



# Vision Technologies



Intrinsically Safe Digital Cameras ● Hazardous Area CCTV Monitoring ● Exd Display ● Zone 1 HMI's





# Vision Technologies

## Introduction

With 20 years of experience within the hazardous area market, Extronics has long recognised the difficulties faced by companies who have operations within explosive environments. A key difficulty is the issue of obtaining reliable images, both moving and still, for reports, surveys, monitoring requirements etc., without creating an incensive risk.

Over the past five years Extronics has made substantial investment in R & D, technical skills and production equipment to create a range of vision solutions that deliver real value to customers.



| iCAM501 Assembly in the Extronics Vision Lab



| iCAM501 Ultra has ATEX & IECEx M1 mining approval

## Digital Still Cameras

Customer focussed research identified a real need for a small, lightweight camera that could be used in all hazardous areas, including some Zone 0 environments. Feedback had indicated that many operations had a need for images to be used in reports etc but that the requirement for hot work permits was a serious drawback. Additionally there was dissatisfaction with the highly expensive, bulky and unwieldy Ex d cameras that were, at the time, the only alternative.

Through considerable investment in design, R & D and production capacity, Extronics developed from ground-up the first intrinsically-safe digital camera - the

iCAM501. Since its launch in 2009, this model has been a major success through its cost-effective ease of use and high build quality. Investment continues into the range with the introduction of the iCAM501 Ultra in 2011 and the auto-focus iCAM502 in 2012. Extronics has now developed substantial expertise in the underlying software and hardware technologies and has a strong roadmap of future product development.

## CCTV Cameras

Because of the increased risk to personnel within designated hazardous areas, many monitoring tasks are best performed remotely. To this end, Extronics has extended the iCAM range to include a Zone 1 CCTV camera and also a range of monitors that can be deployed in these testing environments. These solutions greatly increase both productivity and safety and Extronics is actively developing new products in this area.

## HMI's

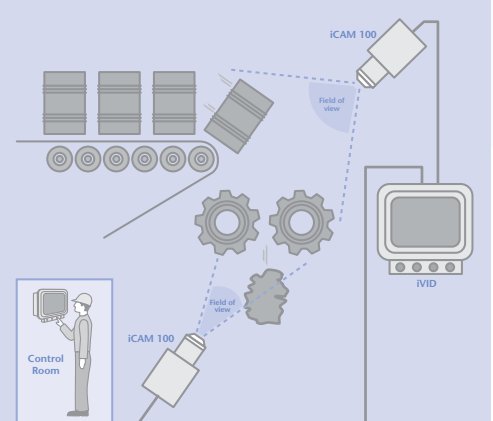
An integral part of the Extronics Vision Technology portfolio is the range of HMI's that are offered in the UK. The Challenger Remote PC and the Explorer Panel PC are designed for use in Zone 1 environments with display options between 15" and 22".

## PROJECT Waste Monitoring System

SRM is a company that helps its customers solve their organic wastes disposal problems through recycling or energy recovery. The company operates a very successful recycling plant at Morecombe which shreds and recycles containers of waste. Occasionally two containers were inadvertently put into the system together which resulted in blockages and substantial downtime.

Extronics was approached to supply a Zone 1 CCTV solution to monitor specific parts of the container tipping process. An operator could intervene via a Zone 1 certified control and display monitor to eliminate the possibility of a blockage in the process. One iCAM100 CCTV camera was situated

where the containers are tipped and a second camera was located further down the shredding path at the heart of the system. The compact and lightweight iCAM100 was easy to install and manipulate without the need for substantial brackets, offering a simple but effective solution to keep the process running.



## 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. Vision Technologies is the fastest growing sector in the Extronics product portfolio.



### iCAM501 Ultra

The world's best selling camera for hazardous areas. The iCAM501 Ultra is Intrinsically safe and accredited to FM Class 1 Div 1, ATEX/IECEx Zone 0 and M1 Mining standards. The camera boasts image sharpness analysis, high performance lens, powerful LED flash and voice recording feature.



### iCAM100

Designed for use in hazardous areas, where a method of surveillance is required and space is at a premium. The camera is a perfect choice for use as part of a CCTV system, or just for single point monitoring of a process operation with a local hazardous area video monitor e.g. the iVID101.



### iVID101 Exd Monitor

Comprises a 12.1 TFT LCD display mounted inside an Ex d enclosure with a glass viewing window. The unit can be connected to various types of video input signals including the iCAM100 video camera and also other types of CCTV cameras.



### iCAM502

Building on the success of the iCAM501, this new model boasts the same lightweight, portable design together with a high performance auto-focus lens. This allows close-up, high definition images to be taken in the most challenging environments e.g. rating plates.



### Explorer HMI

Whether for local display or operation of software in Ex Zone 1/2/21 and 22, for client server applications (Scada), for control of PLC, balances or as a web terminal - the Explorer range of panel PC's offer a high level of versatility for local operation.



### Challenger HMI

The Challenger range provides operators in the plant with a full function PC interface for displaying and operating any software running on a PC or UNIX box. The intrinsically safe system can be installed in Zone 1 or 2 hazardous areas allowing the software application to be installed adjacent to the process.

## Extronics – Making Hazardous Areas Safer

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 monitoring solutions, video monitors and HMI's.



### 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.

