IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx EXV 21.0049X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2022-05-30

Applicant: **Guided Ultrasonics Limited**
Wavemaker House
3 Brentwaters Business Park
The Ham
Brentford
TW8 8HQ
United Kingdom

Equipment: **gPIMS® Ex Wifi Field Control Unit (GP-FCU-WIFI-EX-CM)– Autonomous Data Upload for Oil & Gas Applications**

Optional accessory:

Type of Protection: **'Ex ia' Intrinsic safety**

Marking: Ex ia IIB T4 Ga

Approved for issue on behalf of the IECEx Certification Body: **Sean Clarke CEng MSc MIET**

Position: **Certification Manager**

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.

Certificate issued by:

ExVeritas Limited
Units 16-18 Abenbury Way
Wrexham Ind. Est.
Wrexham LL 139UZ
United Kingdom

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Certificate No.: **IECEx EXV 21.0049X**

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Manufacturer: **Guided Ultrasonics Limited**
Wavemaker House
3 Brentwaters Business Park
The Ham
Brentford
TW8 8HQ
United Kingdom

Manufacturing locations: **Guided Ultrasonics Limited**
Wavemaker House
3 Brentwaters Business Park
The Ham
Brentford
TW8 8HQ
United Kingdom

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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with 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/EXV/ExTR21.0070/00

Quality Assessment Report:

GB/BAS/QAR14.0014/05

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The gPIMS® Ex Wifi Field Control Unit (GP-FCU-WIFI-EX-CM) samples data from Guided Ultrasonics Ltd.'s (GUL) permanently mounted gPIMS® Sensors that provide both thickness and large area monitoring data. It is an intrinsically safe equipment designed for autonomous data upload for oil and gas applications for use in Zone 0 explosive gas environment. The equipment external enclosure is made of stainless steel. It has an internal battery pack powered design fitted with Lithium cells. There are two external ports, one for the passive external antenna and the other to connect the external gPIMS® sensor. It comes with stainless steel mounting bracket that allows the equipment to be attached to a wall or a pole. The intrinsically safe outputs are accessed via the 55-way connector. They are designed to be connected to certified gPIMS® sensor only. The entity connection parameters for the sensor port are listed below:

Signal pins combined w.r.t GND

Uo = 7.8 V, Io = 472 mA, Po = 0.92 W, Co = 67.3 µF, Lo = 0.638 mH

Logic pins combined w.r.t GND

Uo = 5.88 V, Io = 140 mA, Po = 0.206 W, Co = 937.3 µF, Lo = 7.25 mH

Um for RS485 = 5.9 V (Not to be connected in hazardous area)

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Only use passive antenna with the equipment that has a gain of less than 14.9 dBm such that the overall RF power transmission remains less than 3.5 W.
2. For battery module type with replaceable cells (BATTM-EX-4D), use only new SAFT LS33600 as replacement cells, and all cells must be replaced at the same time. However, the cells shall only be accessed in non-hazardous areas.
3. The equipment hazardous area sensor connection may only be connected to a suitable gPIMS® Sensor specified in IECEx certificate reference IECEx BAS 14.0031X. The end installation shall consider the suitability of the choice of sensor along with its cable connection, for which the connection parameters would require to be matched.
4. Under certain extreme circumstances, the non-metallic parts incorporated on the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.

Annex:

IECEx Certificate Annex IECEx EXV 21_0049X_1.pdf

Description Continued:
N/A

Routine Tests:
None.

Technical Documents			
Title:	Drawing No.:	Rev. Level:	Date:
Sampling module type C adapter board	SM-TYPEC-ADAPTOR_SCH	V1.1	2018-07-19
GUL Samling module Type C Adaptor PCB - Readme	SM-TYPEC-ADAPTOR_V1.0	V1.2	2018-10-03
Guided Ultrasonics gPIMS Core Board PCBA Bill of Materials	GE-0008-01	3.6	2021-08-17
Guided Ultrasonics gPIMS Core Board Schematics	GE-0006-01	3.6	2021-08-17
Guided Ultrasonics gPIMS Core Board Gerber Prints	GE-0007-01	3.5	2020-09-23
MTS TOP LABEL PLATE - 4AX CELLS (Sheet 1 of 2)	GP-0994-00	14	2022-05-05
MTS TOP LABEL PLATE - 4D CELLS (Sheet 2 of 2)	GP-0994-00	14	2022-05-05
MTS FCU TOP PLATE (EX CERTIFICATION LABEL)	GP-0999-00	04	2022-04-29
BOM Upper Battery PCB R2	GE-0025-09	R2	2021-04
GE-0025 Upper Battery Gerber Prints	GE-0025 Upper Battery	R2	2021-05
Upper Battery Board Schematics	GE-0025-01	2	2021-05-04
BOM Lower Battery PCB	GE-0026-10 Lower Battery PCB R3	R3	2021-07
GE-0026 Lower Battery Gerber Prints	GE-0026 Lower Battery	R3	2021-07
Lower Battery Board Schematics	GE-0026-01	R3	2021-07-21
BOM EWPWRC	GE-0027-11 EWPWRC R2	R2	2021-09
EWPWRC GERBER PRINTS	GE-0027 EWPWRC GERBER PRINTS	R2	2021-09
EWPWRC PCB Schematics	GE-0027-01	2	2021-09
RF ISOLATOR R1 BOM	GE-0029-11 RF ISOLATOR R1 BOM	R1	2021-09

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GE-0029 RF Isolator Gerber Prints	GE-0029 RF Isolator	R1	2021-09
RF ISOLATOR PCB Schematics	GE-0029-01 RF ISOLATOR PCB	1	2021-09
GUL Mux Board PCBA Bill of Materials	GE-0011-03	3.7	2020-10-07
GUL Mux Board Gerber Prints	GE-0010-01	3.6	2020-08-11
GUL Mux Board Schematics	GE-0009-01	3.6	2020-08-11
GUL Wireless Board PCBA Bill of Materials	GE-0017-01	1.2	2022-01-25
GUL Wireless Board Gerber Prints	GE-0016-06	1.2	2021-05-04
GUL Wireless Board Schematics	GE-0015-02	1.2	2022-01-25
User Instructions	UI-FCU-WIFI-EX-CM	1	2022-05-16
GP-FCU-WIFI-EX Assembly Drawing	GP-0980-00	04	2022-03-02
Potting Box Assembly	GP-0981-00	06	2022-03-21
FCU BATTERY LOCATOR SUB ASSEMBLY	GP-0985-00	05	2022-03-21
BATTERY MODULE ASSEMBLY 'BATTM-EX-4D'	GP-0986-00 (Sheets1-2 of 4)	11	2022-05-17
BATTERY MODULE ASSEMBLY 'BATTM-EX-4AX'	GP-0986-00 (Sheets 3-4 of 4)	11	2022-05-17
WIFI-EX INTERFACE PLATE ASSEMBLY	GP-0987-00	06	2022-03-21

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