



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 15ATEX1205X** Issue: **2**

4 Equipment: **Tab-Ex 01 DZ1 * Flameproof Tablet Enclosure**

5 Applicant: **ecom Instruments GmbH**

6 Address: Industriestrasse 2
97959 Assamstadt
Germany

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 60079-0:2012 +A11 EN 60079-1:2014 EN 60079-11:2012 EN 60079-28:2015 EN 60079-31:2014

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:



I M2	or	II 2 GD	or	II 2 GD
Ex db ia op is I Mb		Ex db ia op is IIC T5 Gb		Ex db ia op is IIB T5 Gb
Ex tb IIIC T100°C Db		Ex tb IIIC T100°C Db		Ex tb IIIC T100°C Db
Ta = -20°C to +50°C		Ta = -20°C to +50°C		Ta = -20°C to +50°C

Project Number 70080603

N Jones
Certification Manager

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13 DESCRIPTION OF EQUIPMENT

The Tab-Ex 01 DZ1 * Flameproof Tablet Enclosure comprises a Samsung Galaxy Tab Active tablet, which is contained within a hardened plastic flameproof enclosure with a toughened glass window. The flameproof enclosure has the same number of side function keys as the original tablet, which are also located in the same position and use push rods in cylindrical flamepaths to actuate the tablet keys.

The flameproof enclosure is further encased in an anti-static plastic enclosure, which houses function keys identical to the ones on the top of the original tablet. These keys are connected to the tablet via an intrinsically safe connection and perform the same function as the originals.

The anti-static enclosure has an intrinsically safe battery charging and data connection facility at the bottom end of the enclosure, which is not to be used in a hazardous area.

There are three different models available, which are based on the available types of Samsung Galaxy TAB active tablets. The types are:

Type Designation	Description
Tab-Ex 01 DZ1 Wifi	Wifi only version based on the Samsung Galaxy Tab Active SM-T360
Tab-Ex 01 DZ1 WWAN	Wifi and WWAN version based on the Samsung Galaxy Tab Active SM-T365
Tab-Ex 01 DZ1 SIM	Wifi and WWAN version based on the Samsung Galaxy Tab Active SM-T365 This model has a SIM card access port.

The tablets are based on standard Samsung models, with the main modification being some additional battery protection circuitry. The three models therefore have the following features.

Features	Tab-Ex 01 DZ1 SIM	Tab-Ex 01 DZ1 WWAN	Tab-Ex 01 DZ1 Wifi
8.0 inch display 800x1280 pixels	✓	✓	✓
Quad core processor 1200MHz	✓	✓	✓
1536MB RAM / 16GB storage / microSD	✓	✓	✓
Battery capacity 4450mAh	✓	✓	✓
Micro USB 2.0	✓	✓	✓
SIM card holder	✓	✓	
WWAN	GSM: 850/900/1800/1900 MHz	✓	
	UMTS: 850/900/1900/2100 MHz	✓	
	LTE: 900/1800/2100/2600 MHz	✓	
Bluetooth: 4.0	✓	✓	✓
Wi-Fi: 802.11 a/b/g/n	✓	✓	✓
Accelerometer and Light Sensor	✓	✓	✓
Rear Camera 3.1 megapixels with autofocus	✓	✓	✓
Front Camera 1.2 megapixels	✓	✓	✓
Multi-Touchscreen	✓	✓	✓
GPS, A-GPS, Glonass, NFC	✓	✓	✓
Android OS	✓	✓	✓

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Variation 1 - This variation introduced the following changes:

- i. The option to fit an alternative glass type for the front and rear windows was recognised.
- ii. A threaded, non-metallic plug was added to the rear of the flameproof enclosure, this allows the SIM card to be removed in service.
- iii. The relay board connector X5 was changed to an alternative type.
- iv. The Z1 Connection PCB was allowed to have an alternative layer stack up.
- v. As a result of the above changes the Description and Specific Conditions of Use were amended.

Variation 2 - This variation introduced the following changes:

- i. To allow an upgrade of the equipment from Group II (IIC) to Group I (M2) requirements, the marking was changed accordingly.
- ii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-28:2007 was replaced by EN 60079-28:2015.
- iii. The introduction of a Specific Condition of Use and a Condition of Manufacture.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report number	Comment
0	23 October 2015	R70024077A R70024077B	The release of the prime certificate.



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Issue	Date	Report number	Comment
1	23 May 2017	R70089675A	This Issue covers the following changes: <ul style="list-style-type: none">• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(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.)</i>• The introduction of Variation 1.
2	13 June 2017	R70080603A R70080603B	The introduction of Variation 2.

15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)

15.1 The equipment shall only be used in areas with low risk of mechanical impact.

15.2 The model 'Tab-Ex 01 DZ1 SIM' shall only be opened for SIM Card access in the non-hazardous area as per the ecom guidance document 100016AL19A. All other equipment models shall not be opened by the end user for any reason; if either of the equipment's enclosures are opened or damaged, the following conditions shall apply:

- The equipment shall be removed from the explosive atmosphere immediately and will not be suitable for re-use until it is repaired by the OEM.
- If the outer enclosure is damaged precautions shall be taken to ensure that the internal flameproof enclosure is not subject to static charging.
- If the inner flameproof enclosure is opened, the equipment shall never be used in an explosive atmosphere unless it has been repaired and re-sealed by the OEM.

15.3 Electrical connections to the equipment are not permitted in the hazardous area.

15.4 When the ambient temperature is greater than +45°C the integrated LED shall only be used (powered) for individual periods of up to 10 minutes, with a total of no more than 1 hours use per day.

15.5 Only equipment marked Ex db ia I Mb is suitable for use in Group I (Mining) environments, equipment not marked Ex db ia I Mb shall not be used in Group I applications.

15.6 This product shall not be used where chemical agents such as oil or grease are likely to come into contact with the equipment. This requirement shall be in accordance with EN 60079-0:2012 + A11, Clause 26.11.

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.

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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 Products marked Ex db ia I Mb shall only be fitted with Type 1 Glass

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