1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 08ATEX2235X** Issue: **12**

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 Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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)

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-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 80009311

N Jones
Certification Manager

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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, 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.

Variation 3 - This variation introduced the following changes:

i. The Printed Circuit Board (PCB) UP9000 Main was modified to allow the addition of a capacitor C77 and a diode array D7.
ii. A 'daughter' PCB was introduced that contains diode array D7 for equipment retro-fit.
iii. The introduction of an alternative Microcontroller (U23).
iv. The introduction of an alternative Switch Encoder.

Variation 4 - This variation introduced the following change:

i. The printed circuit board layout was modified to support D7.

Variation 5 - This variation introduced the following change:

i. The data cable and the transistor package were both modified.
ii. The introduction of additional, French marking was approved.
iii. The application of the Warbling Tone Generator was allowed and a special condition for safe use was introduced.
iv. The special conditions for safe use were revised taking into account those applied in certificate number Sira 04ATEX2269X for the Ultraprobe 2000MPH.

Variation 6 - This variation introduced the following change:

i. Permit the use of Panasonic HHR-70AAA cells.

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Variation 7 - This variation introduced the following change:

i. Introduction of TENERGY AAA 10407 rechargeable cells.

Variation 8 - This variation introduced the following change:

i. Permit the replacement of surface mount integrated circuits with through-hole equivalents using a conversion printed circuit board.

Variation 9 - This variation introduced the following changes:

i. Component packages.
ii. Printed circuit board layout.
iii. Marking.
iv. Removal of electrostatic charge special condition.
v. Non-hazardous location corrections to the certificate.

Variation 10 - This variation introduced the following changes:

i. Printed circuit board revision change for manufacturing purposes.
ii. Notified Body number coding changed from 0518 to nnnn.

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.
5	26 September 2013	R31103A/00	The introduction of Variation 3.
6	12 December 2013	R32421A/00	The introduction of Variation 4.
7	01 July 2015	R70015588A	The introduction of Variation 5.
8	14 November 2016	R70104481A	This Issue covers the following changes: • EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. *(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates 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. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)* • The introduction of Variation 6.
9	19 January 2017	R70104481B	The introduction of Variation 7.
10	30 November 2017	R70158888A	The introduction of Variation 8.

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 08ATEX2235X**
Issue 12

Issue	Date	Report no.	Comment
11	04 December 2018	R70189041A	The introduction of Variation 9.
12	05 September 2019	R80009311A	The introduction of Variation 10.

15 **SPECIFIC CONDITIONS OF 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 Whilst the battery packs used in this equipment may be changed by the user in an area that is known to be non-hazardous, they shall only be replaced with products supplied by UE Systems Inc.

15.1.2 The battery packs shall only recharged in an area that is known to be non-hazardous and by a charger having a maximum output of voltage of 15 V d.c and a maximum output current of 60 mA. (e.g. The charger supplied by UE Systems Inc.).

15.1.3 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.

15.1.4 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.

15.1.6 Under certificate Sira 04ATEX2269X, the Warbling Tone Generator has been certified to a maximum ambient temperature of +40°C. A maximum ambient temperature of +50°C is permissible when used as part of a ULTRAPROBE 9000 SYSTEM.

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 Only the supplied headset, Model DHC-9HH shall be used with this equipment.

15.2.4 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.

17 **CONDITIONS OF MANUFACTURE**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

17.3 The following conditions apply to the **Ultraprobe 9000 MPH for Group II applications**

17.3.1 The inductance of the headset shall not exceed 60 µH measured at 1kHz.

17.3.2 The resistance of the headset shall not be less than 6.4Ω measured at 20°C ± 2°C.

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17.3.3 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 µH measured at 1 kHz.

17.4.3 The resistance of the headset shall not be less than 6.4Ω measured at 20°C ± 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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Certificate Annexe

Certificate Number: **Sira 08ATEX2235X**

Equipment: **Ultraprobe 9000 System**

Applicant: **UE Systems Inc**

Issue 5

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
KEP0917JA01	1 of 1	G	17 Sep 13	Schematic, UP9000
KEP0917JA02	1 to 6	6-14-2013	13 Sep 13	UP9000 BOM
UP9000 MAIN	1 to 11	G	17 Sep 13	PCB UP9000
KEP0910AC01	1 of 1	9-10-2013	12 Sep 13	UP9000 Data Line Protective Diode

Issue 6

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
KEP0910AC01	1 of 1	10-14-13	02 Dec 13	UP9000 Data Line Protective Diode

Issue 7

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
KEP0923BH01	1 of 1	6-20-2014	30 Jul 14	I/O Data Cable Protection Circuit
KEP0917JA02	1 to 6	6-09-2014	31 Jul 14	UP9000 BOM
KEP 01300601	1 of 1	8-5-2014	06 Aug 14	UP 9000 MPH Recharge Plate & I/O Plate Label

Issue 8

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
KEP0504JF01	1 to 3	11-1-16	02 Nov 16	BPA-9 Battery Pack Assembly Details

Issue 9

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
KEP0504JF01	1 to 3	12-23-16	28 Dec 16	BPA-9 Battery Pack Assembly Details

Issue 10

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
KEP0803AG01	1 of 1	8-29-2017	17 Nov 17	Conversion Board for Thru Hole to Surface Mount Circuit Traces

Issue 11

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
KEP0917JA02	1 to 6	6-08-2018	17 Jul 18	UP9000 BOM
KEP0917JA01	1 of 1	H	17 Jul 18	Schematic, UP9000
UP9000 MainPCB	1 to 6	H	18 Jul 18	PCB UP9000
KEP0307AB01	1 of 1	07-24-2018	25 Jul 18	UP9000Mb LABEL (MINING)
KEP10221801	1 of 1	10-30-18	01 Nov 18	UP9000 & UP10000 Plastic And Powdercoat Specifications

Issue 12

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
UP9_PWR	1 to 11	H	05 Aug 19	PCB, UP9000 Power Supply (Component & Trace Layouts)
KEP 01300601	1 of 1	8-5-19	08 Aug 19	UP9000 MPH recharge plate & I/O plate label
KEP0307AB01	1 of 1	08-16-19	20 Aug 19	UP9000Mb LABEL (MINING)

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