



Wireless Networking



Wi-Fi ● Zone 1, 2, 21 & 22 ● Class I & II Division 1 ● Access Point Enclosure Systems ● 802.11 a/b/g/n ● Antennas





Wireless Networking for Hazardous Areas

Over the last few years, Extronics has led the way in helping companies in the Oil & Gas, Chemical and Pharmaceutical process industries to unlock their data from hazardous areas via standards-based wireless technology. Applications once deemed impractical and costly are now a commercial reality. Through innovative product development, technical design capability & implementation skills, we have become leaders in this particular field.

The iWAP Solution - The Extronics range of explosion-proof wireless enclosures enables standard wireless access points to be used in hazardous areas. This allows companies to deploy their preferred wireless hardware in



areas where they would ordinarily pose an incursive risk. Extronics works closely with the leading manufacturers such as Cisco, Aruba, Motorola, Acksys etc. to ensure maximum compatibility. The iWAP range provides solutions for ATEX & IECEx Gas Zones 1 & 2 and Dust Zones 21 & 22. Additionally we have solutions that are certified to U.S. Class 1 Division 1 criteria.

Each iWAP Enclosure is supplied with all the required internal power supplies, cable routing, fixtures and fittings to suit the specific vendors Access Point or



ABOVE: iWAP Mobile – Zone 1 Portable Access Point

LEFT: iWAP107 – Inside the Zone 1 Enclosure

other wireless hardware. Other optional features include surge arrestors for lightning protection, fibre ethernet, POE and serial ports and low temperature/anti-condensation heaters.

Antennas - To enable optimum connectivity Extronics has developed a wide range of antennas. Suitable for various application requirements whether it is the pattern and gain of the antenna or the hazardous area certification. These extremely rugged antennas may be connected to any wireless transmitter without requiring knowledge of the internal electrics or needing to make a fault analysis of the device.

Protect your investment - Your wireless infrastructure investment is safe with an Extronics hazardous area solution. One of the most costly parts of any Wi-Fi deployment is the installation and cabling costs. This only needs to be carried out once as the iWAP systems will continuously be recertified to allow the latest generation wireless hardware to be installed in them, allowing upgrading of the internal wireless hardware without needing new enclosure installation.

PROJECT Zone 1 Wireless LAN

Fine Organics Limited produces pharmaceutical, crop-protection and specialty chemicals at its facility at Seal Sands, near Middlesbrough. The need for real-time data is particularly acute in a multi-use batch plant. Without effective monitoring, equipment faults can potentially shutdown a whole manufacturing plant.

A major issue was how to cost-effectively network the units, particularly in the hazardous areas. Traditional Ethernet cabling was considered but the associated costs, particularly in the Zone 1 hazardous areas, were



prohibitive. Additionally, this approach lacked the scalability that future growth expectations required.

Following a site survey to determine the optimum location and number of Access Points required, Extronics installed a Wi-Fi network throughout the manufacturing plant, including Zone 1 hazardous areas. Extronics deployed a number of iWAP enclosures with Meru access points. The Access Points were centrally managed and controlled using a single channel architecture which provided the most robust and stable solution for heavy metal environments.

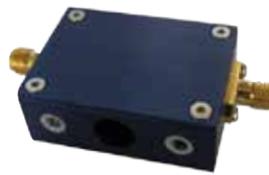
Product Development

Extronics success has been built on innovative product development. A substantial proportion of turnover is re-invested into a comprehensive R & D programme to provide effective solutions to the production problems posed by hazardous areas. The products below were all developed by Extronics to help unlock data from Hazardous Areas.



iWAP107

A Zone 1 and 21 Access point enclosure designed to accommodate the latest MIMO enabled access points e.g. Cisco 3500, Aruba 134 etc. Made from IP66 marine grade aluminium, the iWAP107 can connect via Fibre & Gigabit Ethernet. Other features include power supply options, lightning arrestor and intrinsically safe antenna outputs



iSOLATE501

It is the next generation of Extronics ground breaking technology, designed to improve further on the performance of the industry proven iSOLATE500. This ultra wide band isolator makes RF outputs intrinsically safe and allows standard wireless equipment to be deployed in hazardous areas without the need for notified body assessment. Live disconnect of antennas is possible and installation of wireless networks is made both simple and cost-effective.



iWAP200

A Zone 2 and 21/22 Access point enclosure. Made from 316L stainless steel, the iWAP200 can connect via Fibre or CAT5 Ethernet. Other features include power supply options, lightning arrestor, heater and cooling options.



iWAP Mobile

A Zone 1 Portable LAN system, The iWAP MOBILE provides the ability to quickly deploy wireless infrastructure in parts of the plant that do not have permanent Wi-Fi coverage. Ideal for carrying out RF surveys prior to installing a permanent Wi-Fi network.



iSOLATE-CT

The iSOLATE-CT is designed for use with the iSOLATE501 range of galvanic RF isolators to enable quick & simple wireless deployments in hazardous areas. When fitted to an explosion proof enclosure containing the Extronics iSOLATE501, the RF ports of standard wireless radio device are protected by the intrinsic safety concept, facilitating their use in Zone 1 / Division 1 environments.



iANT Range

The iANT10x series are omnidirectional, increased safety antennas for Zone 1 & 21 and Class 1 Division 1. The iANT20x antennas are available as omnidirectional, sector, or directional variants for optimum performance. They are intrinsically safe devices which may only be connected to circuits certified as intrinsically safe, e.g. when used with the iSOLATE500 range.

Extronics – Smart, Safe & Connected

Founded in 1992, Extronics is a leading global designer and manufacturer of intrinsically safe and explosion proof equipment. From our UK headquarters, we serve customers that work in potentially explosive environments, especially those in the chemical, pharmaceutical, petrochemical, oil and gas industries.



Wireless Networks

Over the last few years, Extronics has led the way in helping companies to unlock their data from hazardous areas via standards-based wireless technology. Through innovative product development, technical design capability & technical partnerships with companies such as Cisco® and Aruba®, Extronics has become recognised as a leader in this particular field.



Vision Technologies

As a result of a substantial investment programme in both R&D, equipment and technical skills, Extronics has become a world leader in vision technologies for hazardous areas. This expertise includes the design and production of the world's first intrinsically-safe digital camera, the iCAM501 Ultra, as well as innovative Smart Phones and Tablets.



Engineering for Hazardous Areas

The Extronics engineering team possesses the expertise and experience necessary to create bespoke engineering solutions based upon the various concepts of protection in hazardous environments. This engineering expertise has enabled Extronics to create a range of innovative Ex d solutions which are available as standard items – dramatically reducing both lead time and production costs.



Personnel & Asset Tracking

Personnel and asset tracking solutions are of particular importance to companies with designated hazardous areas. Extronics wireless expertise provides the framework for the delivery of a range of Active & Passive RFID based tracking solutions. Solutions designed to dramatically improve worker safety, production efficiency and asset management.



1 Dalton Way, Midpoint 18, Middlewich Tel +44 (0)845 277 5000 Email info@extronics.com
Cheshire CW10 0HU. United Kingdom Fax +44 (0)845 277 4000 Web www.extronics.com

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