BARTEC

Mobile Computer

Mobile Computer Data Sheets MC 92N0ex

for barcode and RFID capture

Reservation

Technical data subject to change without notice. No claims for damages arising from alterations, errors or misprints shall be allowed. Attention is drawn to the applicable standards and regulations on safety components and systems together with the relevant operating and installation instructions.

BARTEC

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MC 92NO^{ex}-G

with 1D-Long Range Scan Engine
or 1D-/2D Imager Engine

Features

- International approvals for global usability
- Barcode capture up to 12 m
- WLAN radio standard IEEE 802.11 a/b/g/n
- Easy battery changing in the Ex area
- Expanded storage capacity with replaceable SD card
- Various versions of replaceable keyboards
- Compatibility with MC92NO from Motorola
- Service contracts

Description

The MC 92NO^{ex}-G Mobile Computer with its pistol grip is a robust device for reliable barcode scanning in hazardous (potentially explosive) areas.

The scan trigger is conveniently positioned at the pistol grip. Thus barcodes can be captured with only one hand. The integrated radio module enables real time data access to your host system.

The MC 92NO^{ex}-G combines the strength of Microsoft's Pocket PC platform with the power of the TI OMAC 4430 dual-core® processor with 1 GHz.

A further highlight is the large easy-to-read 3,7" VGA colour display with touchscreen technology. The MC 92NO^{ex}-G is working with the IEEE 802.11a/b/g/n radio standard.

Market	Applications	Users
Automobile industry suppliers of paintwork, for paint shops, etc. **Food and beverages** suppliers of aromatic substances, etc. **Petrochemicals** from production through further processing to delivery **Pharmaceuticals** suppliers of the individual components required for the production of e. g. medication	Material flow monitoring Production control Supplier chain management Incoming/outgoing goods, inventory management Safety tests Spare parts tracking Maintenance/repair work Workshop communication Conformity verification Task allocation	**Dispatch, receiving and stock management departments** Personnel who have been instructed on the handling of potentially explosive substances **Maintenance and repair** Personnel who have been instructed on work in potentially explosive substances. **Production area** Personnel who have been instructed on the handling of potentially explosive substances.

Explosion protection

Ex protection type

ATEX ⟨Ex⟩ II 2G Ex q [ib] IIC T4 Gb

Certification
PTB 13 ATEX 2019 X

IECEx Ex q [ib] IIC T4 Gb

Certification
IECEx PTB13.0043X

Other variants are available for:
- Brazil, Japan, Canada, Russia, South Africa and USA
- Mining EU

Technical data

Keyboard version
- 28 keys, numeric
- 43 keys, numeric with (F) function keys
- 53 keys, alphanumeric

Display
3.7" VGA colour display
with touchscreen 480 x 640 pixels

Barcode options
SE 1524: 1D-Long Range Scan Engine
Reading range: up to 12 m

SE 4500-SR: 1D/2D Imager Engine
Reading range: up to 60 cm

Other variants available, see user's manual.

Dimensions (height x width x depth)
231 mm x 91 mm x 193 mm
9.1 inch x 3.6 inch x 7.6 inch

Weight
approx. 1060 g
approx. 34 oz

Ambient temperature
-20 °C to +40 °C
-4 °F to +104 °F

Storage temperature
-40 °C to +70 °C
-40 °F to +158 °F

Charging temperature
0 °C to +40 °C
+32 °F to +104 °F

Humidity
5 % to 95 % (non-condensing)

Protection class (EN 60529)
IP 54

Processor
TI OMAC 4430 dual-core® processor/1 GHz

Memory
1 GB/2 GB flash RAM/ROM with the option of expansion with SD card: up to 32 GB

Operating system
Windows Embedded Handheld 6.5.3
or Windows CE 7.0

Power supply
Li-ion battery 17-A1Z0-0001
with 7.4 V/2200 mAh
Battery can be changed in the Ex area!

03-0330-0762-01/2014-BAT-357132/1

Backup battery
Ni-MH battery (rechargeable)
2.4 V/15 mAh

Interfaces
- RS232
- USB

Application development
EMDK available from Motorola Solutions Homepage

Audio System
Integrated microphone and loudspeaker

Voice support
Voice over IP

Wireless data communication (WLAN)

Radio standard
IEEE 802.11a/b/g/n

Data rate/frequency range
IEEE802.11a: up to 54 Mbit/s - 5 GHz
IEEE802.11b: up to 11 Mbit/s - 2.4 GHz
IEEE802.11g: up to 54 Mbit/s - 2.4 GHz
IEEE802.11n: up to 600 Mbit/s - 2.4/5 GHz

Output power
100 mW

Antenna
Integrated in the device

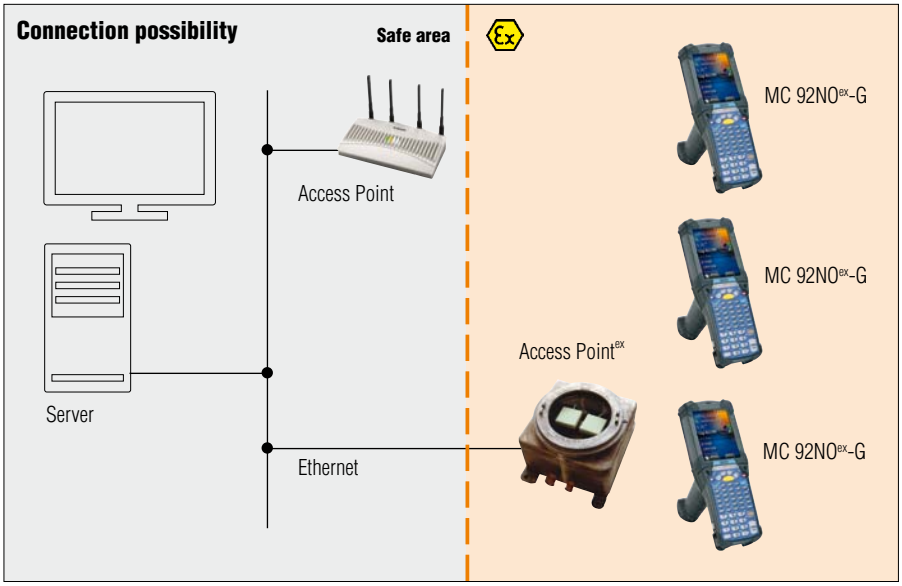
Note
The respective radio frequencies and usable channels depend on the country-specific regulations.

Bluetooth (WPAN)

Bluetooth version 2.1 with EDR (including manager)

Max. data rate
2.1 Mbit/s

Antenna
Integrated in the device



The MC 92NO^{ex}-G Mobile Computer with the 1D-Long Range Scan Engine or the 1D-/2D Imager Engine recognises the following barcodes:

1D-Codes:

Code 11	Interleaved 2 of 5
Code 39	MSI
Code 93	UPCA
Code 128	UPCE
Codabar	UPC/EAN supplementals
Coupon Code	Trioptic 39
Chinese 2 of 5	RSS-14
Discrete 2 of 5	RSS Expanded
EAN-8	RSS Limited
EAN-13	Webcode

2D-Codes: (only with 1D-/2D-Imager Engine)

Aztec	(Macro) Micro PDF-417
Australian 4-state	Micro PDF-417 PDF-417
Canadian 4-state	microQR
Composite AB	Maxi Code
Composite C	QR Code
PDF-417	TLC39
Data Matrix	UK 4-state
Dutch Kix	US Planet
Japanese 4-state	US Postnet
Macro PDF-417	USPS 4-state (US4CB)

Selection chart

Barcode options	Code no.	Version	Code no.	Operating system	Code no.
SE 1524 1D-Long Range Scan Engine	**J**	28 keys, numeric	**A**	Windows Embedded Handheld 6.5.3	**Q**
		43 keys, numeric with (F) function keys	**F**		
		53 keys, alphanumeric	**E**		
SE 4500-SR 1D-/2D Imager Engine	**3**	53 keys, alphanumeric with layout for VT emulation	**G**	Windows CE 7.0	**Y**
		53 keys, alphanumeric with layout for 3270 emulation	**H**		
		53 keys, alphanumeric with layout for 5250 emulation	**J**		

Complete order no. 17-A1A3-0G ☐ 0/SY ☐ ☐ A600
MC 92NO^{ex}-G including Li-ion battery (1 piece).

Please insert correct code. Technical data subject to change without notice. Note: All variants without accessories.
You will find the accessories with order details on the accessories pages.

03-0330-0762-01/2014-BAT-357132/2

MC 92NO^{ex}-K with
1D-Standard Range Scan Engine or 1D/2D Imager Engine

Features

- International approvals for global usability
- WLAN radio standard IEEE 802.11 a/b/g/n
- Easy battery changing in the Ex area
- Expanded storage capacity with replaceable SD card
- Various versions of replaceable keyboards
- Based on MC92NO from Motorola
- Service contracts

Description

The MC 92NO^{ex}-K Mobile Computer is a robust device for reliable barcode scanning in hazardous (potentially explosive) areas.

The scan trigger is positioned in such a way that barcodes can be captured very conveniently. The integrated radio module enables real time data access to your host system.

The MC 92NO^{ex}-K combines the strength of Microsoft's Pocket PC platform with the power of the TI OMAC 4430 dual-core® processor with 1 GHz.

A further highlight is the large easy-to-read 3.7" VGA colour display with touchscreen technology. The MC 92NO^{ex}-K is working with the IEEE 802.11a/b/g/n radio standard.

Market	Applications	Users
Automobile industry suppliers of paintwork, for paint shops, etc. **Food and beverages** suppliers of aromatic substances, etc. **Petrochemicals** from production through further processing to delivery **Pharmaceuticals** suppliers of the individual components required for the production of e. g. medication	Material flow monitoring Production control Supplier chain management Incoming/outgoing goods, inventory management Safety tests Spare parts tracking Maintenance/repair work Workshop communication Conformity verification Task allocation	**Dispatch, receiving and stock management departments** Personnel who have been instructed on the handling of potentially explosive substances **Maintenance and repair** Personnel who have been instructed on work in potentially explosive substances. **Production area** Personnel who have been instructed on the handling of potentially explosive substances.

Explosion protection

ATEX **Ex protection type**
Ⓔx II 2G Ex q [ib] IIC T4 Gb

Certification
PTB 13 ATEX 2019 X

IECEx **Ex protection type**
Ex q [ib] IIC T4 Gb

Certification
IECEx PTB13.0043X

Other variants are available for:
- Brazil, Japan, Canada, Russia, South Africa and USA
- Mining EU

Technical data

Keyboard version
- 28 keys, numeric
- 43 keys, numeric with (F) function keys
- 53 keys, alphanumeric

Display
3.7" VGA colour display
with touchscreen 480 x 640 pixels

Barcode options
SE 965: 1D-Standard Range Scan Engine
Reading range: up to 2.5 m

SE 4500-SR: 1D/2D Imager Engine
Reading range: up to 60 cm

Other variants available, see user's manual.

Dimensions (height x width x depth)
231 mm x 91 mm x 59 mm
9.1 inch x 3.6 inch x 2.3 inch

Weight
approx. 980 g
approx. 31 oz

Ambient temperature
-20 °C to +40 °C
-4 °F to +104 °F

Storage temperature
-40 °C to +70 °C
-40 °F to +158 °F

Charging temperature
0 °C to +40 °C
+32 °F to +104 °F

Humidity
5 % to 95 % (non-condensing)

Protection class (EN 60529)
IP 54

Prozessor
TI OMAC 4430 dual-core® processor/1 GHz

Memory
1 GB/2 GB flash RAM/ROM with the option of expansion with SD card: up to 32 GB

Operating system
Windows Embedded Handheld 6.5.3
or Windows CE 7.0

Power supply
Li-ion battery 17-A1Z0-0001
with 7.4 V/2200 mAh
Battery can be changed in the Ex area!

03-0330-0764-01/2014-BAT-357134/1

Backup battery
Ni-MH battery (rechargeable)
2.4 V/15 mAh

Interfaces
- RS232
- USB

Application development
EMDK available from Motorola Solutions Homepage

Audio System
Integrated microphone and loudspeaker

Voice support
Voice over IP

Wireless data communication (WLAN)

Radio standard
IEEE 802.11a/b/g/n

Data rate/frequency range
IEEE802.11a: up to 54 Mbit/s - 5 GHz
IEEE802.11b: up to 11 Mbit/s - 2.4 GHz
IEEE802.11g: up to 54 Mbit/s - 2.4 GHz
IEEE802.11n: up to 600 Mbit/s - 2.4/5 GHz

Output power
100 mW

Antenna
Integrated in the device

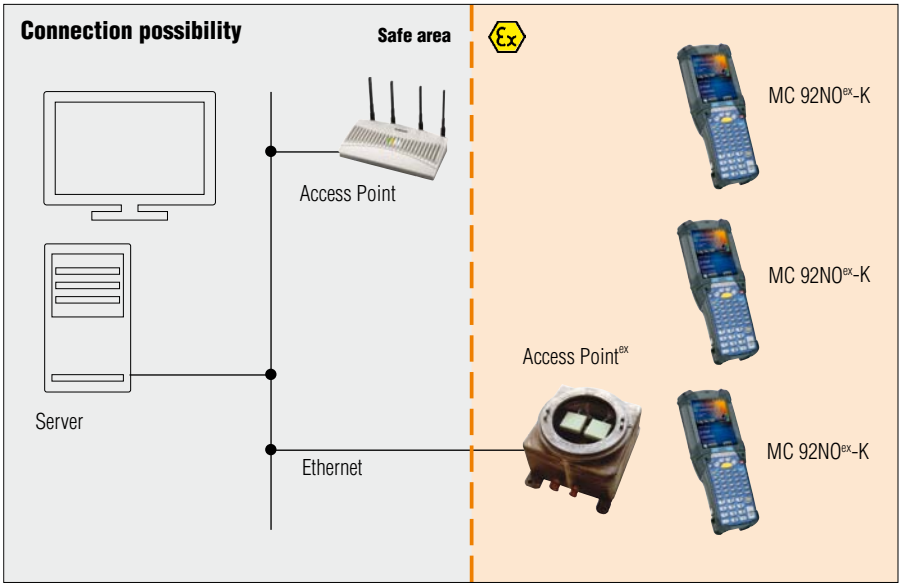
Note
The respective radio frequencies and usable channels depend on the country-specific regulations.

Bluetooth (WPAN)

Bluetooth version 2.1 with BT Explorer (including manager)

Max. data rate
2.1 Mbit/s

Antenna
Integrated in the device



The MC 92NO^{ex}-K Mobile Computer with the 1D-Standard Range Scan Engine or the 1D-/2D-Imager Engine recognises the following barcodes:

1D-Codes:

Code 11	Interleaved 2 of 5
Code 39	MSI
Code 93	UPCA
Code 128	UPCE
Codabar	UPC/EAN supplementals
Coupon Code	Trioptic 39
Chinese 2 of 5	RSS-14
Discrete 2 of 5	RSS Expanded
EAN-8	RSS Limited
EAN-13	Webcode

2D-Codes: (only with 1D-/2D Imager Engine)

Aztec	(Macro) Micro PDF-417
Australian 4-state	Micro PDF-417 PDF-417
Canadian 4-state	microQR
Composite AB	Maxi Code
Composite C	QR Code
PDF-417	TLC39
Data Matrix	UK 4-state
Dutch Kix	US Planet
Japanese 4-state	US Postnet
Macro PDF-417	USPS 4-state (US4CB)

Selection chart

Barcode options	Code no.	Version	Code no.	Operating system	Code no.
SE 965 1D-Standard Range Scan Engine	**A**	28 keys, numeric	**A**	Windows Embedded Handheld 6.5.3	**Q**
		43 keys, numeric with (F) function keys	**F**		
		53 keys, alphanumeric	**E**		
SE 4500-SR 1D-/2D Imager Engine	**3**	53 keys, alphanumeric with layout for VT emulation	**G**	Windows CE 7.0	**Y**
		53 keys, alphanumeric with layout for 3270 emulation	**H**		
		53 keys, alphanumeric with layout for 5250 emulation	**J**		

Complete order no. 17-A1A3-0K ☐ 0/SY ☐ ☐ A600
MC 92NO^{ex}-K including Li-ion battery (1 piece).

Note: All variants without accessories. You will find the accessories with order details on the accessories pages.
Please insert correct code. Technical data subject to change without notice.

03-0330-0764-01/2014-BAT-357134/2

MC 92N0ex-G and -K with extended RFID Reader

Description

This unique idea enables a combination of state-of-the-art technologies and so it was possible to integrate barcode data capture and RFID technology in this one device.

Thanks to the modular keyboard and colour display, the data can be processed directly on the mobile computer. The data is transmitted to other corporate divisions via WLAN or Bluetooth. This means that the data is available in real time for further processing.

The software we offer for individual application development is an open source demo version and an SDK file. The SDK file is available for the C# programming language and contains all necessary resources for specific application development.

On the one hand, the open source demo serves to demonstrate the reading and writing of RFID tags; on the other hand, it offers application developers a good basis for customised reader programming.

The MC 92N0ex-IS can be retrofitted with the RFID option in the factory. It cannot be retrofitted by the customer himself.

Features

- International approvals for global usability
- RFID/UHF with a large reading range
- RFID reader and scanner in one device
- WLAN radio standard IEEE 802.11 a/b/g/n
- Easy battery changing in the Ex area
- Expanded storage capacity with replaceable SD card
- Various versions of replaceable keyboards
- Service contracts

Explosion protection

ATEX Ex protection type
Ⓔx II 2G Ex q [ib] IIC T4 Gb
Ⓔx II 2G Ex q [ib] IIB T4 Gb
(with mounted antenna)

Certification
PTB 13 ATEX 2019 X

For further details see IECEx Certificate of Conformity.

IECEx Ex protection type
Ex q [ib] IIC T4 Gb
Ex q [ib] IIB T4 Gb
(with mounted antenna)

Certification
IECEx PTB13.0043X

For further details see IECEx Certificate of Conformity.

Other variants are available for:
- USA, Canada

Technical data

Keyboard version
- 28 keys, numeric
- 43 keys, numeric with (F) function keys
- 53 keys, alphanumeric

Display
3.7" VGA colour display
with touchscreen 480 x 640 pixels

Barcode options
SE 965: 1D-Standard Range Scan Engine
Reading range: up to 2.5 m

SE 4500: 1D-/2D Imager Engine
Reading range: up to 60 cm

only for MC 92N0ex-G
SE 1524: 1D-Long Range Scan Engine
Reading range: up to 12 m
Other variants available, see user's manual.

Dimensions (height x width x depth)
MC 92N0ex-K
231 mm x 115 mm x 105 mm
(9.1 inch x 4.5 inch x 4.1 inch)

MC 92N0ex-G
231 mm x 115 mm x 193 mm
(9.1 inch x 4.5 inch x 7.6 inch)

Weight
MC 92N0ex-K
approx. 1320 g (approx. 46 oz)

MC 92N0ex-G
approx. 1400 g (approx. 49 oz)

Ambient temperature
-20 °C to +40 °C (-4 °F to +104 °F)

Storage temperature
-40 °C to +70 °C (-40 °F to +158 °F)

Charging temperature
0 °C to +40 °C (+32 °F to +104 °F)

Humidity
5 % to 95 % (non-condensing)

Protection class (EN 60529)
IP 54

Prozessor
TI OMAC 4430 dual-core® processor/1 GHz

Memory
1 GB/2 GB flash RAM/ROM with the option of expansion with SD card: up to 32 GB

Operating system
Windows Embedded Handheld 6.5.3
or Windows CE 7.0

Power supply
Li-ion battery 17-A1Z0-0001
with 7.4 V/2200 mAh
Battery can be changed in the Ex area!

Backup battery
Ni-MH battery (rechargeable)
2.4 V/15 mAh

Interfaces
- RS232
- USB

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Audio System
Integrated microphone and loudspeaker

Voice support
Voice over IP

Wireless data communication (WLAN)

Radio standard
IEEE 802.11a/b/g/n

Data rate/frequency range
IEEE802.11a: up to 54 Mbit/s - 5 GHz
IEEE802.11b: up to 11 Mbit/s - 2.4 GHz
IEEE802.11g: up to 54 Mbit/s - 2.4 GHz
IEEE802.11n: up to 600 Mbit/s - 2.4/5 GHz

Output power
100 mW (Germany and International)

Antenna
Integrated in the device

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

Bluetooth (WPAN)

Bluetooth version 2.1 with BT Explorer (including manager)

Max. data rate
2.1 Mbit/s

Antenna
Integrated in the device

LF Reader extended		
Supported standards		HITAG S256, HITAG S 2 kbit, HITAG 1, HITAG 2, Q5, ATA5567, EM4305, HDX - RO, HDX (Multipage), EM4xxx (UNIQUE), FDX-B, BDE, ISO 117845, ISO Animal, EM 4450/4550, EM4xxx (UNIQUE), FDX-B, BDE, ISO 11784/5, ISO Animal
Nominal reading/writing distance		approx. 5 cm/approx. 1.9 inches
Antenna		ferrite antenna or air coil antenna
Frequency range		125/134 kHz
Transmitting power		100 mW ± 2dB
HF Reader extended		
Supported standards		HF ISO 15693 e.g. I-Code SLI, Tag-IT HFI, my-d vicinity, STM LRI512 HF ISO 14443 e.g. mifare, mifare Ultra Light, my-d proximity, I-Code 1 (optional)
Nominal reading/writing distance HF ISO 15693 HF ISO 14443		 approx. 7 to 12 cm/approx. 2.75 to 4.72 inch approx. 1 to 6 cm/approx. 0.4 to 2.36 inch (with tags in cheque card format)
Antenna		integrated
Frequency range		13.56 MHz
Transmitting power		250 mW ± 2 dB
UHF Reader extended		
Supported standards		EPC Class 1 Gen 2 tag
Nominal reading range		approx. 30 to 50 cm/approx. 11.8 to 19.6 inch
Nominal writing distance		approx. 30 to 50 cm/approx. 11.8 to 19.6 inch
Antenna		integrated
Frequency range	Europa USA	865.6 to 867.5 MHz (EN 302 208) 902.0 to 928.0 MHz (FCC CFR 47 part 15.247)
Transmitting power		200 mW ± 2dB
UHF Reader extended with mounted antenna		
Supported standards		EPC Class 1 Gen 2 tag
Nominal reading range		approx. 150 cm/approx. 59 inches
Nominal writing distance		approx. 150 cm/approx. 59 inches
Antenna		external (UPM Raflatac)
Frequency range	Europa USA	865.6 to 867.5 MHz (EN 302 208) 902.0 to 928.0 MHz (FCC CFR 47 part 15.247)
Transmitting power		200 mW ± 2dB

Selection chart MC 92N0ex-IS with extended RFID Reader

Barcode options	Code no.	RFID options	Code no.	Version	Code no.	Operating system	Code no.
SE 965 1D-Standard Range Scan Engine	A	RFID LF Reader	2	28 keys, numeric	A	Windows Embedded Handheld 6.5.3	Q
		RFID HF Reader	4	43 keys, numeric with (F) function keys	F		
SE 4500-SR 1D-/2D Imager Engine	3	RFID UHF (US) Reader	5	53 keys, alphanumeric	E		
		RFID UHF (EU) Reader	6	53 keys, alphanumeric with layout for VT emulation	G	Windows CE 7.0	Y
SE 1524 1D Long Range Scan Engine (only MC 92N0ex-G)	J	RFID UHF (US) Reader and mounted antenna	7	53 keys, alphanumeric with layout for 3270 emulation	H		
		RFID UHF (EU) Reader and mounted antenna	8	53 keys, alphanumeric with layout for 5250 emulation	J		

Complete order no.

MC 92N0ex **Version GUN** **17-A1A3-RG** ☐☐ **/SY** ☐☐ **A600**

Version BRICK **17-A1A3-RK** ☐☐ **/SY** ☐☐ **A600** including Li-ion battery (1 piece).

Note: All variants without accessories. You will find the accessories with order details on the accessories pages.
Please insert correct code. Technical data subject to change without notice.

03-0330-0781-01/2014-BAT-362915/2

MC 92NO^{ex}-G

with 1D-Long Range Scan Engine
or 1D-/2D Imager Engine

Features

- International approvals for global usability
- Barcode capture up to 12 m
- WLAN radio standard IEEE 802.11 a/b/g/n
- Expanded storage capacity with replaceable SD card
- Various versions of replaceable keyboards
- Based on MC92NO from Motorola
- Service contracts

Description

The MC 92NO^{ex}-G Mobile Computer with its pistol grip is a robust device for reliable barcode scanning in hazardous (potentially explosive) areas.

The scan trigger is conveniently positioned at the pistol grip. Thus barcodes can be captured with only one hand. The integrated radio module enables real time data access to your host system.

The MC 92NO^{ex}-G combines the strength of Microsoft's Pocket PC platform with the power of the TI OMAC 4430 dual-core® processor with 1 GHz.

A further highlight is the large easy-to-read 3.7" VGA colour display with touchscreen technology. The MC 92NO^{ex}-G is working with the IEEE 802.11a/b/g/n radio standard.

Market	Applications	Users
Automobile industry suppliers of paintwork, for paint shops, etc. **Food and beverages** suppliers of aromatic substances, etc. **Petrochemicals** from production through further processing to delivery **Pharmaceuticals** suppliers of the individual components required for the production of e. g. medication	Material flow monitoring Production control Supplier chain management Incoming/outgoing goods, inventory management Safety tests Spare parts tracking Maintenance/repair work Workshop communication Conformity verification Task allocation	**Dispatch, receiving and stock management departments** Personnel who have been instructed on the handling of potentially explosive substances **Maintenance and repair** Personnel who have been instructed on work in potentially explosive substances. **Production area** Personnel who have been instructed on the handling of potentially explosive substances.

Explosion protection

UL **Ex protection type**
Class I Div 2 Group A, B, C, D T6
Class II Div 2 Group F, G
Class III

Certification
UL File E321557

ATEX **Ex protection type**
Ⓔx II 3G Ex nA IIC T6 Gc
Ⓔx II 3D Ex tc IIIC T80 °C Dc
-20 °C ≤ T_a ≤ +50 °C

Certification
B1-A2A3-7C0001, B1-A2A3-7C0002

Technical data

Keyboard version
- 28 keys, numeric
- 43 keys, numeric with (F) function keys
- 53 keys, alphanumeric

Display
3.7" VGA colour display
with touchscreen 480 x 640 pixels

Barcode options
SE 1524: 1D-Long Range Scan Engine
Reading range: up to 12 m

SE 4500-SR: 1D/2D Imager Engine
Reading range: up to 60 cm

Other variants available, see user's manual.

Dimensions (height x width x depth)
231 mm x 91 mm x 193 mm
9.1 inch x 3.6 inch x 7.6 inch

Weight
approx. 765 g
approx. 27 oz

Ambient temperature
-20 °C to +50 °C
-4 °F to +122 °F

Storage temperature
-40 °C to +70 °C
-40 °F to +158 °F

Charging temperature
0 °C to +40 °C
+32 °F to +104 °F

Humidity
5 % to 95 % (non-condensing)

Protection class (EN 60529)
IP 64

Processor
TI OMAC 4430 dual-core® processor/1 GHz

Memory
1 GB/2 GB flash RAM/ROM with the option of expansion with SD card: up to 32 GB

Operating system
Windows Embedded Handheld 6.5.3
or Windows CE 7.0

Power supply
Li-ion battery B7-A2Z0-0006
with 7.4 V/2200 mAh

03-0330-0766-01/2014-BAT-357389/1

Backup battery
Ni-MH battery (rechargeable)
2.4 V/15 mAh

Interfaces
- RS232
- USB

Application development
EMDK available from Motorola Solutions Homepage

Audio System
Integrated microphone and loudspeaker

Voice support
Voice over IP

Wireless data communication (WLAN)

Radio standard
IEEE 802.11a/b/g/n

Data rate/frequency range
IEEE802.11a: up to 54 Mbit/s - 5 GHz
IEEE802.11b: up to 11 Mbit/s - 2.4 GHz
IEEE802.11g: up to 54 Mbit/s - 2.4 GHz
IEEE802.11n: up to 600 Mbit/s - 2.4/5 GHz

Output power
100 mW

Antenna
Integrated in the device

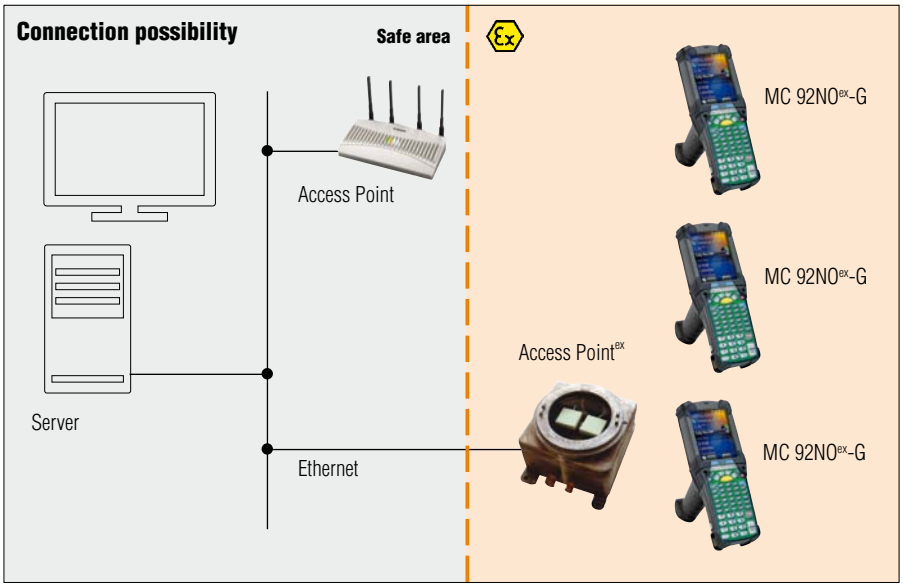
Note
The respective radio frequencies and usable channels depend on the country-specific regulations.

Bluetooth (WPAN)

Bluetooth version 2.1 with EDR (including manager)

Max. data rate
2.1 Mbit/s

Antenna
Integrated in the devicet



The MC 92NO^{ex}-G Mobile Computer with the 1D-Long Range Scan Engine or the 1D-/2D Imager Engine recognises the following barcodes:

1D-Codes:

Code 11	Interleaved 2 of 5
Code 39	MSI
Code 93	UPCA
Code 128	UPCE
Codabar	UPC/EAN supplementals
Coupon Code	Trioptic 39
Chinese 2 of 5	RSS-14
Discrete 2 of 5	RSS Expanded
EAN-8	RSS Limited
EAN-13	Webcode

2D-Codes: (only with 1D-/2D-Imager Engine)

Aztec	(Macro) Micro PDF-417
Australian 4-state	Micro PDF-417 PDF-417
Canadian 4-state	microQR
Composite AB	Maxi Code
Composite C	QR Code
PDF-417	TLC39
Data Matrix	UK 4-state
Dutch Kix	US Planet
Japanese 4-state	US Postnet
Macro PDF-417	USPS 4-state (US4CB)

Selection chart

Barcode options	Code no.	Version	Code no.	Operating system	Code no.
SE 1524 1D-Long Range Scan Engine	**J**	28 keys, numeric	**A**	Windows Embedded Handheld 6.5.3	**Q**
		43 keys, numeric with (F) function keys	**F**		
		53 keys, alphanumeric	**E**		
SE 4500-SR 1D-/2D Imager Engine	**3**	53 keys, alphanumeric with layout for VT emulation	**G**	Windows CE 7.0	**Y**
		53 keys, alphanumeric with layout for 3270 emulation	**H**		
		53 keys, alphanumeric with layout for 5250 emulation	**J**		

Complete order no. B7-A2A4-0G ☐ 0/SY ☐ ☐ A600
MC 92NO^{ex}-G including Li-ion battery (1 piece).

Note: All variants without accessories. You will find the accessories with order details on the accessories pages.
Please insert correct code. Technical data subject to change without notice.

03-0330-0766-01/2014-BAT-357389/2

MC 92NO^{ex}-K

with 1D-Standard Range Scan Engine
or 1D-/2D Imager Engine

Features

- International approvals for global usability
- WLAN radio standard IEEE 802.11 a/b/g/n
- Expanded storage capacity with replaceable SD card
- Various versions of replaceable keyboards
- Based on MC92NO from Motorola
- Service contracts

Description

The MC 92NO^{ex}-K Mobile Computer is a robust device for reliable barcode scanning in hazardous (potentially explosive) areas.

The scan trigger is positioned in such a way that barcodes can be captured very conveniently. The integrated radio module enables real time data access to your host system.

The MC 92NO^{ex}-K combines the strength of Microsoft's Pocket PC platform with the power of the TI OMAC 4430 dual-core® processor with 1 GHz.

A further highlight is the large easy-to-read 3.7" VGA colour display with touchscreen technology. The MC 92NO^{ex}-K is working with the IEEE 802.11a/b/g/n radio standard.

Market	Applications	Users
Automobile industry suppliers of paintwork, for paint shops, etc. **Food and beverages** suppliers of aromatic substances, etc. **Petrochemicals** from production through further processing to delivery **Pharmaceuticals** suppliers of the individual components required for the production of e. g. medication	Material flow monitoring Production control Supplier chain management Incoming/outgoing goods, inventory management Safety tests Spare parts tracking Maintenance/repair work Workshop communication Conformity verification Task allocation	**Dispatch, receiving and stock management departments** Personnel who have been instructed on the handling of potentially explosive substances **Maintenance and repair** Personnel who have been instructed on work in potentially explosive substances. **Production area** Personnel who have been instructed on the handling of potentially explosive substances.

Explosion protection

UL Ex protection type
Class I Div 2 Group A, B, C, D T6
Class II Div 2 Group F, G
Class III

Certification
UL File E321557

ATEX Ex protection type
(Ex) II 3G Ex nA IIC T6 Gc
(Ex) II 3D Ex tc IIIC T80 °C Dc
-20 °C ≤ T_a ≤ +50 °C

Certification
B1-A2A3-7C0001, B1-A2A3-7C0002

Technical data

Keyboard version
- 28 keys, numeric
- 43 keys, numeric with (F) function keys
- 53 keys, alphanumeric

Display
3.7" VGA colour display
with touchscreen 480 x 640 pixels

Barcode options
SE 965: 1D-Standard Range Scan Engine
Reading range: up to 2.5 m

SE 4500-SR: 1D/2D Imager Engine
Reading range: up to 60 cm
Other variants available, see user's manual.

Dimensions (height x width x depth)
231 mm x 91 mm x 59 mm
9.1 inch x 3.6 inch x 2.3 inch

Weight
approx. 700 g
approx. 22 oz

Ambient temperature
-20 °C to +50 °C
-4 °F to +122 °F

Storage temperature
-40 °C to +70 °C
-40 °F to +158 °F

Charging temperature
0 °C to +40 °C
+32 °F to +104 °F

Humidity
5 % to 95 % (non-condensing)

Protection class (EN 60529)
IP 64

Processor
TI OMAC 4430 dual-core® processor/1 GHz

Memory
1 GB/2 GB flash RAM/ROM with the option of expansion with SD card: up to 32 GB

Operating system
Windows Embedded Handheld 6.5.3
or Windows CE 7.0

Power supply
Li-ion battery B7-A2Z0-0006
with 7.4 V/2200 mAh

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Backup battery
Ni-MH battery (rechargeable)
2.4 V/15 mAh

Interfaces
- RS232
- USB

Application development
EMDK available from Motorola Solutions Homepage

Audio System
Integrated microphone and loudspeaker

Voice support
Voice over IP

Wireless data communication (WLAN)

Radio standard
IEEE 802.11a/b/g/n

Data rate/frequency range
IEEE802.11a: up to 54 Mbit/s - 5 GHz
IEEE802.11b: up to 11 Mbit/s - 2.4 GHz
IEEE802.11g: up to 54 Mbit/s - 2.4 GHz
IEEE802.11n: up to 600 Mbit/s - 2.4/5 GHz

Output power
100 mW

Antenna
Integrated in the device

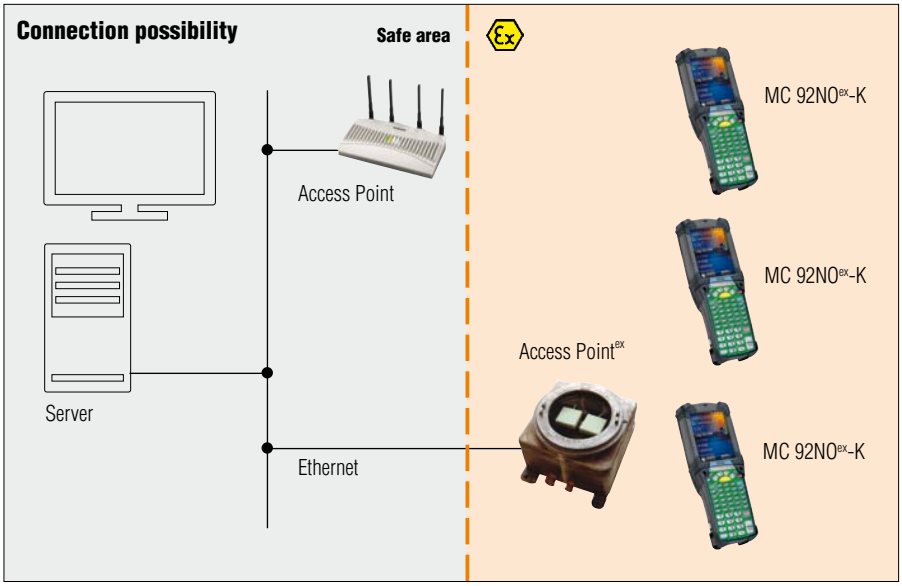
Note
The respective radio frequencies and usable channels depend on the country-specific regulations.

Bluetooth (WPAN)

Bluetooth Version 2.1 mit EDR (inklusive Manager)

Max. data rate
2.1 Mbit/s

Antenna
Integrated in the device



The MC 92NO^{ex}-G Mobile Computer with the 1D-Standard Range Scan Engine or the 1D-/2D Imager Engine recognises the following barcodes:

1D-Codes:

Code 11	Interleaved 2 of 5
Code 39	MSI
Code 93	UPCA
Code 128	UPCE
Codabar	UPC/EAN supplementals
Coupon Code	Trioptic 39
Chinese 2 of 5	RSS-14
Discrete 2 of 5	RSS Expanded
EAN-8	RSS Limited
EAN-13	Webcode

2D-Codes: (only with 1D-/2D Imager Engine)

Aztec	(Macro) Micro PDF-417
Australian 4-state	Micro PDF-417 PDF-417
Canadian 4-state	microQR
Composite AB	Maxi Code
Composite C	QR Code
PDF-417	TLC39
Data Matrix	UK 4-state
Dutch Kix	US Planet
Japanese 4-state	US Postnet
Macro PDF-417	USPS 4-state (US4CB)

Selection chart

Barcode options	Code no.	Version	Code no.	Operating system	Code no.
SE 965 1D-Standard Range Scan Engine	**A**	28 keys, numeric	**A**	Windows Embedded Handheld 6.5.3	**Q**
		43 keys, numeric with (F) function keys	**F**		
		53 keys, alphanumeric	**E**		
SE 4500-SR 1D-/2D Imager Engine	**3**	53 keys, alphanumeric with layout for VT emulation	**G**	Windows CE 7.0	**Y**
		53 keys, alphanumeric with layout for 3270 emulation	**H**		
		53 keys, alphanumeric with layout for 5250 emulation	**J**		

Complete order no. B7-A2A4-0K ☐ 0/SY ☐ ☐ A600
MC 92NO^{ex}-K including Li-ion battery (1 piece).

Note: All variants without accessories. You will find the accessories with order details on the accessories pages.
Please insert correct code. Technical data subject to change without notice.

03-0330-0767-01/2014-BAT-357390/2

MC 92N0ex-G and -K with extended RFID Reader

Description

This unique idea enables a combination of state-of-the-art technologies and so it was possible to integrate barcode data capture and RFID technology in this one device.

Thanks to the modular keyboard and colour display, the data can be processed directly on the mobile computer. The data is transmitted to other corporate divisions via WLAN or Bluetooth. This means that the data is available in real time for further processing.

The software we offer for individual application development is an open source demo version and an SDK file. The SDK file is available for the C# programming language and contains all necessary resources for specific application development.

On the one hand, the open source demo serves to demonstrate the reading and writing of RFID tags; on the other hand, it offers application developers a good basis for customised reader programming.

The MC 92N0ex-IS can be retrofitted with the RFID option in the factory. It cannot be retrofitted by the customer himself.

Features

- International approvals for global usability
- RFID/UHF with a large reading range
- RFID reader and scanner in one device
- WLAN radio standard IEEE 802.11 a/b/g/n
- Easy battery changing in the Ex area
- Expanded storage capacity with replaceable SD card
- Various versions of replaceable keyboards
- Service contracts

Explosion protection

UL Ex protection type
Class I Div. 2 Groups A, B, C, D T6
Class II Div. 2 Groups F, G
Class III

Certification
UL File E321557

ATEX Ex protection type
Ⓔx II 3G Ex nA IIC T6 Gc
Ⓔx II 3D Ex tc IIIC T80 °C Dc
-20 °C ≤ T_a ≤ +50 °C

Ⓔx II 3G Ex nA IIB T6 Gc
Ⓔx II 3D Ex tc IIIB T80 °C Dc
-20 °C ≤ T_a ≤ +50 °C
(with mounted antenna)

Certification
B1-A2A3-7C0001, B1-A2A3-7C0002

Technical data

Keyboard version
- 28 keys, numeric
- 43 keys, numeric with (F) function keys
- 53 keys, alphanumeric

Display
3.7" VGA colour display
with touchscreen 480 x 640 pixels

Barcode options
SE 965: 1D-Standard Range Scan Engine
Reading range: up to 2.5 m

SE 4500: 1D-/2D Imager Engine
Reading range: up to 60 cm

only for MC 92N0ex-G
SE 1524: 1D-Long Range Scan Engine
Reading range: up to 12 m
Other variants available, see user's manual.

Dimensions (height x width x depth)
MC 92N0ex-K
231 mm x 115 mm x 105 mm
(9.1 inch x 4.5 inch x 4.1 inch)

MC 92N0ex-G
231 mm x 115 mm x 193 mm
(9.1 inch x 4.5 inch x 7.6 inch)

Weight
MC 92N0ex-K
approx. 980 g (approx. 34.5 oz)

MC 92N0ex-G
approx. 1120 g (approx. 39.5 oz)

Ambient temperature
-20 °C to +50 °C (-4 °F to +122 °F)

Storage temperature
-40 °C to +70 °C (-40 °F to +158 °F)

Charging temperature
0 °C to +40 °C (+32 °F to +104 °F)

Humidity
5 % to 95 % (non-condensing)

Protection class (EN 60529)
IP 64

Prozessor
TI OMAC 4430 dual-core® processor/1 GHz

Memory
1 GB/2 GB flash RAM/ROM with the option of expansion with SD card: up to 32 GB

Operating system
Windows Embedded Handheld 6.5.3
or Windows CE 7.0

Power supply
Li-ion battery B7-A2Z0-0006
with 7.4 V/2200 mAh

Backup battery
Ni-MH battery (rechargeable)
2.4 V/15 mAh

Interfaces
- RS232
- USB

03-0330-0782-01/2014-BAT-362984/1

Audio System
Integrated microphone and loudspeaker

Voice support
Voice over IP

Wireless data communication (WLAN

Radio standard
IEEE 802.11a/b/g/n

Data rate/frequency range
IEEE802.11a: up to 54 Mbit/s - 5 GHz
IEEE802.11b: up to 11 Mbit/s - 2.4 GHz
IEEE802.11g: up to 54 Mbit/s - 2.4 GHz
IEEE802.11n: up to 600 Mbit/s - 2.4/5 GHz

Output power
100 mW (Germany and International)

Antenna
Integrated in the device

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

Bluetooth (WPAN)

Bluetooth version 2.1 with BT Explorer (including manager)

Max. data rate
2.1 Mbit/s

Antenna
Integrated in the device

LF Reader extended and internal		
Supported standards		HITAG S256, HITAG S 2 kbit, HITAG 1, HITAG 2, Q5, ATA5567, EM4305, HDX - RO, HDX (Multipage), EM4xxx (UNIQUE), FDX-B, BDE, ISO 117845, ISO Animal, EM 4450/4550, EM4xxx (UNIQUE), FDX-B, BDE, ISO 11784/5, ISO Animal
Nominal reading/writing distance		approx. 5 cm/approx. 1.9 inches
Antenna		ferrite antenna or air coil antenna
Frequency range		125/134 kHz
Transmitting power		100 mW ± 2dB
HF Reader extended		
Supported standards		HF ISO 15693 e.g. I-Code SLI, Tag-IT HFI, my-d vicinity, STM LRI512 HF ISO 14443 e.g. mifare, mifare Ultra Light, my-d proximity, I-Code 1 (optional)
Nominal reading/writing distance HF ISO 15693 HF ISO 14443		 approx. 7 to 12 cm/approx. 2.75 to 4.72 inch approx. 1 to 6 cm/approx. 0.4 to 2.36 inch (with tags in cheque card format)
Antenna		integrated
Frequency range		13.56 MHz
Transmitting power		250 mW ± 2 dB
UHF Reader extended		
Supported standards		EPC Class 1 Gen 2 tag
Nominal reading range		approx. 30 to 50 cm/approx. 11.8 to 19.6 inch
Nominal writing distance		approx. 30 to 50 cm/approx. 11.8 to 19.6 inch
Antenna		integrated
Frequency range	Europa USA	865.6 to 867.5 MHz (EN 302 208) 902.0 to 928.0 MHz (FCC CFR 47 part 15.247)
Transmitting power		200 mW ± 2dB
UHF reader extended with mounted antenna		
Supported standards		EPC Class 1 Gen 2 tag
Nominal reading range		approx. 150 cm/approx. 59 inches
Nominal writing distance		approx. 150 cm/approx. 59 inches
Antenna		external (UPM Raflatac)
Frequency range	Europa USA	865.6 to 867.5 MHz (EN 302 208) 902.0 to 928.0 MHz (FCC CFR 47 part 15.247)
Transmitting power		200 mW ± 2dB

Selection chart MC 92N0ex-NI with extended and internal RFID Reader

Barcode options	Code no.	RFID options	Code no.	Version	Code no.	Operating system	Code no.
none**	0	RFID LF Reader internal*	1	28 keys, numeric	A	Windows Embedded Handheld 6.5.3	Q
		RFID LF Reader	2	43 keys, numeric with (F) function keys	F		
SE 965 1D-Standard Range Scan Engine	A	RFID HF Reader	4	53 keys, alphanumeric	E		
		RFID UHF (US) Reader	5	53 keys, alphanumeric with layout for VT emulation	G		
SE 4500-SR 1D-/2D Imager Engine	3	RFID UHF (EU) Reader	6	53 keys, alphanumeric with layout for 3270 emulation	H	Windows CE 7.0	Y
SE 1524 1D Long Range Scan Engine (only MC 92N0ex-G)	J	RFID UHF (US) Reader and mounted antenna	7	53 keys, alphanumeric with layout for 5250 emulation	J		
		RFID UHF (EU) Reader and mounted antenna	8				

* available only without the scan engine

** combinable only with internal RFID LF reader.

Complete order no. MC 92N0ex

Version GUN B7-A2A4-RG □□/SY □□A600

Version BRICK B7-A2A4-RK □□/SY □□A600

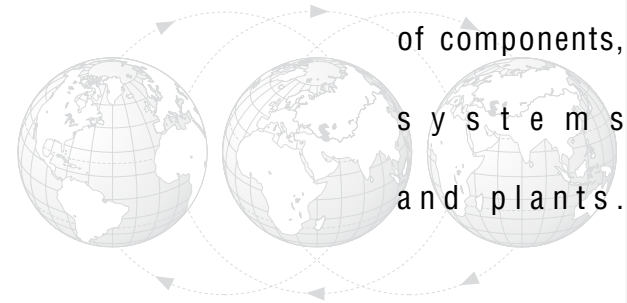
including Li-ion battery (1 piece).

Note: All variants without accessories. You will find the accessories with order details on the accessories pages.
Please insert correct code. Technical data subject to change without notice.

03-0330-0782-01/2014-BAT-362984/2

BARTEC

BARTEC protects people and the environment by the safety of components, systems and plants.



BARTEC Vertrieb
Deutschland GmbH

Max-Eyth-Straße 16
97980 Bad Mergentheim

Phone: +49 7931 597-0
Fax: +49 7931 597-119

bartec-vd@bartec.de
www.bartec-group.com

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