



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

Certificate No.: IECEx ITS 09.0027X issue No.:2

Status: **Current**

Date of Issue: 2011-09-22

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Certificate history:

Issue No. 2 (2011-9-22)
Issue No. 1 (2011-7-18)
Issue No. 0 (2009-12-15)

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

Electrical Apparatus: **iCAM501 & iCAM501U Intrinsically Safe Digital Camera**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Extronics Ltd**
IECEX ITS 09.0027X
Ex ia IIB T4 Ga
Ex ia IIC T4 Gb
-20°C < Ta < +60°C
Ex ia I Ma
0°C < Ta < +60°C

Approved for issue on behalf of the IECEx
Certification Body:

V K Varma

Position:

Certification Officer

Signature:
(for printed version)

Date:

Vijay K. Varma
2011-09-22

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.

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

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:

IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 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/ExTR09.0039/00

GB/ITS/ExTR09.0039/01

GB/ITS/ExTR09.0039/02

Quality Assessment Report:

GB/SIR/QAR08.0025/02



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The **EXTRONICS LIMITED iCAM501** is an 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 Duracell MN1500 AA alkaline cells, housed within the camera's battery compartment, accessible by a cover opened by a quarter turn screw. The Duracell MN1500 AA alkaline cells are spark ignition safe for gas group IIC and Temperature Class T4 in an upper ambient temperature of +60° C. Changing the batteries in Group II hazardous areas is permitted.

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

The iCAM501U version of the camera may also be used in Group I applications, with reduced ambient temperature range $0^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$.

CONDITIONS OF CERTIFICATION: YES as shown below:

For Group II applications only, the user shall not carry more than a maximum of 2 spare MN 1500 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.

For Group I applications, the changing of the batteries in the hazardous area and the transportation of spare batteries into the hazardous area is not permitted.

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

ATEX Certificate follows with
Special Conditions marked

Additional model number iCAM501U

Minor drawing modifications

This Document has NOT been materially altered, however we have added highlighting to clearly identify areas where our customers seek clarification.

This copy has been downloaded from Stott Industrial Supplies (02) 49668020 www.stottind.com.au



1. EC-TYPE EXAMINATION CERTIFICATE

2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**
3. EC-Type Examination Certificate Number: **ITS09ATEX26868X**
4. Equipment or Protective System: **iCAM501 Intrinsically Safe Digital Camera**
5. Manufacturer: **EXTRONICS LIMITED**
6. Address: **1 Dalton Way,
Midpoint 18, Middlewich,
Cheshire, UK.
CW10 0HU**
7. This equipment or protective system 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 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Intertek Report 09038825 Issue 1 dated December 2009, 11052589 Issue 1 dated July 2011 and 11051967 Issue 1 dated September 2011.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2009, EN 60079-11:2007 and EN 60079-26:2007 except in respect of those requirements referred to at item 18 of the Schedule.
10. If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate. Refer Following Page
11. This EC Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
12. The marking of the equipment or protective system shall include the following:-

II 1 G Ex ia IIB T4 Ga II 2 G Ex ia IIC T4 Gb $-20^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$
 I M1 Ex ia I Ma $0^{\circ}\text{C} \leq T_a \leq 60^{\circ}\text{C}$

V K Varma
Certification Officer
21st September 2011

Intertek Testing & Certification Limited
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www.intertek.com
Registered No 3272281 Registered Office: 25 Savile Row London W1X 1AA

This certificate may only be reproduced in its entirety and without any change, schedule included and is subject to Intertek Testing and Certification Conditions for Granting Certification.

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13. SCHEDULE

14. EC-TYPE EXAMINATION CERTIFICATE NUMBER ITS09ATEX26868X

15. DESCRIPTION OF EQUIPMENT OR PROTECTIVE SYSTEM

The **EXTRONICS LIMITED iCAM501 & iCAM501U** are intrinsically safe digital cameras 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 Duracell MN1500 AA alkaline cells, housed within the camera's battery compartment, accessible by a cover opened by a quarter turn screw. The Duracell MN1500 AA alkaline cells are spark ignition safe for gas group IIC and Temperature Class T4 in an upper ambient temperature of +60°C. Changing the batteries in Group II hazardous areas is permitted.

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: $U_m = 250V \text{ ac}$

The **iCAM501U** version of the camera may also be used in Group I applications, with reduced ambient temperature range $0^\circ\text{C} \leq T_a \leq 60^\circ\text{C}$.

16. REPORT NUMBER

Intertek Report 09038825 Issue 1 dated December 2009, 11052589 Issue 1 dated July 2011 and 11051967 Issue 1 dated September 2011.

17. SPECIAL CONDITIONS FOR SAFE USE

The condition of safe use relating to this product:

For Group II applications only, the user shall not carry more than a maximum of 2 spare MN 1500 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.

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.

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.

Conditions of manufacture relating to the product / routine tests:

None

18. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (EHSR'S)

The relevant EHSR's have been identified and assessed in Intertek Report Ref 09038825 Issue 1 dated December 2009 and 11051967 Issue 1 dated September 2011.

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13. SCHEDULE

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19. DRAWINGS

Title:	Drawing No.:	Rev. Level:	Date:
General Arrangement Drawings	324963	02	26/07/2011
Main PCB Schematic	324388	03	24/11/2009
Keypad PCB Schematic	322847	04	24/11/2009
Flash LED board schematic	323507	03	24/11/2009
Main PCB BOM	324389	03	24/11/2009
Keypad PCB BOM	323878	04	03/11/2009
Flash LED board BOM	323868	03	23/05/2011
Main PCB Layout	325886	03	04/12/2009
Main PCB Layout	325886	04	27/07/2011
Keypad PCB Layout	323465	04	24/11/2009
Keypad PCB Layout	323465	05	27/07/2011
Flash LED board PCB Layout	323508	03	24/11/2009
Flash LED board PCB Layout	323508	04	27/07/2011
iCAM501 Operating Manual	326264	02	21/09/2011
iCAM501 ATEX Label	325998	02	16/09/2011
iCAM501U Operating Manual	331684	01	20/09/2011

20. REVISIONS

Issue 2 – June 2011

Use of alternative flash LED part

Issue 3 – September 2011

Introduction of alternative enclosure material for model iCAM501U

Addition of M1 marking on model iCAM501U

Updates to drawings

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

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