

EU-Type Examination Certificate



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1. **EU-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU**
3. **EU-Type Examination Certificate Number: ITS09ATEX26868X Issue 6**
4. **Product:** iCAM502 Intrinsically Safe Digital Camera
5. **Manufacturer:** Extronics Limited
6. **Address:** 1 Dalton Way
Midpoint 18, Middlewich
Cheshire, CW10 0HU, United Kingdom
7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
8. Intertek Testing and Certification Limited, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that the product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificate referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. New issues of such EC-Type Examination Certificates, and Supplementary Certificates to such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

The examination and test results are recorded in confidential Intertek Report Ref 102698719LHD-001 Issue 1 dated January 2017.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2009, EN 60079-11:2007, EN 60079-26:2007 and EN 50303:2000 except in respect of those requirements referred to at item 16 of the Schedule.
10. If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Safe Use specified in the Schedule to this certificate.
11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:



II 1 G Ex ia IIB T4/T3 Ga -20°C ≤ Ta ≤ +60°C
II 2 G Ex ia IIC T4/T3 Gb -20°C ≤ Ta ≤ +60°C
I M1 Ex ia I Ma 0°C ≤ Ta ≤ +60°C

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A T Austin
Certification Officer
27th January 2017



SCHEDULE

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13. Description of Equipment or Protective System

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 $0^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ 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: $U_m = 250\text{V ac}$

14. Report Number

Intertek Report Ref 102698719LHD-001 Issue 1 dated January 2017.

15. Special Conditions of Certification

(a). Specific Conditions of Safe Use

- 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.

(b). Conditions of Manufacture - Routine Tests

- None.



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16. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report Ref 102698719LHD-001 Issue 1 dated November 2016.

17. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Keypad PCB Schematic	322847	04	24/11/2009
Flash LED board schematic	323507	04	02/03/2012
Keypad PCB BOM (2 sheets)	323878	05	17/07/2012
iCAM501 Flash LED board BOM	323868	04	20/03/2012
Keypad PCB Layout (5 sheets)	323465	07	11/07/2012
Flash LED board PCB Layout (7 sheets)	323508	05	04/05/2012
iCAM502 General Arrangement Drawings (3 sheets)	332002	01	20/03/2012
iCAM502 Main PCB Layout (17 sheets)	330132	01	23/03/2012
iCAM502 Certification Label	333300	01	18/04/2012
iCAM502 Main PCB Schematic (9 sheets)	330423	2	17/10/2016
iCAM502 Main PCB BOM (2 sheets, replaces 329870)	401634	1.3	28/10/2016

18. Details of Certificate changes

Modifications to the product covered under **Issue 2** (June 2011):

- Use of alternative flash LED part.

Modifications to the product covered under **Issue 3** (September 2011):

- Introduction of alternative enclosure material for model iCAM501U.
- Addition of M1 marking on model iCAM501U.
- Updates to drawings.

Modifications to the product covered under **Issue 4** (July 2012):

- Introduction of alternative modified model iCAM502.
- Use of new boards used in iCam502 as alternatives for existing models.
- Introduction of new alternative batteries.
- Addition of T3 marking when used with alternative batteries.
- Updates to drawings.

Modifications to the product covered under **Issue 4** (February 2013 Amended):

- The following typographical errors have been corrected.
- Removed the "Procell" description from the Duracell MN1500 battery text.
- Amended drawing number 321407 to be 323868 in the drawing table.

Modifications to the product covered under **Issue 5** (April 2014):

- Introduction of alternative camera module for use in iCAM502.
- Amended drawing number 401634 Rev 1.2 replacing 329870 Rev 1 to reflect modification of BOM lists including the alternative camera module.



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18. Details of Certificate changes (continued)

Modifications to the product covered under **Issue 6** (November 2016):

- 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 (see Section 17 for the latest).

This Certificate is the property of Intertek Testing and Certification Ltd and is subject to Intertek Testing and Certification's Conditions for Granting Certification

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