

# IECEx Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: **IECEx BAS 06.0085X** Issue No.: **0**

Status: **Current**

Date of Issue: **2007-04-05** Page **1 of 3**

Applicant: **Intermec Technologies Corporation**  
6001 36th Avenue West  
Everett  
Washington  
98203  
**United States of America**

Electrical Apparatus: **BAR Code Scanner Terminal Type CK32IS**  
Optional accessory:

Type of Protection: **Intrinsic Safety Ex ia**

Marking: **Ex ia I / IIC T4 (-20°C ≤ Ta ≤ +50°C)**  
**Ex iaD 20 T250°C (-20°C ≤ Ta ≤ +50°C)**

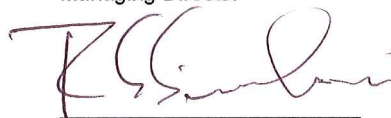
Approved for issue on behalf of the IECEx  
Certification Body:

R S Sinclair

Position:

Managing Director

Signature:  
(for printed version)

  
13-4-07

Date:

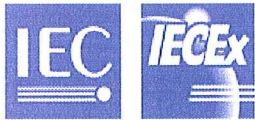
1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**Baseefa (2001) Ltd.**

Rockhead Business Park  
Staden Lane  
Buxton  
Derbyshire  
SK17 9RZ  
United Kingdom





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Manufacturer: **Intermec Technologies Corporation**  
6001 36th Avenue West  
Everett  
Washington  
98203  
**United States of America**

Manufacturing location(s):

**Davis Derby Limited**  
Chequers Lane  
Derby  
DE21 6AW  
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 manufacture'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 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:

|   |  |
|---|--|
| <b>IEC 60079-0 : 2000</b><br>Edition: 3.1 | Electrical apparatus for explosive gas atmospheres - Part 0: General requirements                                |
| <b>IEC 60079-11 : 1999</b><br>Edition: 4  | Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'                               |
| <b>IEC 61241-0 : 2004</b><br>Edition: 1   | Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements                  |
| <b>IEC 61241-11 : 2005</b><br>Edition: 1  | Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety 'ID' |

*This Certificate **does not** indicate compliance with electrical 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/BAS/ExTR06.0141/00

Quality Assessment Report:

GB/BAS/QAR06.0077/00  
GB/BAS/QAR07.0019/00



# IECEx Certificate of Conformity

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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The BAR Code Scanner Terminal Type CK32IS is designed to scan bar-codes, store the information in its internal memory and communicate with external equipment via the integral Ethernet, CF Radio or Bluetooth Radio interfaces.

The apparatus is a hand-held portable device that comprises a battery-pack which is replaceable in the hazardous area, and several PCB's (some encapsulated) all contained within a sealed plastic housing. The apparatus has a keypad and display with touch-screen on the front face, the Bar-Code scanner situated on the end of the apparatus and an optional handle fitted to the underside complete with scanner trigger.

The only external electrical connections made to the apparatus other than the replaceable battery pack are the Ethernet and USB interfaces.

For terminal parameters see Annex

### CONDITIONS OF CERTIFICATION: YES as shown below:

The apparatus is not certified for use in the presence of conductive dusts as defined in section 3 of IEC 61241-0.

# Baseefa (2001) Ltd.

Rockhead Business Park  
Staden lane, Buxton  
Derbyshire  
SK17 9RZ  
United Kingdom



ANNEX to IECEx BAS 06.0085X

Issue No. 0

Date: 2007-04-05

## Battery Pack Charge Connections

$U_m = 18Vdc$

The battery pack is designed to be charged when disconnected from the BAR Code Scanner Terminal in the non-hazardous area only.

| Battery Pack Output Connector |         | Main Board Power Input Connections |        | Ethernet and USB Connector |         |
|-------------------------------|---------|------------------------------------|--------|----------------------------|---------|
| $U_o$                         | = 8.4V  | $U_i$                              | = 8.4V | $U_o$                      | = 4.61V |
| $I_o$                         | = 5.93A | $P_i$                              | = 9W   | $I_o$                      | = 344mA |
| $P_o$                         | = 8.04W | $C_i$                              | = 0    | $P_o$                      | = 396mW |
| $C_i$                         | = 0     | $L_i$                              | = 0    | $C_i$                      | = 0     |
| $L_i$                         | = 0     | $U_o$                              | = 8.4V | $L_i$                      | = 125uH |
|                               |         | $I_o$                              | = 7.2A | $C_o$                      | = 36μF  |





## EC - TYPE EXAMINATION CERTIFICATE

### Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

- 3 EC - Type Examination Certificate Number: **Baseefa06ATEX0317X**
- 4 Equipment or Protective System: **BAR Code Scanner Terminal Type CK32IS**
- 5 Manufacturer: **Intermec Technologies Corporation**
- 6 Address: **6001 36th Avenue West, Everett, Washington, 98203, USA**
- 7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 8 Baseefa (2001) Ltd., Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential Report No. **05(C)0573**
- 9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0: 2004 EN 50020: 2002 IEC 61241-0: 2004 IEC 61241-11: 2005**  
except in respect of those requirements listed at item 18 of the Schedule.
- 10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- 11 This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
- 12 The marking of the equipment or protective system shall include the following :

**Ex I M1 / II 1GD Ex ia I/II C T4 (-20°C ≤ Ta ≤ +50°C) Ex iaD 20 T250°C (-20°C ≤ Ta ≤ +50°C)**

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **5391**

Project File No. **05/0573**

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

### Baseefa

Rockhead Business Park, Staden Lane,  
Buxton, Derbyshire SK17 9RZ  
Telephone +44 (0) 1298 766600 Fax +44 (0) 1298 766601  
e-mail [info@baseefa.com](mailto:info@baseefa.com) web site [www.baseefa.com](http://www.baseefa.com)  
Baseefa is a trading name of Baseefa (2001) Ltd  
Registered in England No. 4305578 at the above address

**R S SINCLAIR**  
**DIRECTOR**  
On behalf of  
Baseefa (2001) Ltd.



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## Schedule

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Certificate Number Baseefa06ATEX0317X

### 15 Description of Equipment or Protective System

The BAR Code Scanner Terminal Type CK32IS is designed to scan bar-codes, store the information in its internal memory and communicate with external equipment via the integral Ethernet, CF Radio or Bluetooth Radio interfaces.

The apparatus is a hand-held portable device that comprises a battery-pack which is replaceable in the hazardous area, and several PCB's (some encapsulated) all contained within a sealed plastic housing. The apparatus has a keypad and display with touch-screen on the front face, the Bar-Code scanner situated on the end of the apparatus and an optional handle fitted to the underside complete with scanner trigger.

The only external electrical connections made to the apparatus other than the replaceable battery pack are the Ethernet and USB interfaces.

#### Battery Pack Charge Connections

$$U_m = 18\text{Vdc}$$

The battery pack is designed to be charged when disconnected from the BAR Code Scanner Terminal in the non-hazardous area only.

#### Battery Pack Output Connector

$$\begin{aligned}U_o &= 8.4\text{V} \\I_o &= 5.93\text{A} \\P_o &= 8.04\text{W} \\C_i &= 0 \\L_i &= 0\end{aligned}$$

#### Main Board Power Input Connections

$$\begin{aligned}U_i &= 8.4\text{V} \\P_i &= 9\text{W} \\C_i &= 0 \\L_i &= 0 \\U_o &= 8.4\text{V} \\I_o &= 7.2\text{A}\end{aligned}$$

#### Ethernet and USB Connector

$$\begin{aligned}U_o &= 4.61\text{V} \\I_o &= 344\text{mA} \\P_o &= 396\text{mW} \\C_i &= 0 \\L_i &= 125\text{uH} \\C_o &= 36\text{uF} \\L_o &= 25\text{uH} \\U_i &= 4.61\text{V}\end{aligned}$$



**16 Report Number**

05(C)0573

**17 Special Conditions for Safe Use**

1. The apparatus is not certified for use in the presence of conductive dusts as defined in section 3 of IEC 61241-0.

**18 Essential Health and Safety Requirements**

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

**19 Drawings and Documents**

| Number        | Sheet   | Issue | Date     | Description                                    |
|---------------|---------|-------|----------|--|
| 100-001       | 1 of 1  | G     | 03/28/07 | CK32AS I-Safe Overview Block Diagram           |
| 120-120       | 1 of 1  | C     | 03/26/07 | Flex, Scanner, EV10 CK31CA, ROHS               |
| 145-146       | 1 of 1  | B     | 02/28/07 | PCB, Good Read LED, CK32AS                     |
| 145-166       | 1 of 1  | C     | 02/28/07 | PCB, Antenna Safety Coupler, CK32AS            |
| 145-174       | 1 of 1  | C     | 02/28/07 | PCB, 42-Key Keypad, CK32, I-Safe               |
| 145-175       | 1 of 1  | C     | 02/28/07 | PCB, 56-Key Keypad, CK32, I-Safe               |
| 145-187       | 1 of 1  | B     | 02/28/07 | PCB, I/O Connector CK32AS                      |
| 145-196       | 1 of 1  | B     | 02/28/07 | PCB, Speaker, 0.062 Thick, CK32AS ROHS         |
| 145-198-TRACE | 1 to 2  | 003   | ----     | PCB, Battery Contact CK32 (Artwork)            |
| 145-198       | 1 of 1  | D     | 03/07/07 | PCB, Battery Contact CK32                      |
| 145-200       | 1 of 1  | B1    | 05/26/06 | PCB, Antenna Safety Coupler 2, CK32AS          |
| 145-225-TRACE | 1 to 12 | 004   | ---      | PCB, Main, CK32 I-Safe (Artwork)               |
| 145-225       | 1 to 2  | J     | 02/28/07 | PCB, Main, K32 I-Safe                          |
| 145-226-TRACE | 1 to 8  | 002   | ---      | PCB, LCD Interface, CK32 I-Safe (Artwork)      |
| 145-226       | 1 of 1  | D     | 02/28/07 | PCB, LCD Interface, CK32 I-Safe                |
| 145-227-TRACE | 1 to 8  | 003   | ---      | PCB, Protection CK32 I-Safe (Artwork)          |
| 145-227       | 1 of 1  | E     | 02/28/07 | PCB, Protection, CK32 I-Safe                   |
| 145-285       | 1 of 1  | C     | 03/02/07 | PCB, Antenna, CK32AS                           |
| 220-081       | 1 of 1  | C     | 03.24/07 | Beeper Assy, CK32AS                            |
| 220-083       | 1 to 2  | B     | 02/28/07 | Flex Assy. Display Backlight, CK32AS           |
| 220-084       | 1 of 1  | B     | 02/28/07 | Flex Circuit, I/O Connector, CK32              |
| 220-093       | 1 of 1  | A     | 02/23/07 | Flex, Keypad, Z-Fold, Ultra-Thin, ROHS. CK32AS |
| 220-094       | 1 to 2  | A     | 02/23/07 | Flex Assy, LCD Jumper, 60-Pin, CK32AS          |
| 220-095       | 1 to 2  | B     | 02/28/07 | Flex Circuit Assy. Microphone, CK32AS, ROHS    |
| 224-584       | 1 of 1  | D     | 02/26/07 | PCB Assy, Switch, Reed, Trigger, ROHS          |
| 224-592       | 1 to 2  | B     | 02/28/07 | PCB Assy. Good Read LED, CK32AS                |
| 224-625       | 1 to 2  | C     | 02/28/07 | PCB Assy. 42-Key Keypad, CK32, I-Safe          |
| 224-626       | 1 to 2  | C     | 02/28/07 | PCB Assy. 56-Key Keypad, CK32, I-Safe          |
| 224-645       | 1 to 2  | B     | 02/28/07 | PCB Assy. I/O Connector, CK32                  |
| 224-657       | 1 to 2  | B     | 02/28/07 | PCB Assy, Speaker, CK32AS, ROHS                |





| Number            | Sheet   | Issue | Date     | Description  |
|-------------------|---------|-------|----------|--|
| 224-659           | 1 of 1  | A     | 03/02/07 | PCB Assembly, Battery Contact, CK32AS                              |
| 224-691           | 1 to 9  | M     | 03/03/07 | PCB Assy. Main CK32 I-Safe   |
| 224-692           | 1 to 3  | E     | 03/09/07 | PCB Assy. LCD, CK32 I-Safe   |
| 224-693           | 1 to 5  | G     | 03/24/07 | PCB Assy, Protection, CK32, I-Safe                                 |
| 224-987           | 1 to 2  | C     | 03/29/07 | PCB Assy. Antenna, CK32AS  |
| 236-118           | 1 of 1  | B     | 03/24/07 | Cable Assy, Safety Wires, LCD to Prot, CK32AS                      |
| 236-119           | 1 of 1  | B     | 03/24/07 | Cable Assy, Safety Wires, Prot to LCD, CK32AS                      |
| 236-120           | 1 of 1  | B     | 03/24/07 | Cable Assy, Power Supply, Prot to LCD, CK32AS                      |
| 236-121           | 1 of 1  | B     | 03/24/07 | Cable Assy, Power Supply, LCD to Prot, CK32AS                      |
| 236-130           | 1 of 1  | B     | 03/24/07 | Cable Assy, Power Supply, Prot to LCD, CK32AS                      |
| 236-131           | 1 of 1  | B     | 03/24/07 | Cable Assy, Power Supply, LCD to Prot, CK32AS                      |
| 245-257           | 1 to 6  | B     | 03/23/07 | Common Parts, CK32   |
| 318-019           | 1 of 1  | A     | 03/09/07 | Battery Pack Assy, CK32AS  |
| 318-021           | 1 of 1  | A     | 03/08/07 | Battery Pack, AB6  |
| 334-050           | 1 to 3  | B     | --       | Speaker, 28mm, 8 ohm   |
| 346-309           | 1 to 2  | D     | 02/26/07 | Touchscreen, CK32, ROHS  |
| 506-478-002       | 1 of 1  | A     | 04/24/06 | Schematic, Intermec CK32 I-Safe Battery Pack Safety Circuit        |
| 506-478-003       | 1 of 1  | A     | 04/24/06 | Schematic, Intermec CK32 I-Safe Battery Pack Contact Board         |
| 509-478-002-TRACE | 1 to 3  | A     | ---      | PCB, Intermec CK32 I-Safe, Battery Pack Protection Board (Artwork) |
| 509-478-002       | 1 to 2  | A     | 15/03/06 | PCB, Intermec CK32 I-Safe Battery Pack Protection Board            |
| 509-478-003-TRACE | 1 to 2  | A     | ---      | PCB, Intermec CK32 I-Safe, Battery Pack Contact Board (Artwork)    |
| 509-478-003       | 1 to 2  | A     | 25/04/06 | PCB, Intermec CK32 I-Safe Battery Pack Contact Board               |
| 591-829           | 1 of 1  | B     | 03/24/07 | Speaker, S/M, Side Emitter, 8 ohm                                  |
| 632-379           | 1 to 8  | A     | 03/23/07 | Encapsulation/Insulation Layouts                                   |
| 632-641           | 1 to 13 | A     | --       | CK32 Handheld PCB Rework Instruction                               |
| 642-462           | 1 to 2  | B     | 03/23/07 | Cover, Top, CK32AS, Family   |
| 642-466           | 1 of 1  | B     | 03/29/07 | Seal, Main Housing, CK32   |
| 642-471           | 1 of 1  | B     | 03/23/07 | Housing, Battery, Top, CK32AS                                      |
| 642-472           | 1 of 1  | B     | 03/23/07 | Housing, Battery, Bottom, CK32AS                                   |
| 642-473           | 1 of 1  | B     | 03/23/07 | Housing, Lower, CK32AS   |
| 642-522           | 1 of 1  | B     | 03/23/07 | Cover, Antenna, CK32AS   |
| 642-625           | 1 to 2  | B     | 04/03/07 | Handle Back, Overmolded, AH4                                       |
| 642-626           | 1 to 2  | B     | 04/03/07 | Handle Case, Left, AH4   |
| 642-627           | 1 to 2  | B     | 04/03/07 | Handle Case, Right, AH4  |
| 654-729           | 1 to 2  | A     | 01/30/07 | Insulator, Main PCB, CK32  |
| 715-438           | 1 to 3  | B     | 03/22/07 | Display Assy, LCD, CK32AS  |





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| Number      | Sheet         | Issue | Date     | Description                             |
|-------------|---------------|-------|----------|---|
| 715-451     | 1 to 2        | B     | 03/23/07 | Core Assy, Electronics, CK32AS          |
| 754-817     | 1 of 1        | A     | 03/09/07 | Cover Assy, Bottom, CK32AS              |
| 805-817     | 1 of 1        | B     | 03/24/07 | Cable Assy. 802.11 Antenna, CK32        |
| 805-818     | 1 of 1        | B     | 03/24/07 | Cable Assy. BT Antenna, CK32            |
| 805-819     | 1 of 1        | A     | 03/08/07 | Antenna Assy, 802.11/BT, CK32           |
| 819-089     | 1 of 1        | 06    | 12/14/06 | Lbl Die, Laser Warning, CK32AS          |
| 819-092     | 1 of 1        | A     | 01/26/07 | Lbl Graphic, Battery Pack, Cert, CK32AS |
| 819-102     | 1 & 2<br>of 5 | A     | 03/06/07 | Label Set, I-Safe/Cert, Family, CK32AS  |
| 865-019     | 1 of 1        | 2     | 02/03/06 | Window, Scanner, CK32AS                 |
| SCH_S9a2_UB | 1 to 18       | 1.6   | 03/24/07 | EV10 Scan Engine (Optical Scanner)      |
| DRCB0M1     | 1 to 2        | S0D   | 10/20/05 | <802.11 Radio Module>                   |
| 0533 BTM311 | 1 to 2        | 4A-3  | 10/14/04 | <Bluetooth Module>                      |