1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 14ATEX4124X** Issue: **7**

4 Equipment: **Industrial Computer Barracuda 15" WS Gen 2**

5 Applicant: **Eaton Electric Ltd**

6 Address: Great Marlings, Butterfield, Luton, Bedfordshire, LU2 8DL, UK

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

8 CSA Group Netherlands B.V., notified body number 2813 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/A11:2013 EN 60079-11:2012 EN 60079-15:2010

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 3G
Ex nA IIC T3 Gc
Ta = -40°C to +60°C
(Some versions may be marked with a -10°C lower ambient temperature limit, see change iii in Variation 1.)

Ethernet Module

II 3G (1G)
Ex nA [ia Ga] IIC T3 Gc
Ta = -40°C to +45°C

Project Number 70220979

Signed: J A May

Title: Director of Operations

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13 **DESCRIPTION OF EQUIPMENT**

The Barracuda 15 WS Gen 2 is an Industrial Computer Module for use on rig floors and rugged use areas.

The equipment has a cast, post machined aluminium enclosure, and an Aluminum sheet metal sub chassis. The front bezel has an UL Rated ABS inlay to allow the use of a projected Capacitance (P-Cap) touch sensor. The finish is an exterior powder coated Polyester over a trivalent chrome passivation layer.

The field IO is backward compatible with the existing Barracuda 15 WS, under Sira 08ATEX4103X, but has been upgraded with the jam nut connector style for additional impact strength. It is available with an AC and DC detachable power supply, the AC being offered with a detachable AC power cord or glanded cable (field wireable) input.

Enclosure and face seals are achieved with silicone closed cell foam gaskets, VHB bonding tapes and military grade RTV front glass permanent sealing. Internally the main unit operates on 12 V DC with an auxiliary 5 V low power module, the maximum operating power around 80 Watts at full brightness and 100% processor utilization. The main heat producing parts are directly and thermally coupled to the heavily finned enclosure in order to move as much heat out the box as necessary to use commercial electronic hardware in +60°C ambient environments.

For operation down to -40°C including switch on at -40°C, a thermostatically controlled distributed heater system is used to selectively heat certain parts to a suitable temperature before the system is allowed to start up. Temperature control is is achieved by a electromechanical thermostat which only allows AC mains to the heater PSU below an internal temperature of 15°C. The heater pads are supplied with 24 VDC from the heater PSU, and no pads are running above 20 Watts each. In the DC powered system, the raw DC which can be as low as 9 V is fed to an internal DCDC PSU to provide the necessary 24 VDC for the heater pads. As a protection against thermal run-away in the AC unit, an additional +100°C thermal fuse is in series with the electromechanical thermostat, and can cut heater power permanently. For the DC unit, the same thermostat control is used with the secondary protection being orporated into the DCDC module itself.

For the AC or DC systems supplied with detachable power cords, there are no user accessible parts under the covers. The cables are attached to the connectors and the unit powered up. For the AC glanded PSU version, the customer is expected to remove the PSU from the main unit and wire in his AC power cabling accessing the terminals under a removable bottom cover.

The equipment has an Ethernet interface which provides an intrinsically safe output as shown below:

The BxLAN Ethernet interface is approved

[Ex ia Ga] IIC
Ta = -40°C to +70°C

Part no.	Data rate	Configuration	Suitable groups
BxLAn-OEM	10/100 Mbps	PCB without enclosure (optional covers)	I, IIA, IIC, IIIC

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Intrinsic safety is achieved by limiting the energy which can be transferred from the safe area to the hazardous area.

Hazardous area side SK2/PL2:
10/100 Mbps versions

Uo = 6.0V
Io = 2.24A
Po = 1.16A

Version	Group	Capacitance Co (µF)	Inductance Lo (µH)	Or	Inductance Lo (µH)
10/100 Mbps	IIC	39	7.1		10.6

Variation 1 - This variation introduced the following changes:

i. The introduction of:
- The D.C. version of the Barracuda 15 WS Gen 2.
- A Delta Electronics type BFB0712L-AF00 blower.
- A 5-Wire Resistive touchscreen controller.

ii. The general assembly drawing was modified to include a previously-assessed wireless module.

iii. It was recognised that the manufacturer marks some versions of the equipment with a -10°C lower ambient temperature limit. This is done to ensure that these versions will operate correctly and does not affect safety; therefore, the marking in the certificate is unaltered.

Variation 2 - This variation introduced the following change:

i. The Introduction of the following optional alternative items:
- AMTouch type 28505-000 resistive touch screen and Admetro touchscreen controller.
- Canbus port.
- A connector for the serial port.
- ROTA Ex USB port, replacing a current USB port which introduces an additional Condition of Certification.

Variation 3 - This variation introduced the following change:

i. The introduction of an addition of alternate thinner version of the approved P-CAP Touch Screen

ii. The lusion of the following devices, as used in the Barracuda 19 Gen2:
- Internal USB Memory Device
- External USB Bluetooth Device
- Profibus

iii. It was acknowledged that the CF door was actually part of the samples submitted to CSA for testing and evaluation.

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Variation 4 - This variation introduced the following change:

i. Add alternative fiber configuration utilizing a Stran Technologies Type Gen XP Fiber Optic Connector, with a corresponding amendment to an existing Condition of Manufacture and the introduction of a new Condition of Manufacture.
ii. The introduction of an alternative certification label drawing without North American certification information, this applying to the a.c. version with heater only.
iii. It was retrospectively recognised that following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2012 was replaced by EN 60079-0:2012/A11:2013.

Variation 5 - This variation introduced the following change:

i. Permit a change in the legal entity, and a modified manufacturing name and address from Azonix Corporation, Building #4, North Billerica. MA 01862, USA to Eaton Electric ltd, Great Marlings, Butterfield, Luton, Bedfordshire, LU2 8DL, UK.

Variation 6 - This variation introduced the following change:

i. The introduction of an alternative LCD and SBC (Single Board Computer) were recognised.
ii. The introduction of a certified Ethernet module which provides an intrinsically safe output. As a result; the standard EN 60079-11:2012 was introduced, the marking and product description were amended and Specific Conditions of Use were introduced therefore, an 'X' suffix was added to the certificate number.
iii. Internal changes to the enclosure casting were recognised.
iv. Following the introduction of an 'ia' Ethernet module, the certificate is amended from a 'Type Examination Certificate' to an 'EU-Type Examination Certificate'.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	30 June 2014	R70006511A	The release of prime certificate.
1	02 March 2015	R70009510A	The introduction of Variation 1.
2	03 July 2015	R70024996A	The introduction of Variation 2.

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Issue	Date	Report no.	Comment
3	12 May 2016	R70046232A	This Issue covers the following changes: • 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, 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 Type Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)* • The introduction of Variation 3.
4	28 June 2017	R70139793A	The introduction of Variation 4.
5	14 January 2019	R70196195A	The introduction of Variation 5.
6	31 October 2019	0870	Transfer of certificate Sira 14ATEX4124 from Sira Certification Service to CSA Group Netherlands B.V..
7	08 January 2020	R70220979A	This Issue covers the following changes: • The replacement standard detailed in Variation 4 was amended to correct a typographical error. • The introduction of Variation 6.

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

15.1 The quoted entity parameters of Co and Lo are applicable for the distributed capacitance and inductance in cable. Where there is circuit capacitance or inductance in the connected equipment (represented by Ci and Li respectively), then these values shall not exceed 50% of the quoted Co and Lo

15.2 The safe area connection SK1 must only be connected to Ethernet sources which are not Power over Ethernet (PoE) capable.

15.3 Identical connectors are used for the safe area and hazardous area connections. Equipment labelling for correct connections shall be observed.

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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Certificate Annexe

Certificate Number: **Sira 14ATEX4124X**

Equipment: **Industrial Computer Barracuda 15” WS Gen 2**

Applicant: **Eaton Electric Ltd**

Issue 0

Drawing	Sheets	Rev	Date (Sira stamp)	Title
17-200388	1 to 11	1	23 Jun 14	General Arrangement

Issue 1

Drawing	Sheets	Rev	Date (Sira stamp)	Title
16-100626	1 of 1	A	16 Feb 15	Marking, DC, without heater
16-100674	1 of 1	A	16 Feb 15	Marking, DC, with heater
17-200388	1 to 11	D	16 Feb 15	General arrangement
E16-100627	1 of 1	A	16 Feb 15	Marking, AC, without heater
E16-100628	1 of 1	A	16 Feb 15	Marking, AC, with heater

Note: the marking drawings for the a.c. version of the Barracuda 15” WS Gen 2 were omitted from issue 0 of the certificate, so are included under Issue 1.

Issue 2

Drawing	Sheets	Rev	Date (Sira stamp)	Title
16-100687	1 of 1	A	2 Jul 15	ROTA connector label
17-200388	1 to 11	E	26 Jun 15	General arrangement
20-203157	1 of 1	A	26 Jun 15	Serial port connector
20-203159	1 of 1	C	26 Jun 15	CANbus connector

Issue 3

Drawing	Sheets	Rev	Date (Sira stamp)	Title
17-200388	1 to 14	F	31 Mar 2016	General Arrangement Drawing

Issue 4

Drawing	Sheets	Rev	Date (Sira stamp)	Title
17-200388	1 to 14	G	07 Jun 17	General arrangement
E16-100628-1	1 of 1	A	07 Jun 17	Marking, AC, with heater, IECEx/ATEX only

Issue 5

Drawing	Sheets	Rev	Date (Sira stamp)	Title
16-100626	1 of 1	B	04 Jan 19	Marking, DC, without heater
16-100674	1 of 1	B	04 Jan 19	Marking, DC, with heater
E16-100627	1 of 1	B	04 Jan 19	Marking, AC, without heater
E16-100628	1 of 1	B	04 Jan 19	Marking, AC, with heater
E16-100628-1	1 of 1	B	04 Jan 19	Marking, AC, with heater, IECEx/ATEX only

Issue 6 - No new drawings were introduced.

Issue 7

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
17-200388	1 to 16	H	26 Sep 19	General arrangement
16-100724	1 of 1	B	20 Dec 19	LABEL, EXTERNAL, AGENCY APPROVALS, I.S. ETHERNET, NO HEATERS, UAC, 15” BARR G2

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Certificate Annexe

Certificate Number: **Sira 14ATEX4124X**

Equipment: **Industrial Computer Barracuda 15” WS Gen 2**

Applicant: **Eaton Electric Ltd**

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
16-100725	1 of 1	B	20 Dec 19	LABEL, EXTERNAL, AGENCY APPROVALS, I.S. ETHERNET, HEATERS, UAC, 15” BARR G2
16-100726	1 of 1	B	20 Dec 19	LABEL, EXTERNAL, AGENCY APPROVALS, I.S. ETHERNET, NO HEATERS, DC, 15” BARR G2
16-100727	1 of 1	B	20 Dec 19	LABEL, EXTERNAL, AGENCY APPROVALS, I.S. ETHERNET, HEATERS, DC, 15” BARR G2

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