



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 08ATEX2235X** Issue: **4**

4 Equipment: **Ultraprobe 9000 System**

5 Applicant: **UE Systems Inc**

6 Address: **14 Hayes Street
Elmsford
New York
10523-2536
USA**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2006 EN 60079-11:2007
IEC 60079-0:2007 Edition 5 (used for guidance in respect of marking)

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2G
Ex ib IIB T3 Gb
Ta = -20°C ≤ Ta ≤ +50°C



I M2
Ex ib I Mb
Ta = -20°C ≤ Ta ≤ +50°C

Project Number **NA**

C Ellaby
Deputy Certification Manager

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 08ATEX2235X
Issue 4

13 DESCRIPTION OF EQUIPMENT

The Ultraprobe 9000 System consists of a Pistol and its various sensors, a headset and a Warbling Tone Generator (**Note:** the Warbling Tone Generator is not approved for Group I applications).

The electronics are implemented in six different sub-assemblies: motherboard, micro/memory module, digital display, keypad, transmitter configuration module and battery pack. In addition a Headphone Set (Model DHC-9HH) may be plugged into the Pistol.

Variation 1 - This variation introduced the following changes:

- i. The introduction of the Ultraprobe 9000Mb MPH for Group I applications; this model incorporates the following design changes:
 - Lithium Battery for lower maximum surface temperature.
 - Battery encapsulation for exclusion of explosive atmospheres, moisture or dusts.
 - Handle material change for improved low temperature performance.The model numbers were also clarified as below:
 - Ultraprobe 9000 MPH for use in Group II applications.
 - Ultraprobe 9000Mb MPH for use in Group I applications.
- ii. The Description of Equipment, Special Conditions for Safe Use, Conditions of Certification and markings were rationalised and updated accordingly.

Variation 2 - This variation introduced the following changes:

- i. The I/O Cable housing was updated.
- ii. Additional diodes (D4-6) were introduced into the I/O Cable protection circuit.
- iii. The Special Conditions for Safe Use and the Conditions of Certification were amended to reinforce the fact that only a type 4PC-USB data cable can be used for data download.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	9 December 2009	R17917A	The release of the prime certificate.
1	2 August 2011	R17917A/01	Report number R17917A/01 replaced R17917A/00 to correct a typographical error, no technical changes were involved.
2	3 April 2012	R24986A/00	The introduction of Variation 1.
3	16 May 2012	R26926A/00	The introduction of Variation 2.
4	31 October 2012	R24986A/01	Report no. R24986A/01 replaced R24986A/00.

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 08ATEX2235X
Issue 4

- 15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)
- 15.1 The following conditions apply to the **Ultraprobe 9000 MPH for Group II applications**
- 15.1.1 The batteries used in this equipment may be replaced by the user, however, only the following types of Nickel-Metal-Hydrate and Lithium batteries shall be used:
- VARTA Microbattery GmbH, Type VH800 AAA-L "High Cap" (P/N 55180).
 - ST Microsystems SNAPHAT Lithium Battery Assembly, Cat. No. M4T28-BR12SH1.
- 15.1.2 The enclosure and a number of accessories including the carry case are manufactured from aluminium. In rare cases, ignition sources due to impact and friction sparks could occur. Therefore care should be taken to avoid the risk of drop and impact during storage, transportation and use.
- 15.1.3 No precautions against electrostatic discharge are necessary for portable equipment that has an enclosure made of plastic, metal or a combination of the two, except where a significant static-generating mechanism has been identified. Activities such as placing the item in a pocket or on a belt, operating a keypad or cleaning with a damp cloth, do not present a significant electrostatic risk. However, where a static-generating mechanism is identified, such as repeated brushing against clothing, then suitable precautions shall be taken, e.g. the use of anti-static footwear.
- 15.1.4 Only the supplied headset, Model DHC-9HH, shall be used with this equipment.
- 15.1.5 Only an approved data cable physically identified as a type 4PC-USB shall be used for data download.
- 15.2 The following conditions apply to the **Ultraprobe 9000Mb MPH for Group I applications**
- 15.2.1 The user shall not replace the battery pack used in this equipment, this shall only be performed by the manufacturer, in addition, the battery pack shall only be recharged in a safe area.
- 15.2.2 The enclosure and a number of accessories including the carry case are manufactured from aluminium. In rare cases, ignition sources due to impact and friction sparks could occur. Therefore care should be taken to avoid the risk of drop and impact during storage, transportation and use.
- 15.2.3 No precautions against electrostatic discharge are necessary for portable equipment that has an enclosure made of plastic, metal or a combination of the two, except where a significant static-generating mechanism has been identified. Activities such as placing the item in a pocket or on a belt, operating a keypad or cleaning with a damp cloth, do not present a significant electrostatic risk. However, where a static-generating mechanism is identified, such as repeated brushing against clothing, then suitable precautions shall be taken, e.g. the use of anti-static footwear.
- 15.2.4 Only the supplied headset, Model DHC-9HH shall be used with this equipment.
- 15.2.5 Only an approved data cable physically identified as a type 4PC-USB shall be used for data download.
- 16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)**
- The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 08ATEX2235X
Issue 4

17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.
- 17.3 The following conditions apply to the **Ultraprobe 9000 MPH for Group II applications**
- 17.3.1 The manufacturer shall fit this equipment with the following types of Nickel-Metal-Hydride and Lithium batteries:
- VARTA Microbattery GmbH, Type VH800 AAA-L "High Cap" (P/N 55180).
 - ST Microsystems SNAPHAT Lithium Battery Assembly, Cat. No. M4T28-BR12SH1.
- 17.3.2 The inductance of the headset shall not exceed 60 μ H measured at 1kHz.
- 17.3.3 The resistance of the headset shall not be less than 6.4 Ω measured at 20°C \pm 2°C.
- 17.3.4 Only the approved 4PC-USB data cable shall be supplied with the Ultraprobe 9000 system.
- 17.4 The following conditions apply to the **Ultraprobe 9000Mb MPH for Group I applications**
- 17.4.1 The manufacturer shall fit this equipment with the batteries that are defined on the certified drawings.
- 17.4.2 The inductance of the headset shall not exceed 60 μ H measured at 1 kHz.
- 17.4.3 The resistance of the headset shall not be less than 6.4 Ω measured at 20°C \pm 2°C.
- 17.4.4 The Warbling Tone Generator used with the Ultraprobe 9000 MPH for Group II applications shall not be fitted with the Ultraprobe 9000Mb MPH for Group I applications.
- 17.4.5 Only an approved data cable physically identified as a type 4PC-USB shall be supplied with the Ultraprobe 9000 system.

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Certificate Annexe

Certificate Number: Sira 08ATEX2235X
 Equipment: Ultraprobe 9000 System
 Applicant: UE Systems Inc



Issue 0

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
KEP01300601	1 of 1	-	08 Dec 09	UP 9000 MPH Recharge Plate and I/O Plate Label
KEP0424JG01	1 of 1	-	08 Dec 09	BPA-9 Label Information
KEP0414JG03	1 of 1	-	08 Dec 09	DHC-9HH Label Information
KEP0414JG01	1 of 1	-	08 Dec 09	UP9000 Kit Parts Identification
KEP09141E02	1 of 1	-	08 Dec 09	Handle Right
KEP09141E01	1 of 1	-	08 Dec 09	Handle Left
KEP0103502	1 of 1	-	08 Dec 09	UP2000 Handle End Cap (Cap without holes)
KEP0103501	1 of 1	-	08 Dec 09	Ultraprobe 2000 Trigger with molded Pin
KEP0901JE01	1 of 1	-	08 Dec 09	Handle End Protection Plate Detail
KEP0504JF01	1 to 3	-	08 Dec 09	BPA-9 Battery Pack Assembly Details
KEP0508JF01	1 of 1	-	08 Dec 09	Battery Connector Sleeve Procedure and Insulation Placement – UP9000 MPH
KEP1130B101	1 of 1	-	08 Dec 09	UP9000 Battery Connector Wire Spacing Details
KEP1120B101	1 of 1	-	08 Dec 09	Battery Cable to Circuit Board Details
KEP0917JA01	1 of 1	F	08 Dec 09	Schematic, UP9000
UP9_PWR	1 to 11	F	08 Dec 09	PCB, UP9000 Power Supply (Component & Trace Layouts)
UP9000 MAIN	1 to 11	F	08 Dec 09	PCB, UP9000 DB Converter, Main Board, Audio Amp (Component & Trace Layouts)
UP9_XD_C	1 to 8	C	08 Dec 09	PCB, UP9000 Transducer Preamp (Component & Trace Layouts)
KEP0917JA02	1 to 5	-	08 Dec 09	Component Lists
KEP1102BG01	1 of 1	-	08 Dec 09	UP-9000.UP10000 Wire, PC Board & Housing Specifications
KEP0603J101	1 of 1	-	08 Dec 09	UP9000 ATEX MPH Circuit Board Encapsulation Details
KEP0915JE01	1 of 1	-	08 Dec 09	Memory Lithium Cell Protection Circuit Details
KEP0612JG01	1 of 1	-	08 Dec 09	Memory Lithium Cell Protection Circuit Board
KEP0531JG01	1 of 1	-	08 Dec 09	Protective Diode Attachment Details
KEP0407JB01	1 of 1	-	08 Dec 09	Piezoelectric Transducer Specifications
KEP1104301	1 of 1	-	08 Dec 09	Ultraprobe Headset Schematic (Model DHC-9HH)
KEP0923BH01	1 of 1	-	08 Dec 09	I/O Data Cable Protection Circuit

Issue 1 (No new drawings were introduced.)

Issue 2

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
KEP0109AB01	1	0	17 Jan 12	UP9000Mb Handle & Battery Cable Termination Details
KEP0111AB01	1	0	17 Jan 12	UP9000Mb Handle Details
KEP1006JA01	1	0	17 Jan 12	Encapsulated Lithium Battery
KEP0307AB01	1	0	08 Mar 12	UP 9000mb mph recharge plate & I/O plate label

Issue 3

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
KEP0923BH01	1 of 1	-	24 Jan 12	I/O Data Cable Protection Circuit
KEP0409AB01	1 of 1	-	25 Apr 12	KEP0409AB01 DATA CABLE WARNING LABEL

Note: The manufacturer's 'revised date' on the above drawing no's. KEP0923BH01 and KEP0409AB01 are stated as 12-27-2011 and 04-09-2012 respectively.

Issue 4 (No new drawings were introduced.)

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Sira Certification Service

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