- Network all your Radiation Monitors over an ISA100.11a secure wireless network

- Supports a wide range of radiation monitors - old and new - from different manufacturers.

- Eliminates costly network cable installation

- 200m typical line-of-site range
  50m typical in built-up areas.

- Allows deployment of portable monitors

- Up to 500 devices on a single network.

- Redundant network options.

- Simple configuration and deployment.

Features

- Compact design to fit alongside most devices
- Supports a wide range of monitor types
- Pulse and serial interfaces
- 9-30Vdc powered
- IP55 protected enclosure
- ISA100.11a compliant

Overview

The Teleterm W3i Radiation Monitor Wireless Interface provides a convenient means of monitoring all your radiation monitors regardless of manufacturer and age over a secure wireless network to generate alarms and control evacuation logic systems.

Attach a Teleterm W3i to each radiation monitor and transmit monitor readings and alarms wirelessly to your control centre to eliminate costly installation network cabling.

Also allows portable monitors to be easily deployed in mobile applications.

Supports a wide range of Monitors

The Teleterm W3 has a built-in RS232/RS485 serial communications interface and pulse and contact inputs that can be connected to Radiation Monitors or any instruments utilising standard Modbus.

It is supplied with built in support for a wide range of monitors including models from Canberra, Lab-Impex Systems / Ultra Electronics. (See the list of supported radiation monitors in the Specifications).

If your monitor is not listed, consult with your Omniflex representative for availability.

ISA100.11a

ISA100Wireless is an international standard (IEC 62734), and is an open wireless network that is scalable, reliable and secure.

ISA100 operates over the 2.4GHz ISM band using the widely supported IEEE802.15.4 radio standard. This means no special licencing is required to operate an ISA100 wireless network.

Being an industry standard network, the Teleterm W3 can be used with any ISA100 compatible Wireless Access Point (WAP) to connect your monitors to your central monitoring and control system. The ISA100 wireless standard integrates high level cyber security features to ensure data integrity, confidentiality and authenticity.

Simple Configuration

The Teleterm W3 comes preloaded with support for a wide range of radiation monitors as well as serial Modbus, allowing a minimum of configuration to connect a radiation monitor to the wireless network.

The W3 is easy to configure using the free Omniset software utility. Two steps for configuration: **Step 1:** Configure the ISA100 network parameters. **Step 2:** Set the radiation monitor type or Modbus serial and associated parameters.

Responsive Alarms

The Teleterm W3i constantly reads the radiation monitor and can be set to transmit readings immediately that a reading above a set threshold is observed. For readings below the threshold, the readings transmitted to the central control system can be set to a lower update rate leaving the network free of unnecessary traffic to allow urgent alarms to be received without delay, while still logging the background radiation levels.
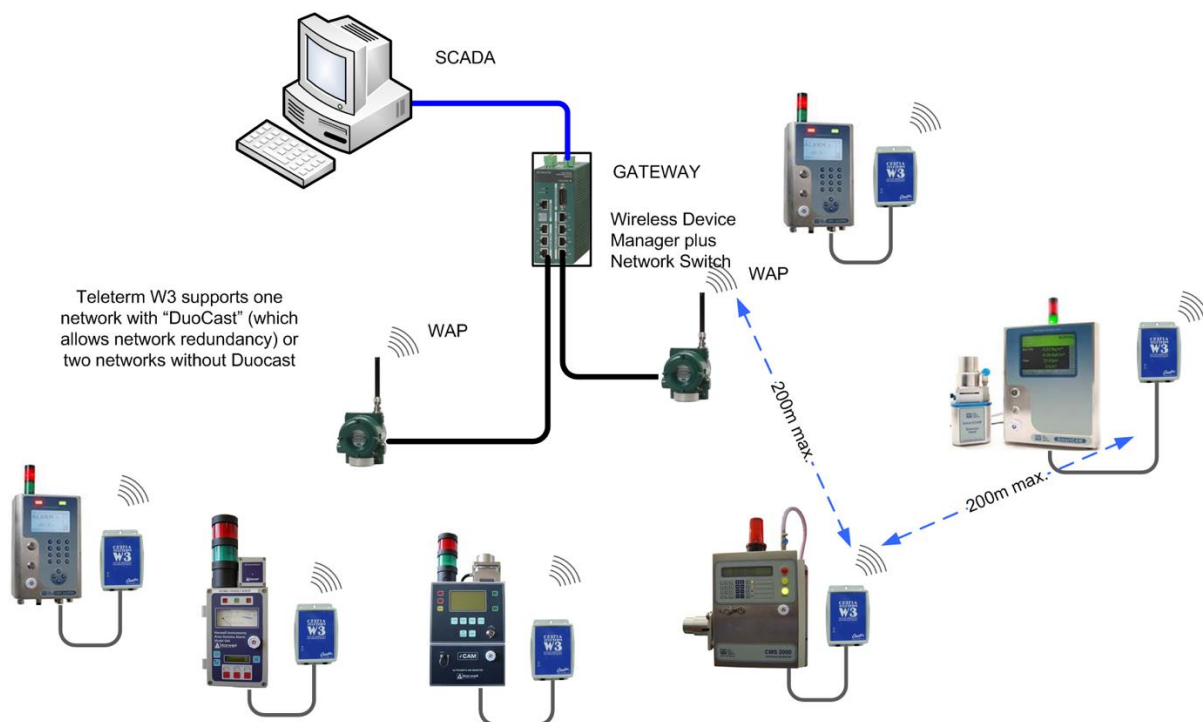
www.omniflex.com/products/C2371B

Typical Wireless Network Installation
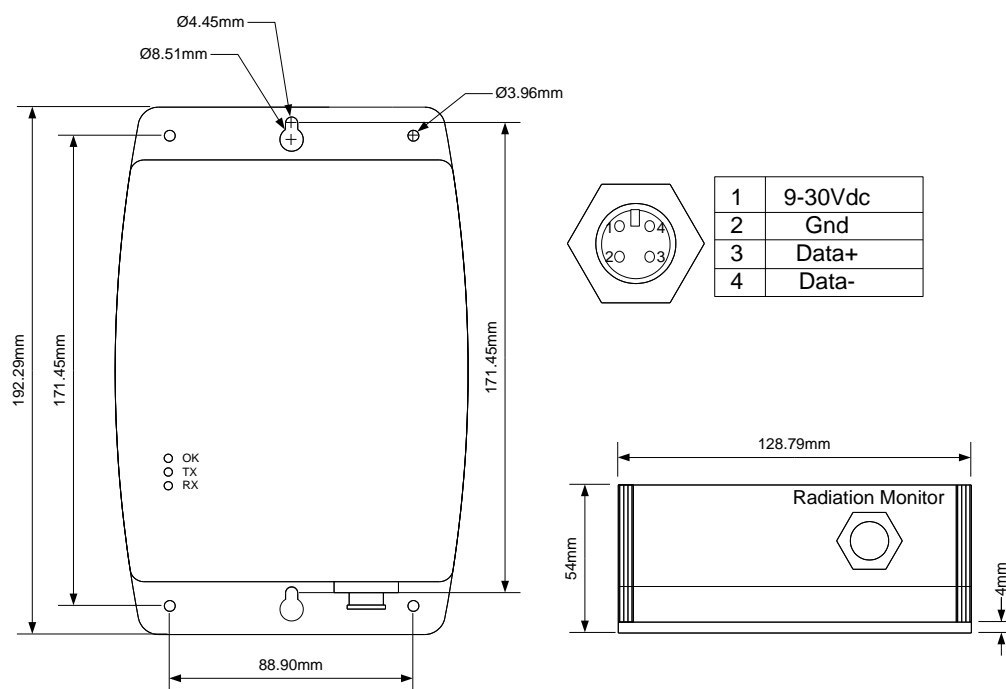
SCADA

GATEWAY

Wireless Device Manager plus Network Switch

WAP

Teleterm W3 supports one network with "DuoCast" (which allows network redundancy) or two networks without Duocast

WAP

200m max.

200m max.

Mechanical Dimensions

Ø4.45mm
Ø8.51mm
Ø3.96mm

192.29mm
171.45mm
171.45mm

OK
TX
RX

88.90mm

1	9-30Vdc
2	Gnd
3	Data+
4	Data-

128.79mm

Radiation Monitor

54mm

4mm

www.omniflex.com/products/C2371B

Omniflex
REMOTE MONITORING SPECIALISTS

Specifications

Power Supply (often suppled from the monitor)

Voltage	9-30Vdc
Current	70mA max at 9Vdc 25mA typical at 24Vdc

LED Indicators

OK LED (green):	Powered on
Tx LED (red)	Data transmitting on monitor port
Rx LED (yellow)	Data receiving on monitor port

Wireless interface

Technology	ISA100.11a® (IEEE802.15.4)
Frequency Band	2400-2483.5MHz ISM (license free)
Data Rate	250kbps
Security Encoding	AES 128 bits
RF Transmit Power	12dBm (EIRP)
Antenna	Internal
Update Period	8 to 3600 s [factory set to 8s]
Range	Up to 200m line-of-sight Up to 50m in built-up areas

Serial interface

Type	RS232/RS485/Pulses
Baud Rate	300-115200
Cable Length	1200m (4000ft) in RS485 mode 30m (100ft) in RS232 mode
Connection	IP55 Connector on base of housing

Supported Radiation Monitors

Canberra AB96 Alpha and/or Beta Monitor
Canberra iCAM Alpha and/or Beta Monitor
Canberra G64 Gamma Monitor
Ultra Electronics / Lab Impex Systems CMS2000 MK6 Alpha and/or Beta Monitor
Ultra Electronics / Lab Impex Systems CMS Gamma Monitor
Ultra Electronics / Lab Impex Systems SmartCAM 47
Others may be available on request

Modbus Slave Protocol

Address Selection	Set in software 1 − 255
Modbus Functions	1, 2, 3, 4, 5, 6, 15, 16

Modbus Master Protocol

Configuration	Up to 16 "Query Blocks" can read from or write to a Modbus Slave device. Poll rates for each Query Block can be individually set.
Modbus Functions	1, 2, 3, 4, 5, 6, 15, 16

Typical Data Sent

Data Items	Identification Tag Radiation Level Alarm States Units of Measurement Air Flow (not continuous)
Modbus Functions	1, 2, 3, 4, 5, 6, 15, 16

Environment

Operating Temp.	-10° C − 60° C (+14° F − 140° F)
Storage Temp.	-25° C − 85° C (-13° F − 185° F)
Relative Humidity	5 to 95%

Mechanical

Width	129mm (5 .079")
Height	193 mm (7.598")
Depth	54mm (2.126")
Protection	IP55

Weight

Unpacked	570gm (20.10oz) approx.
Packed	670gm (23.63oz) approx.

Compliance to Standards

Safety	EN60950-1 (Indoor/Outdoor use)
Emissions	EN 55011:2011 Class B
Immunity − ESD	IEC 61000-4-2:1995, level 3
Immunity − RF Fields	IEC 61000-4-3:1995, level 3
Immunity − Fast Transients	IEC 61000-4-4:1995 2 kV − DC power port 1 kV − other input/output lines

Ordering Information

ORDER CODE	DESCRIPTION
C2371B	Teleterm W3i Wireless Radiation Interface
Accessories	
C1179A	Teleterm USB-C Programming Cable (USB-C to RJ11)