Australian/New Zealand
Certification Scheme for
EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT
ANZEx Scheme

Certificate of Conformity

Certificate No.: **ANZEx 08.3063X**	Issue No.: **1**	Date of Issue: **27/07/2009**
	Issue No.: **0**	Date of Issue: **14/01/2009**

Certificate Holder:
Ecom Engineering GmbH
Industriestrasse 2
Assamstadt 97959
Germany

Electrical Apparatus:
i.roc 627-Ex Intrinsically Safe PDA

Type of Protection:
Ex ia I
Ex ia IIC T4 (Tamb = 50 °C)

Marking Code:
Ecom Instruments GmbH
i.roc 627-Ex Intrinsically Safe PDA
ANZEx 08.3063X
Ex ia I
Ex ia IIC T4
Tamb = -20 °C to +50 °C
Serial no.

Manufacturing Location(s):
Ecom Instruments GmbH
Industriestrasse 2
Assamstadt 97959
Germany

The EPEE certification database located at ***http://www.anzex.com.au*** *shows the validity of this Certificate.*

This certificate and schedule shall not be reproduced except in full

Test Safe AUSTRALIA

Certificate issued by:

TestSafe Australia
919 Londonderry Road, Londonderry NSW 2753
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Phone: +61 2 4724 4900 Fax: +61 2 4724 4999
http://www.testsafe.com.au

JAS-ANZ

www.jas-anz.com.au/register

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*This certificate is granted subject to the conditions as set out in Standards Australia/Standards New Zealand Miscellaneous Publication **MP87:2004**.*

STANDARDS:

The electrical apparatus 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:

AS/NZS 60079.0:2005	Electrical apparatus for explosive gas atmospheres – Part 0: General requirements (including Amendment 1)
AS/NZS 60079.11:2006	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"
AS 60529:2004	Degree of protection provided by enclosures (IP code)

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standard(s) listed above.*

ASSESSMENT & TEST REPORTS:

The equipment listed has successfully met the assessment and test requirements as recorded in:

Test Report No. and Issuing Body:	**29197, 31284, TestSafe Australia**
Quality Assessment Report No. and Issuing Body:	**DE/PTB/QAR07.0004/00(06-26316), PTB**
File Reference:	**2007/015728, 2009/002873**

Signed for and on behalf of issuing body

27/07/2009

Date of Issue

Quality & Certification Manager

Position

This certificate and schedule shall not be reproduced except in full

This certificate is not transferable and remains the property of the issuing body and must be returned in the event of it being revoked or not renewed.

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Schedule

EQUIPMENT:

The i.roc 627-Ex Intrinsically Safe PDA is a portable battery operated personal data assistant (PDA). It has a touch screen, a keypad and two LED indicators for user interface. The apparatus can be equipped with an optional head and a HG x20-Ex Pistol Handle. The optional heads include RF x10-Ex RFID Reader, RF x11-Ex RFID Reader, BC x10-Ex LED Scanner with CCD Sensor and MCT202 HART Modem. Connection with external devices are via a Charger/USB combined connector and the HART Modem terminals (if HART Modem option is used). Connection to the Charger/USB connector and installation/un-installation of an optional head can only be allowed in safe areas.

The PDA is allowed to be used in Zone 1 and Zone 2 areas.

CONDITIONS OF CERTIFICATION:

Conditions of safe use:

(1) The apparatus is allowed to be used in Zone 1 and Zone 2 areas only.

(2) Installation and uninstallation of head optionals are only allowed in safe area.

(3) Recharge of the battery is only allowed in safe areas.

(4) Connections with external peripherals are only allowed in safe area except the terminals of the HART Modem head option.

(5) The following parameters must be taken into account when the optional HART Modem is connected to an external equipment:

Input Parameters for HART Modem	Maximum Input
Maximum Input Voltage U_i	30 V
Maximum Input Current I_i	333 mA
Maximum Input Power P_i	1 W
Maximum Internal Capacitance C_i	2 nF
Maximum Internal Inductance L_i	0 mH

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CONDITIONS OF CERTIFICATION Continued:

Output Parameters for HART Modem	Maximum Output
Maximum Output Voltage U_o	1.43 V
Maximum Output Current I_o	Negligible
Maximum Output Power P_o	Negligible
Maximum External Capacitance C_o	1000 uF
Maximum External Inductance L_o	1000 mH

DOCUMENTS:

The following documents were assessed in the course of preparing this report. The documents listed give a full and correct specification of the safety aspects of the electrical equipment.

Document No.	Sht.	Document Title	Issue	Date
3501SP02A	1	Barriereplatine (Barrier Board schematic)	01G	2006/05/18
3501SL02A	3	Part List – Barrier Board	01F	2006/03/08
3501BA02A	1	Barriereplatine Bestuckung (Top)	02G	2006/05/15
3501BC02A	1	Barriereplatine Bestuckung Bottom	02G	2006/05/15
3501YA02A	1	Barriereplatine Layout (Top)	07G	2006/07/17
3501YB02A	1	Barriereplatine Layout (Bottom)	07G	2006/07/17
3501SP12A	1	Leiterplatte Barriere-Platine Touch Stromlaufplan (Barrier Board for Touch Screen schematic)	00G	2006/05/08
3501SL12A	1	Part List – PCB Touch Board Barrier	00F	2006/03/08
3501BA12A	1	Leiterplatte Barriere-Platine Touch Bestuckung (Top) Name	02G	2006/05/10
3501BC12A	1	Leiterplatte Barriere-Platine Touch Bestuckung (Bottom)	03G	2006/08/18
3501YA12A	1	Leiterplatte Barriere-Platine Touch Layout (Top)	03G	2006/05/10

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DOCUMENTS Continued:

Document No.	Sht.	Document Title	Issue	Date
3501YB12A	1	Leiterplatte Barriere-Platine Touch Layout (Bottom)	03G	2006/08/18
3500SP04A	1	Leiterplatte Akku Stromlaufplan (Battery Board schematic)	02G	2006/06/11
3500SL04A	1	Part List – Battery Board	02G	2006/07/10
3500BA04A	1	Leiterplatte Akku Bestuckung (Top)	05G	2007/03/22
3500YA04A	1	Leiterplatte Akku Layout (Top)	04G	2006/10/31
3500YB04A	1	Leiterplatte Akku Layout (Bottom)	04G	2006/10/31
3500SP03A	1	Leiterplatte: Adapter-PDA-Board Stromlaufplan (Adapter PDA Board schematic)	01G	2006/01/09
3500BA03A	1	Leiterplatte: Adapter-PDA-Board Bestuckung (Top)	02G	2006/04/18
3500BB03A	1	Leiterplatte: Adapter-PDA-Board Bestuckung (Bottom)	02G	2006/04/18
3500YA03A	1	Leiterplatte: Adapter-PDA-Board Layout (Top)	02G	2006/04/18
3500YB03A	1	Leiterplatte: Adapter-PDA-Board Layout (Bottom)	02G	2006/04/18
3501SP06A	1	Sicherungsplatine (Fuse Board schematic)	00G	2006/03/12
3501BD06A	1	Sicherungsplatine Werte Bottom	01G	2006/05/10
3501YA06A	1	Sicherungsplatine Layout (Top)	01G	2006/05/10
3501YB06A	1	Sicherungsplatine Layout (Bottom)	01G	2006/05/10
3501SP08A	1	Leiterplatte: Relaisplatine Stromlaufplan (Relay Board schematic)	00G	2006/04/20
3501SL08A	1	Stuckliste Relaisplatine (part list for Relay Board)	01F	2006/03/08
3501BA08A	1	Leiterplatte: Relaisplatine Bestuckung (Top)	01G	2006/05/10
3501BB08A	1	Leiterplatte: Relaisplatine Bestuckung (Bottom)	01G	2006/05/10
3501YA08A	1	Leiterplatte: Relaisplatine Layout (Top)	01G	2006/05/10

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DOCUMENTS Continued:

Document No.	Sht.	Document Title	Issue	Date
3501YB08A	1	Leiterplatte: Relaisplatine Layout (Bottom)	01G	2006/05/10
3501SP09A	1	Leiterplatte WLAN-Board (Zone 1) Stromlaufplan (WLAN Board schematic)	00G	2006/05/09
3501EX11A	1	Overview i.roc 62. –Ex Series	02G	2007/01/31
3501EX03A	1	Connection of Boards	02G	2007/02/31
2760SP23A	1	Flex-Verbinder-RFID&Scanner Version 2 Schematic	00G	2008/09/24
2760SL23A	1	Stuckliste / Part List (part list for Flex Barrier for RFID)	00G	2008/09/24
2760BA23A	1	Flex-Verbinder-RFID&Scanner Version 2 Population (Top)	00G	2008/09/24
2760YA23A	1	Flex-Verbinder-RFID&Scanner Version 2 Layout (Top)	00G	2008/09/24
2760YB23A	1	Flex-Verbinder-RFID&Scanner Version 2 Layout (Bottom)	00G	2008/09/24
2760BB23A	1	Flex-Verbinder-RFID&Scanner Version 2 Solid – Flex Stackup	00G	2008/09/24
2756SP03A	1	MC-Toolkit-Flex (Version 2) Schematic	00G	2008/09/12
2756SL03A	1	Part List MC-Toolkit-Flex Version 2	00G	2008/09/22
2756BA03A	1	MC-Toolkit-Flex (Version 2) Population (Top)	00G	2008/09/12
2756YA03A	1	MC-Toolkit-Flex (Version 2) Layout (Top)	00G	2008/09/12
2756BB03A	1	MC-Toolkit-Flex (Version 2) Rigid-Flexible Stackup (Bottom)	00G	2008/09/12
2756YB03A	1	MC-Toolkit-Flex (Version 2)	00G	2008/09/12
2760SP10A	1	RFID-Board Stromlaufplan	03G	2005/03/03
2756SP02A	5	HART-Modem-Leiterplattenset Stromlaufplan (Hart Modem schematic)	06G	2006/11/14
2756BA02A	1	HART-Modem-Leiterplattenset Bestuckung (Top) Name	05G	2006/11/02

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DOCUMENTS Continued:

Document No.	Sht.	Document Title	Issue	Date
2756BB02A	1	HART-Modem-Leiterplattenset Bestuckung (Top) Value	05G	2006/11/02
2756YA02A	1	HART-Modem-Leiterplattenset Layout (Top)	05G	2006/11/02
2756YB02A	1	HART-Modem-Leiterplattenset Layout (Innen1)	05G	2006/11/02
2756YC02A	1	HART-Modem-Leiterplattenset Layout (Innen2)	05G	2006/11/02
2756YD02A	1	HART-Modem-Leiterplattenset Layout (Bottom)	05G	2006/11/02
2756SL02A	5	Part List – HART-Modem-Leiterplattenset	05G	2006/11/14
3501PB47A	3	Test Report Max. Possible Consumption of an Encapsulated Resistor type 1206	00G	2008/09/11
3501PB01A	1	Test Report Thermal Behaviour of an Encapsulated Mini-MELF Resistor	01F	2006/02/05
2761PB14A	4	Test Report i.roc Maximum Burden of the Encapsulated Z-Diodes	00F	2004/07/29
3501PB07A	1	Prufbericht Thermal Behaviour of an Encapsulated Z-Diode BZV55C5,6	00F	2006/05/02
3501PB45A	4	Test Report Maximum Radiated Power of RFID Read Head with a Frequency Range of 11-15 MHz	00G	2008/08/21
3501PB44A	4	Test Report Maximum Radiated Power of RFID Read Head with a Frequency Range of 100-150kHZ	00G	2008/08/25
2761PB18A	2	Test Report i.roc 6*-Ex: Maximum Optical Output Power of the Scanner	00T	2004/10/15
3500PB17A	4	Test Report Maximum Temperature of the Encapsulated Ceramic Plate Assembly	00G	2006/11/21
3501AZ10A	1	Label i.roc (label drawing for Main Unit)	00G	2008/10/15
2756AZ03A	1	Label i.roc (label drawing for optional HART Modem)	00G	2008/10/15

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Schedule of variations

Variations permitted by Issue 1:

The client has requested for the following changes to the apparatus:

1. Battery type was changed from four VARTA PoLiFlex PLF423566 (3.7V 900mAh) to either two BYD LP103450SR (3.7V 1700mAh) or two ICP103450 (3.7V 2000mAh);
2. The associated Battery Board was changed in schematic and PCB artwork;
3. A MobileBIDI Serial Interface head option was added;
4. Some non-safety related components on the Flex Barrier for RFID & Scanner were changed.

The changes had been assessed in test report 31284.

Conditions of certification relating to Issue 1:

In addition to the conditions of certification in Issue 0, the following conditions of safe use apply:

1. Installation and uninstallation of the MobileBIDI head are only allowed in safe area;
2. Connections with external peripherals are only allowed in safe area except the terminals of the MobileBIDI head option;
3. The following parameters shall be taken into account when the MobileBIDI head is connected to an external equipment:

Input Parameters for MobileBIDI head	Maximum Input
Maximum Input Voltage U_i	13.2 V
Maximum Input Current I_i	2 A
Maximum Internal Capacitance C_i	Negligible
Maximum Internal Inductance L_i	0 mH

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Drawing schedule relating to Issue 1:

Document No.	Sheets	Document Title	Issue	Date
3501SP20A	1	Leiterplatte Akku Schematic (Battery Board schematic)	01M	2008/03/27
3501SL20A	1	Part List – Battery Board	01M	2008/03/26
3501YA20A	1	Leiterplatte Akku Layout (Top)	01M	2008/03/31
3501BA20A	1	Leiterplatte Akku Mounting top	01M	2008/03/31
3501YB20A	1	Leiterplatte Akku Layout (Bottom)	01M	2007/03/31
2760SP23A	1	Flex-Verbinder-RFID&Scanner Version 2 Schematic	01G	2009/04/22
2760SL23A	1	i.roc Stuckliste / Part List (part list for Flex Barrier for RFID & Scanner)	01G	2009/04/22
2760BA23A	1	Flex-Verbinder-RFID&Scanner Version 2 Population (Top)	01G	2009/04/22
3509SP01A	1	MobileBIDI Schematic	00N	2008/11/11
3509SL01A	1	Stuckliste/Part List: MobileBIDI	00G	2009/06/02
3509BA01A	1	MobileBIDI Names Top	00G	2008/03/20
3509YA01A	1	MobileBIDI Top Layer	00G	2008/03/20
3509BB01A	1	MobileBIDI Names Bottom	00G	2008/03/20
3509YB01A	1	MobileBIDI Bottom Layer	00G	2008/03/20
3501AL02A	3	Safety Instructions: i.roc	00G	2009/07/06
3509AZ01A	1	Label Mobile BIDI Australia	00G	2009/06/19