



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	IECEX ITS 09.0027X	Issue No: 6	<u>Certificate history:</u>
Status:	<b>Current</b>	Page 1 of 4	Issue No. 6 (2017-02-07)
Date of Issue:	<b>2017-02-07</b>		Issue No. 5 (2014-04-15)
Applicant:	<b>Extronics Limited</b> 1 Dalton Way, Midpoint 18, Middlewich, Cheshire, UK. CW10 0HU <b>United Kingdom</b>		Issue No. 4 (2013-03-20)
Equipment:	<b>iCAM502 Intrinsically Safe Digital Camera</b>		Issue No. 3 (2012-08-10)
<i>Optional accessory:</i>			Issue No. 2 (2011-09-22)
Type of Protection:	<b>Intrinsic Safety "I"</b>		Issue No. 1 (2011-07-18)
Marking:	Extronics Ltd IECEX ITS 09.0027X Ex ia IIB T4/T3 Ga Ex ia IIC T4/T3 Gb -20°C < Ta < +60°C Ex ia I Ma 0°C < Ta < +60°C		Issue No. 0 (2009-12-15)

Approved for issue on behalf of the IECEx  
Certification Body:

A T Austin

Position:

Certification Officer

Signature:  
(for printed version)

Date:

20017-02-07

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road,  
Leatherhead,  
Surrey, KT22 7SB  
United Kingdom





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Manufacturer: **Extronics Limited**  
1 Dalton Way,  
Midpoint 18,  
Middlewich,  
Cheshire, UK.  
CW10 0HU  
**United Kingdom**

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2007-10</b> Edition:5	Explosive atmospheres - Part 0:Equipment - General requirements
<b>IEC 60079-11 : 2006</b> Edition:5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-26 : 2006</b> Edition:2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[GB/ITS/ExTR09.0039/06](#)

Quality Assessment Report:

[GB/SIR/QAR08.0025/07](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The Extronics Limited iCAM502 is intrinsically safe digital camera with a voice recording function. It comprises an anti-static PC/ABS enclosure housing an assembly of 3 PCB's; a CPU board, a keypad board and an LED flash board. The CPU and keypad PCB stack is encapsulated along with the camera lens assembly. The LED flash board is soldered to the encapsulated board assembly and the LED flash units are encapsulated.

The camera is powered by 2 off AA alkaline cells connected in series and housed within the camera's battery compartment, accessible by a cover opened by a quarter turn screw. The AA alkaline cells are spark ignition safe for gas group IIC and Temperature Class T4 or T3 depend of type of cell used and the upper ambient temperature of +60°C. Changing the batteries in Group II hazardous areas is permitted.

The iCAM502 camera may also be used in Group I applications, with reduced ambient temperature range  $0^{\circ}\text{C} \leq \text{Ta} \leq +60^{\circ}\text{C}$  with respect to Special Conditions of Use.

Underneath the battery compartment cover is a USB port for the purposes of offloading picture or other data or for programming the camera. The unit may be connected to any PC or similar device with a USB port.

USB Interface: Um = 250V ac

### CONDITIONS OF CERTIFICATION: YES as shown below:

- For Group II applications only, the user shall not carry more than a maximum of 2 spare approved AA Cells into the hazardous area. Precautions shall be taken to prevent short circuiting of un-protected battery terminals. Discharged cells shall be removed from the hazardous area.
- The Temperature Class for the equipment is determined by type of batteries used:
  - T4: Duracell MN 1500, Duracell Industrial ID1500
  - T3: Energizer E91, Panasonic LR6XWA
- For Group I applications, the changing of the batteries in the hazardous area and the transportation of spare batteries into the hazardous area are not permitted.
- Duracell MN 1500 and Duracell Industrial ID1500 are the only types of battery permitted for Group I applications.
- The USB port shall only be connected in the non-hazardous area.
- If the camera is damaged in any way, it shall be removed from the hazardous area.



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Issue 1:

Additional use of alternative flash LED device.  
Special conditions of safe use amended to match ATEX certificate.

### Issue 2:

Use of a new enclosure material.  
Addition of Group I and associated special condition for safe use.  
Additional model number iCAM501U.  
Minor drawing modifications.

### Issue 3:

Introduction of alternative model iCAM502 based on existing iCAM501U with new image sensor and minor changes to the circuitry and printed circuit boards layout.  
Use of new printed circuit boards used in iCAM502 as alternatives for existing models.  
Introduction of new alternative batteries (Duracel Procell PC 1500, Energizer E91, Panasonic LR6XWA).  
Addition of T3 marking when used with alternative batteries.  
Updates to drawings.

### Issue 4:

Correction of typographical error:  
- Removed the "Procell" description from the Duracel MN1500 battery text.

### Issue 5:

Introduction of alternative camera module for use in iCAM502.  
Amended drawing to reflect modification of BOM lists including the alternative camera module.

### Issue 6:

Addition of alternative camera with autofocus module.  
Addition of alternative alkaline battery cell, manufactured by Duracell model Industrial ID1500, as a rebranded from Duracell Procell PC1500.  
Removal of reference to models iCAM501 and iCAM501U as these are no longer manufactured.  
Update to the drawings.