

Mobile Computer MC 92N0^{ex}-IS

Datasheet



Based on the successful MC 9000^{ex} range BARTEC has developed the MC 92 Mobile Computer, in close cooperation with Zebra, for global use in potentially explosive areas.

The device range enables complex applications to be executed, processes to be simplified and productivity boosted. Whereas barcode scanners are used for the classic collection of data, the MC 92 also offers wireless data exchange and direct further processing of data in the field. The MCs are available with a choice of different barcode scanners in order to read 1D, PDF, 2D and DPM (Device Part Marking) barcodes. The selection permits a customised adjustment that also enables barcode scanning at a distance of up to 12 m (long range). Three versions of operating system are available. These are the familiar environment of Windows® Embedded Handheld and Compact, as well as Android, the innovative, most commonly used operating system in the world. This means the user can easily adjust the devices to meet his requirements. The real time data exchange via Wi-Fi or Bluetooth is convenient, saves time and improves work processes. The optimised power management and automatic shutdown via a motion sensor both guarantee long operating times.

The MC 92N0^{ex}-IS is approved for ATEX and IECEx Zone 1 and UL Class I, II, III Div.1. Further local certifications are available or possible customer request possible.

User environment

Operating temperature	-20 °C to +40 °C (-4 °F to 104 °F)
Charging temperature	0 °C to +40 °C (32°F to 104°F)
Storage temperature (without battery)	-40 °C to +70 °C (-40 °F to 158 °F)
Relative humidity	5 % ~ 95 % (non-condensing)
Protection class (IEC 60529)	IP 64 for Typ 17-A1A2-****/***** (UL Div. 1) IP 54 for Typ 17-A1A3-****/***** (ATEX/IECEX Zone 1)

Technical data

Processor	TI OMAP 4430 dual-core® Prozessor/1 GHz
Memory (RAM)	2 GB
Mass storage	1 GB
Storage expansion	User accessible MicroSD with 32GB SDHC
Operating system	<ul style="list-style-type: none"> – Windows® Embedded Handheld 6.5.3 – Windows® Embedded Compact 7 (CE 7.0) – Android 4.4.4 (Kit Kat) with Mobility Extension (Mx) from Zebra
Display	3.7" VGA color display with touchscreen
Resolution	<ul style="list-style-type: none"> – VGA mode: 480 x 640 pixel (WEH 6.5.3, CE 7.0 and Android) – QVGA mode: 240 x 320 pixel (CE 7.0)
Battery	<ul style="list-style-type: none"> – Lithium-ion battery - Type 17-A1Z0-0001 with 7.2 V/2800 mAh (20.16 Wh) for Type 17-A1A3-****/***** (ATEX/IECEX Zone 1) – Lithium-ion battery - Type 17-A1Z0-0023 with 7.4 V/2600 mAh (19.3 Wh) for Type 17-A1A2-****/***** (UL Div. 1) – Battery can be changed in the potentially explosive area
Backup battery	Ni-MH battery (rechargeable) 2.4 V/15 mAh, installed in the device
Voice & Audio	Integrated microphone, loudspeaker and 2.5 mm headset jack
Voice communication	<ul style="list-style-type: none"> – Voice over IP – Voice Directed Picking Tech Speech Pro approved, speech-based applications through third party provider VDP Clients (only with Windows operating system) – Push-To-Talk, Workforce Connect PTT Express (client included) with headset and hands free mode, wired headset support
Keypad	<ul style="list-style-type: none"> – 28 numeric keys – 43 numeric keys with (F) function keys – 53 alphanumeric keys – 53 alphanumeric keys with layout for VT emulation
Interfaces	RS232 and USB over Docking Station
Bluetooth	<p>Operating system: Windows Microsoft stack (preset as standard) Bluetooth Version 2.1 with EDR Stonestreet stack (may be optionally activated) Bluetooth 4.0 with low energy consumption</p> <p>Operating system: Android Stonestreet stack Bluetooth 4.0 with low energy consumption</p>

WLAN-WiFi

Radio standard - Operating system: Windows
IEEE 802.11 a/b/g/n/d/h/i

Radio standard - Operating system: Android
IEEE 802.11 a/b/g/n/d/h/i/k/r

Data rate:

IEEE802.11a: up to 54 Mbit/Sec.
IEEE802.11b: up to 11 Mbit/Sec.
IEEE802.11g: up to 54 Mbit/Sec.
IEEE802.11n: up to 65 Mbit/Sec.

Frequency range (country related):

IEEE802.11a: 5 GHz
IEEE802.11b: 2.4 GHz
IEEE802.11g: 2.4 GHz
IEEE802.11n: 2.4 GHz und 5 GHz

Security:

WPA2 Enterprise, 802.1x; EAP-TLS; TTLS (CHAP, MS-CHAP, MS-CHAPv2, PAP or MD5); PEAP (TLS, MSCHAPv2, EAP-GTC); LEAP, EAP-FAST (TLS, MS-CHAPv2, EAP-GTC), WPA2/AES, CCX v4 and IPv6

Output power: 210 mW

Antenne: Integrated in the device

Note: The respective radio frequencies and usable channels depend on specific country regulations.

Software

No functional changes were made to the device due to the explosion protection. All tools and applications available from Zebra for the MC9200 are compatible with the MC92N0^{ex}-IS version. e.g. messaging via Workforce Connect PTT Express, the Mobility DNA solutions from ZEBRA, Terminal Emulation (z.B. Wavelink, weitere) and Third Party Applications for the ZEBRA MC9200

Mobility DNA

Mobility DNA solutions help you get more value out of our mobile computers by adding functionality as well as simplifying deployment and management of our mobile devices. For more information on these Zebra-only features, please visit zebra.com/mobilitydna

PTT (Push-to-Talk) App

Powered by Zebra Technologies, BARTEC brings the enterprise-class push-to-talk application PTT Pro into hazardous areas. PTT Pro connects your workforce with enterprise-class instant PTT and secure messaging services. It supports direct messaging, image, audio, and video - regardless of whether your users are carrying a BARTEC mobile device in hazardous areas, or their own Android or Windows device in non-hazardous areas. For more information see bartec.com

Application development

PSDK and EMDK for Windows and Android available from Zebra Support website

Warranty

1 year

Service contracts

COMFORT and ALL-IN

Scope of delivery

- Mobile Computer MC 92N0^{ex}-IS
- Battery
- Hand strap
- Stylus
- User Manual

Also required

(not included in the delivery)

- Docking station or battery charging station for charging

Accessories

See datasheet: MC 92N0^{ex}-IS Accessories

Mobile Computer MC 92NO^{ex}-G



The Mobile Computer MC 92NO^{ex}-G with its handgrip is a robust unit for secure barcode scanning in potentially explosive areas. The scan trigger is ideally integrated in the hand-grip, enabling barcodes to be conveniently scanned. The integrated radio module ensures real time data exchange with the host system. The MC 92NO^{ex}-G combines the advantages of the Microsoft or Android platform with the strengths of the TI OMAC 4430 dual core® processor with 1 GHz. The large, easy to read 3.7" VGA colour display is equipped with touchscreen technology. The device operates using the IEEE 802.11 radio standards.

Explosion protection

Marking ATEX	Ex II 2G Ex q [ib] IIC T4 Gb
Certification	PTB 13 ATEX 2019X
Marking IECEx	Ex q [ib] IIC T4 Gb
Certification	IECEx PTB 13.0043X
Marking UL	Class I Div. 1 Group C, D Class II Div. 1 Group F, G Class III
Certification	UL E226123
Further Certifications	CE, FCC/IC Other approvals and certificates, see bartec.com

Technical data

Size (H x W x D)	231 x 91 x 193 mm (9.1 x 3.6 x 7.6 inch)
Weight (with battery)	<ul style="list-style-type: none"> - approx. 1060 g (2.3 lb) for Type 17-A1A3-****/***** (ATEX/IECEX Zone 1) - approx. 830 g (1.8 lb) for Type 17-A1A2-****/***** (UL Div. 1)
Operating system	<ul style="list-style-type: none"> - SE965-SR: 1D scan engine with standard range; Reading range up to 1.3 m (51.2 inch) depending on type, size and quality of the barcode - SE1524-ER: 1D scan engine with extended range; Reading range up to 13.7 m (539.4 inch) depending on type, size and quality of the barcode - SE4500-SR: Omnidirectional 1D/2D engine for image capture of 1D and 2D symbols; Reading range up to 0.6 m (23.6 inch) depending on type, size and quality of the barcode - SE4500-HD**: 1D/2D DPM engine for image capture of several DPMs on metal, plastic and glass surfaces, including dot peening, laser etching, moulding, punching or fusing procedures; Reading range up to 0.28 m (11 inch) depending on type, size and quality of the barcode - Supported symbologies/barcodes: see table

Ordering information

1	7	-	A	1	A	*	-	0	G	*	0	/	S	Y	*	*	A	6	0	0
			A		B					C		D								

<p>A Explosion protection 2 – UL Division 1 3 – ATEX/IECEX Zone 1</p> <hr/> <p>B Barcode capture A – SE965-SR J – SE1524-ER 3 – SE4500-SR 5 – SE4500-HD**</p> <hr/> <p>C Keypad A – 28 numeric keys F – 43 numeric keys with (F) function key E – 53 alphanumeric keys G – 53 alphanumeric keys with layout for VT emulation*</p>	<p>D Operating system Q – Windows Embedded Handheld 6.5.3 (WEH6.5.3) Y – Windows Embedded Compact 7 (CE7.0) A – Android 4.4.4 (KitKat)</p> <hr/> <p>IMPORTANT: * Emulation software is not included in the delivery. ** Only available with Windows CE/WEH operating system.</p>
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Mobile Computer MC 92NO^{ex}-K



The Mobile Computer MC 92NO^{ex}-K is a robust unit for secure barcode scanning in potentially explosive areas. The scan trigger is positioned so that barcodes can be scanned with the greatest convenience. The integrated radio module ensures real time data exchange with the host system. The MC 92NO^{ex}-K combines the advantages of the Microsoft or Android platform with the strengths of the TI OMAP 4430 dual core® processor with 1 GHz. The large, easy to read 3.7" VGA colour display is equipped with touchscreen technology. The device operates using the IEEE 802.11 radio standards.

Explosion protection

Marking ATEX	Ex II 2G Ex q [ib] IIC T4 Gb
Certification	PTB 13 ATEX 2019X
Marking IECEx	Ex q [ib] IIC T4 Gb
Certification	IECEX PTB 13.0043X
Marking UL	Class I Div. 1 Group C, D Class II Div. 1 Group F, G Class III
Certification	UL E226123
Further Certifications	CE, FCC/IC

Other approvals and certificates, see bartec.com

Technical data

Size (H x W x D)	231 x 91 x 56 mm (9.1 x 3.6 x 2.2 inch)
Weight (with battery)	<ul style="list-style-type: none"> - approx. 980 g (2.2 lb) for Type 17-A1A3-****/***** (ATEX/IECEX Zone 1) - approx. 700g (1.5 lb) for Type 17-A1A2-****/***** (UL Div. 1)
Operating system	<ul style="list-style-type: none"> - SE965-SR: 1D scan engine with standard range; Reading range up to 1.3 m (51.2 inch) depending on type, size and quality of the barcode - SE4500-SR: Omnidirectional 1D/2D engine for image capture of 1D and 2D symbols; Reading range up to 0.6 m (23.6 inch) depending on type, size and quality of the barcode - SE4500-HD**: 1D/2D DPM engine for image capture of several DPMs on metal, plastic and glass surfaces, including dot peening, laser etching, moulding, punching or fusing procedures; Reading range up to 0.28m (11 inch) depending on type, size and quality of the barcode - Supported symbologies/barcodes: see table

Ordering information

1 7 - A 1 A * - 0 K * 0 / S Y * * A 6 0 0

A B C D

<p>A Explosion protection 2 – UL Division 1 3 – ATEX/IECEX Zone 1</p>	<p>D Operating system Q – Windows Embedded Handheld 6.5.3 (WEH6.5.3) Y – Windows Embedded Compact 7 (CE7.0) A – Android 4.4.4 (KitKat)</p> <p>IMPORTANT: * Emulation software is not included in the delivery. ** Only available with Windows CE/WEH operating system.</p>
<p>B Barcode capture A – SE965-SR 3 – SE4500-SR 5 – SE4500-HD**</p>	
<p>C Keypad A – 28 numeric keys F – 43 numeric keys with (F) function key E – 53 alphanumeric keys G – 53 alphanumeric keys with layout for VT emulation*</p>	

Supported Symbologies / Barcodes

1D Symbol/Codes	Code 11 Code 39 Code 93 Code 128 Codabar Coupon Code Chinesisch 2 aus 5 Discrete 2 aus 5 EAN-8 EAN-13 Interleaved 2 aus 5 MSI RSS-14 RSS Limited RSS Expanded UPCA UPCE UPC/EAN additions Trioptic 39 Webcode	2D Symbol/Codes only with SE4500-SR and SE4500-HD	Aztec Australian 4-state Canadian 4-state Composite AB Composite C Data Matrix Dutch Kix Japanese 4-state (Macro) Mikro PDF-417 Micro PDF-417 microQR PDF-417 PDF-417 Macro QR Code TLC39 UK 4-state US Planet US Postnet
		DPM Codes only with SE4500-HD	Mounted on: Metal Plastic Glass Method: Dot peening Laser cut Cast Punched Moulded