								
•	Accuracy:	±0.5 %								
•	Loop impedance:	21 Ω								
0	0 to 50 mV									

Range:	0 to 50 mV
Resolution:	3 μV
Accuracy:	±0.5 %
	Resolution:

25 MQ Input impedance: Maximum voltage: 3.2 V

0 to 1 V

- 0 to 1 V Range: 200 µV Resolution: Accuracy: ±0.5 %
- Input impedance: 25 MΩ
- Maximum voltage: 3.2 V

Temperature PT-100 (2-wires)

• Range: -200 to 400 °C

•	Resolution: 0.1 °C		
•	Accuracy:	-200 to -60 °C	
		60 to 400 °C	
		-60 to 60 °C	

Temperature Thermocouple J

•	Range:	-200 to 1,000 °C	
•	Resolution:	0.1 °C	
•	Accuracy:	-200 to -60 °C	±0.5 %
		60 to 1,000 °C	±0.5 %
		-60 to 60 °C	±0.5 °C
•	Cold junction compe	ensation error:	±0.3 °C

Temperature Thermocouple K							
 Range: 	-200 to 1,000 °C						
 Resolution: 	0.1 °C						
 Accuracy: 	-200 to -60 °C						
	60 to 1,000 °C						
	-60 to 60 °C						
 Cold junction cor 	npensation error:						

Temperature Thermocouple T		
Range:	-200 to 400 °C	
 Resolution: 	0.1 °C	
Accuracy	200 to 60 °C	

- Accuracy: -200 to -60 °C 60 to 400 °C -60 to 60 °C
- Cold junction compensation error:

Contact (for Switch/Door Position)

Open/Closed Range:

Pulse Counter (input 4 only)

- Optocoupler input
- 1 to 65,536 counts Range: Resolution: 1 count

•	Frequency range:	0 to 4,000 Hz
•	Input signal:	0 to 5 V

 Input impedance: 470 Ω

Frequency (input 4 only)

- Optocoupler input 20 Hz to 4 KHz Range:
- Input signal: 0 to 5 V Input impedance: 470 Ω

- Internal Temperature
- DNL910: PT-100 Type: DNL920: Digital Range: -20 to 50 °C 0.1 °C Resolution:
- DNL910: ±0.3 °C Accuracy: DNL920: ±0.5 °C

Internal Humidity (for DNL920)

Range:	5 to 95 %
Resolution:	0.5 %

- Accuracy: ±3 % at 10 to 90 % ± 5 % at 5 to 10 % and 90 to 95 %
- DNL804-BXT, DNL808-BXT and DNL810-BXT
- DNL804-BXT External Current Sensor
 - Range: 4 to 20 mA
 - 0.06 °C 1.16 uA Resolution: 0.5 % Accuracy: 21 O
- Loop impedance:

DNL808-BXT External Temperature Sensor

 Range: 	-50 to 150 °C	
 Resolution: 	0.06 °C	
 Accuracy: 	-50 to 60 °C	±0.3 °C
	60 to 150 °C	±0.5 %

DNL810-BXT Internal RH/Temperature Sensors

- Temp range: -20 to 50 °C
- Temp resolution: 0.04 °C
- Temp accuracy: +0.4 °C
- Humidity range: 5 to 95 %
- Humidity resolution: 0.5 %
- Humidity accuracy: ±3 %

OUTPUTS

±0.5 %

 $\pm 0.5\%$

±0.3 °C

±0.5 %

±0.5 %

±0.5 °C

±0.3 °C

±0.5 %

±0.5 %

±0.5 °C

±0.3 °C

DNR900, DNL910, DNL920, DNL910-PA, DNL920-PA

External Power Excitation (transducers usage)

 12 V DC @ 2 A Reset fuse overload

- Dry Contact Alarm Output Open collector
- Close position resistance: 500
- Max. Load: 50 mA, 3 V DC

DATANET LOGGER SAMPLING FEATURES

- ~59,000 samples Memory capacity: Sampling rate: Once every second to once every 18 hours
- Sampling resolution: 16-bit
- · Channel separation: 80 dB

DATANET RF NETWORK COMMUNICATION

- Frequency: 2.4 GHz
- Units per network: 65.000
- Data rate: 250 Kbps
- Full mesh network architecture supported
- 128-bit network security encryption
- Worldwide license-free **RF** Transmission:
- DNL8xx and DNL9xx: 4 dbm DNR900, DNL9xx-PA: 17 dbm DNR800: 20 dbm

DATANET HARDWARE SPECIFICATIONS

DNR900, DNL910, DNL920 and DNL9XX-PA

- Display
- 2-row LCD
- 16 character display

Power Supply

- Internal rechargeable 4.8 V NiMH battery
- Built-in battery charger
- External 12 V DC input

Operating Temperature Range

 -20 to 50 °C for all models • Water and dust proof: IP54

DNR900 PC Communication

- USB 2.0 compliance
- Mini USB type B cable

Casing

- Plastic ABS box
 - Dimensions: 97 x 93 x 27 mm 200 gr
- Weight:
- Table and wall mounting

DNL804-BXT, DNL808-BXT, DNL810-BXT

Power Supply

- Removable battery pack supporting up to 4 x AA 3.6 V lithium batteries
- Battery life: Up to 3 years depending on sampling rate

Casing

Weight:

Dimensions

• DNL810-BXT: 10.2 x 8.8 x 5.3 cm (without the external antenna)

(without the external antenna and strain relief add-on)

DNL804-BXT and DNL808-BXT: 9 x 8.8 x 5.3 cm

17.5 g

-30 to 75 °C for all models (operating at temperature

close to or below zero may affect battery life)

137 g not including batteries

Operating Temperature Range

Water and dust proof: IP54

GENERAL SPECIFICATIONS

Man Machine Interface

Standards Compliance

CE, FCC, IC Canada

DCS-1800 PCS-1900 MHz

12 V DC external power supply

Windows® based software

Definition of custom sensors

Offline Receiver alarm indication

Manual backup of calibration settings

Over-the-air firmware update

Full logger calibration

Alarm levels on graphs

Export to spreadsheets

collected data

loggers

Documentation and filing

DATASUITE SOFTWARE FOR DATANET

· Data displayed in numeric or graphical display of all

Online retrieval and display of the collected data in

Analytical functions, for professional analysis of the

Software integration with range of fourtec data

RS232 Serial Interface

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inputs

real-time

Quad Band: GSM-850/EGSM-900/

Supports Open AT® software platform Internal Expansion Socket (AES) interface

2-button keypad

External Antenna:

Wall mounting

218 g including four batteries

Ordering Information

Part Number (PN)	Product Description	
DATANET DEVICES		
DNR900A	Receiver/Repeater + universal power supply	
DNL910A	Temperature RF logger with 4 external inputs + universal power supply + calibration certificate	
DNL910A-PA	Temperature RF logger with built-in Power Amplifier & 4 external inputs + universal power supply + calibration certificate	
DNL920A	Temperature & Humidity RF logger with 4 external inputs + universal power supply + calibration certificate	
DNL920A-PA	Temperature & Humidity RF logger with built-in Power Amplifier and 4 external inputs + universal power supply + calibration certificate	
DNR800A	Mini Repeater with extended RF range + universal power supply	
DNL804A-BXT	4 to 20 mA RF logger + external antenna + calibration certificate + extended battery pack	
DNL808A-BXT	External NTC 10KΩ RF logger(-50 to 150 °C) + NTC temperature probe (2.5 m cable) + external antenna + extended battery pack	
DNL810A-BXT	Temperature and Humidity RF logger + external antenna + extended battery pack	
SENSORS		
12753	PT-100 (-70 to 400 °C) 2-wire temperature sensor (2.5 m cable)	
12752	PT-100 (-70 to 400 °C) 2-wire temperature sensor (4 m cable)	
12751	PT-100 (-70 to 400 °C) 2-wire temperature sensor (6 m cable)	
50116	PT-100 (-200 to 400 °C) 2-wire temperature sensor (2.5 m cable)	
50165	Thermocouple Type K sensor, 500 mm cable with flat pin connector	
DT043	Temperature (-40 to 60 C) and Humidity probe (3 m cable)	
DT332	Replacement NTC 10K Ω (-50 to 150 °C) temperature probe (2.5 m cable) for DNL808	
ACCESSORIES & SOFTW	ARE	
50164	Quad Band GSM Modem (for DataSuite SMS alerts)	
13825	External Siren + Strobe for DataSuite alarm notifications	
13750	USB over IP Ethernet adapter	
13129	Replacement standard external antenna for Mini DataNet units	
13416	External 2.5 m antenna with magnet connector	
13330	Mini USB communication cable for DNR900 (3 m cable)	
11304	Internal battery pack for DNL9XX loggers	
13806	AA 3.6 battery for Mini DataNet External Battery Pack	
12928	2/3 AA 3.6 V battery for Mini DataNet logger	
AD001	Replacement universal 110V/220V power supply	
DataSuite-DN	DataSuite Installation CD + mini USB 3m cable + single user license	
DS-CFR-DN	DatPass for DataSuite meeting 21 CFR Part 11 Compliancy. With DataSuite CFR and DatPass software +mini USB 3m cable + user licenses	

About fourtec

fourtec – Fourier Technologies Ltd. is a recognized leader in data-logging and monitoring solutions for controlled industrial environments, such as food, pharmaceutical, medical, storage and transportation industries.

Our solutions enable our customers to deliver higher quality products, ensure consumer safety, comply with regulatory requirements and increase profitability. Innovation, expertise and a commitment to quality are the values that drive the development and production of our products.



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