

MC27^{ex}-NI Mobile Computer

Quick Start Guide



Quick Start Guide - Translation

MC27^{ex}-NI

Mobile Computer

Type B7-A2N* - ****/*****

ATEX / IECEx / UKEX Zone 2 / 22

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1 Basic safety information

1.1 Information on this Quick Start Guide



Read carefully before putting the devices into operation.

The Quick Start Guide is a fixed part of the product. It must be kept in the direct vicinity of the device and the installation, operating and service staff must have access to it at all times.

The Quick Start Guide contains important information, safety instructions and test certificates which are necessary for the perfect function of the device in operation.

The Quick Start Guide is directed at all individuals concerned with the commissioning, handling and servicing of the product. The applicable guidelines and standards for areas with gas and dust atmosphere (EN/IEC 60079-17, EN/IEC 60079-19) must be observed when conducting this work.

Knowledge of the safety and warning information in this Quick Start Guide and the strict compliance with it is essential for safe installation and commissioning. Accidents, injuries and material damage can be avoided by circumspect handling and systematically following the instructions.

The examples, tables, and figures provided in this Quick Start Guide are for illustration purposes. Due to the different requirements of the respective application, the BARTEC company cannot assume responsibility or liability for actual use based on the examples and figures.

The BARTEC company reserves the right to carry out technical changes at any time.

In no event will BARTEC company be responsible or liable for indirect or consequential damages resulting from the use or application of this Quick Start Guide.

Safety and warning information is particularly emphasised in this Quick Start Guide and marked by symbols.

DANGER

DANGER describes a directly imminent danger. If not avoided, death or severe injury will be the consequence.

WARNING

WARNING describes a possibly imminent danger. If not avoided, death or severe injury may be the consequence.

CAUTION

CAUTION describes a possibly imminent danger. If not avoided, mild or slight injury may be the consequence.

ATTENTION

ATTENTION describes a possibly damaging situation. If not avoided, the plant or objects in its vicinity may be damaged.



Important information on effective, economical & environmentally compliant handling.

1.1.1 Languages

The original Quick Start Guide with safety information is written in German. All other available languages are translations of the original Quick Start Guide.

The Quick Start Guide is available in German and English. If further languages are required, these must be requested from BARTEC or stated on placing an order.

1.1.2 Changes in the document

BARTEC reserves the right to change the content of this document without notification. No warranty is assumed for the correctness of the information. In cases of doubt, the German safety instructions apply because it is not possible to rule out errors of translation or printing. In the case of legal disputes our [General Terms and Conditions for Deliveries and Services](#) apply.

The current versions of the datasheets, user manual, certificates and declarations of conformity can be downloaded from www.bartec.com or may be requested directly from BARTEC GmbH.

1.1.3 Registered trademarks

Bluetooth®	is a registered trademark of Bluetooth Special Interest Group
Android™	The "Android" name, the Android logo, the Google Play trademark and other Google trademarks are the property of Google LLC.
WiFi	is a registered trademark of Wi-Fi-Alliance, an association of manufacturers founded in 1999.

1.2 Handling the product

The product described in this Quick Start Guide left the factory in a perfect and tested state in terms of safety. To maintain this state and to achieve a perfect and safe operation of this product, it may only be operated in the manner described by the manufacturer. In addition, the perfect and safe operation of this product requires correct transportation, proper storage and careful operation.

The safe and perfect handling of the Mobile Computer is a prerequisite for its perfect and correct functioning.

1.3 Intended use

1.3.1 Exclusive purpose

The Mobile Computer series is a handheld piece of electrical equipment. It serves the purpose of the mobile recording, processing and/or radio transmission of data within hazardous areas.

It is used exclusively in combination with devices which comply with the requirements placed on the overvoltage category I.

The admissible operating data of the device used must be considered.

1.3.2 Unintended use

Any other use is unintended and may lead to damage and accidents. The manufacturer shall not be liable for any use extending beyond the exclusive purpose.

1.4 Duties of the operator

The operator undertakes to only permit persons to work with the Mobile Computer who

- are acquainted with the basic regulations on safety and accident prevention, and who have been inducted in the use of the Mobile Computer,
- have read and understood the documentation, the safety chapter and the warnings.

The operator checks that the safety and accident prevention regulations applicable to the respective case of use have been observed.

1.5 Safety information

- Do not dry wipe or clean devices in hazardous areas!
- Do not open devices in hazardous areas.
- Do not replace or charge battery in hazardous areas.
- General statutory provisions or guidelines on occupational health and safety, accident prevention provisions and environmental protection laws must be heeded, e.g. Operational Safety Ordinance (BetrSichV) and nationally applicable ordinances.
- Use suitable clothing and shoes with respect to the danger of hazardous electrostatic charges.
- Avoid heat influences outside the specified temperature range.
- Protect device from external influences! Do not expose device to caustic/aggressive liquids, vapours or spray. In the case of malfunction or damaged enclosure, remove the device immediately from the hazardous area and bring it to a safe place.

1.6 Maintenance

The pertinent erection and operating provisions for electrical systems must be observed! (e.g. Directive 2014/34/EU, BetrSichV and nationally applicable ordinances EN/IEC 60079-14 and the series DIN VDE 0100)!

Observe the national waste disposal regulations when disposing of the devices.

1.6.1 Servicing

No constant servicing will be necessary if operated correctly under consideration of the assembly instructions and environmental conditions.

1.6.2 Inspection

According to EN/IEC 60079-17 and EN/IEC 60079-19 the operator of electrical systems in hazardous areas is obliged to have these inspected by an electrician to ensure correct condition.

1.6.3 Repairs

Repairs to explosion-protected devices may only be performed by authorized personnel with original spare parts and according to the state of the art.

Therefore all repairs to the Mobile Computer have to be conducted by BARTEC.

Contact information and instructions for repair requests and processing can be found at:

bartec.com/service-support/returns-repair

Select "Automation and Enterprise Mobility"

- Procedure guide
- RMA Form

1.6.4 Commissioning

It must be checked that all components and documents are available before commissioning.

1.7 Labelling, test certificate, and standards

Labels on explosion protection and the test certificate are attached to the Mobile Computer. Labelling see Chapter: Technical data.

The guidelines and standards applicable to the Mobile Computer for devices and protected systems for intended use in hazardous areas are provided in the Declaration of Conformity.

1.8 Warranty

WARNING

No changes or retrofits may be made without the written consent of the manufacturer.

If non-specified components are used, the explosion protection will no longer be guaranteed. In the case of externally procured parts, it is not guaranteed that these have been designed and manufactured in accordance with their load and requisite safety.

- ▶ Contact the manufacturer before any changes or retrofits to receive a release. Only use original spare and wearing parts.



The manufacturer shall exclusively assume the complete warranty only for spare parts ordered from him.

Our [General Terms and Conditions for Deliveries and Services](#) shall apply in principle. These shall be made available to the operator on signing of contract at the latest. Warranty and liability claims in the case of injury and damage to property shall be excluded if they are attributable to one or several of the following causes:

- Unintended use of the Mobile Computer.
- Incorrect handling
- Failure to observe the information in the Quick Start Guide and the user manual with respect to transport, storage, commissioning, operation and service.
- Independent structural changes
- Faulty monitoring of parts subject to wear and tear.
- Incorrectly performed repairs.
- Cases of disaster through the impact of foreign bodies and force majeure.

For the Mobile Computer, we offer a manufacturer warranty of one year starting from the date of transfer of risk, as defined in our [general terms and conditions](#).

For batteries and accessories, the manufacturer warranty period is 6 months from the transfer of risk.

This warranty covers all parts of the delivery and shall be restricted to the free replacement or repair of the defective parts in our Bad Mergentheim factory. For this purpose, any packaging supplied must be kept where possible. In the case of warranty, the goods must be returned to us after written agreement using an RMA form. There shall be no claim to repair at the sight of erection.

The information contained herein refers to the explosion-protected version of the Mobile Computer MC27^{ex}-NI.

This Quick Start Guide contains all important information on the subject of explosion protection.

Further product information on handling and commissioning can be found on the BARTEC support page: <https://automation.bartec.de/indexE.htm>

1.9 Co-applicable documents



All documents are available online from the following websites:

BARTEC: www.bartec.com or <http://automation.bartec.de/indexE.htm>

ZEBRA: www.zebra.com

In the event of an overlaps with Zebra, the instructions of BARTEC apply.

Document BARTEC	Explanation
Quick Start Guide Mobile Computer MC27^{ex}-NI	This Quick Start Guide describes the safety-related information, first use and further data of the Mobile Computer MC27 ^{ex} -NI.
Data sheet Mobile Computer MC27^{ex}-NI	This technical data sheet contains the most important explosion-relevant technical data as well as general technical data.
Document ZEBRA	Explanation
For MC2700 Mobile Computer <ul style="list-style-type: none"> ▪ Quick Start Guide (DE/EN) ▪ Product Reference Guide (EN) 	Instructions for commissioning, operating, configuring, programming and maintaining of the Mobile Computer.

1.10 Definition of terms

A few abbreviations are used in the documentation.

NI	=	Non Incendive is used as generic term for Zone 2 and Division 2 version
MC	=	Mobile Computer stands for the entire product series

1.11 Configuration



The devices are only supplied with preinstalled operating system.
 Customer software or further applications are not contained in the delivery.

This Quick Start Guide refers to the following configurations:

Configuration	Version
Processor	Qualcomm Snapdragon 660 Octa-Core, 1,8 GHz
Display	4" Color Display with 800 x 480 Pixel resolution
Memory	3 GB
Mass storage	32 GB
Operating system	The MC27 ^{ex} -NI is delivered by BARTEC according to the currently available Android version (for details see data sheet). <small>Android is a trademark of Google LLC.</small>
WAN	GSM/UMTS/LTE
WLAN	IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v
Bluetooth	Class 2, v5.0, Low Energy (BLE)
GPS	Integrated autonomous assisted GPS (A-GPS)
NFC	ISO14443 Typ A and B: FeliCa and ISO 15693 cards. P2P-mode and Card Emulation via Host (HCE) support
Scanner	SE4100-SR: 1D/2D standard range imager
Camera	13 MP camera on the back

2 Regulatory information

All BARTEC devices are designed to be compliant with the rules and regulations in locations they are sold and will be labeled as required.

Any changes or modifications to BARTEC equipment, not expressly approved by BARTEC, could void the user's authority to operate the equipment.

CAUTION

Only use BARTEC approved and NRTL-certified accessories, battery packs and battery charging stations. Do NOT attempt to charge damp/wet mobile computer or batteries. All components must be dry before connecting to an external power source.

2.1 Health and Safety Recommendations

2.1.1 Ergonomic Recommendations

In order to avoid or minimize the potential risk of ergonomic injury, always follow good ergonomic workplace practices. Consult with your local Health and Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

2.1.2 Restricted Use Locations

Remember to observe restrictions and obey all signs and instructions on the use of electronic devices in restricted use locations.

2.1.3 Safety in Hospitals and Aircraft



NOTE: Wireless devices transmit radio frequency energy that may affect medical electrical equipment and aircraft's operation. Wireless devices should be switched off wherever you are requested to do so in hospitals, clinics, healthcare facilities or by airline staff. These requests are designed to prevent possible interference with sensitive equipments.

2.1.4 Medical Devices

It is recommended that a minimum separation distance of 20 cm (8 inches) be maintained between a wireless device and a medical devices such as pacemakers, defibrillator, or other implantable devices to avoid potential interference with the medical device. Pacemaker users should keep the device at the opposite side of the pacemaker or turn OFF the device if suspected of interference.

Please consult your physician or the manufacturer of the medical device to determine if the operation of your wireless product may interfere with the medical device.

2.2 RF Exposure Guidelines

SAFETY INFORMATION

Reducing RF Exposure – Use Properly

Only operate the device in accordance with the instructions supplied.

The device complies with internationally recognized standards covering human exposure to electromagnetic fields.

Use only BARTEC tested and approved accessories to ensure RF exposure compliance. The use of third-party accessories may not comply with RF exposure compliance requirements and should be avoided.

2.2.1 LED Devices

Classified as 'EXEMPT RISK GROUP' according to IEC 62471:2006 and EN 62471:2008.
Pulse Duration: 22.8 ms or CW (MC2700 with SE4100)

2.2.2 Power Supply

WARNING - ELECTRICAL SHOCK

Use only a BARTEC approved, Certified ITE [LPS] power supply with appropriate electrical ratings. Use of alternative power supply will invalidate any approvals given to this unit and may be dangerous.

2.3 Batteries

2.3.1 Battery information

This information applies to BARTEC approved batteries.

CAUTION

Risk of explosion if battery is replaced by an incorrect type. Dispose of batteries according to instructions. Use only BARTEC approved batteries. Accessories which have battery charging capability are approved for use with the following battery models:
Standard battery – Type B7-A2Z0-0081 (3.6 V / 3300 mAh)

BARTEC approved rechargeable batteries are designed and constructed to the highest standards within the industry.

However, there are limitations as to how long a battery can operate or be stored before needing replacement. Many factors affect the actual life cycle of a battery pack such as heat, cold, harsh environmental conditions, and severe drops.

When batteries are stored over six months, some irreversible deterioration in overall battery quality may occur. Store batteries at half charge in a dry, cool place, removed from the equipment to prevent loss of capacity, rusting of metallic parts, and electrolyte leakage. When storing batteries for one year or longer, the charge level should be verified at least once a year and charged to half charge.

Replace the battery when a significant loss of run time is detected.

2.3.2 Battery Safety Guidelines



IMPORTANT – SAFETY INSTRUCTIONS – SAVE THESE INSTRUCTIONS

WARNING

When using this product basic safety precautions should always be followed, including the following:

The area in which the units are charged should be clear of debris and combustible materials or chemicals. Particular care should be taken where the device is charged in a non-commercial environment.

- Read all the instructions before using the product.
 - Follow battery usage, storage, and charging guidelines found in the user's guide.
 - Improper battery use may result in a fire, explosion, or other hazard.
-
- To charge the mobile device battery, the battery and charger temperatures must be between 0°C and +40°C (+32°F and +104°F).
 - Do not use incompatible batteries and chargers. Use of an incompatible battery or charger may present a risk of fire, explosion, leakage, or other hazard. If you have any questions about the compatibility of a battery or a charger, contact us.
 - Do not disassemble or open, crush, bend or deform, puncture, or shred. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion, or risk of injury.
 - Severe impact from dropping any battery-operated device on a hard surface could cause the battery to overheat.
 - Do not short circuit a battery or allow metallic or conductive objects to contact the battery terminals.
 - Do not modify, disassemble, or remanufacture, attempt to insert foreign objects into the battery, immerse or expose to water, rain, snow or other liquids, or expose to fire, explosion, or other hazard.
 - Do not leave or store the equipment in or near areas that might get very hot, such as in a parked vehicle or near a radiator or other heat source. Do not place battery into a microwave oven or dryer.
 - To reduce the risk of injury, close supervision is necessary when used near children.
 - Please follow local regulations to promptly dispose of used re-chargeable batteries.
 - Do not dispose of batteries in fire. Exposure to temperatures over 100°C (212°F) may cause explosion.
 - Seek medical advice immediately if a battery has been swallowed.
 - In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice.

2.4 CE-Marking and European Economic Area (EEA)

2.4.1 Statement of Compliance

BARTEC hereby declares that this radio equipment is in compliance with Directives 2014/53/EU and 2011/65/EU.

Any radio operation limitations within EEA countries are identified in the EU Declaration of Conformity.

2.5 United States and Canada Regulatory

2.5.1 Radio Frequency Interference Notices

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received including interference that may cause undesired operation.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:



- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

2.5.2 Radio Frequency Interference Requirements – Canada

Innovation, Science and Economic Development Canada ICES-003 Compliance Label:
CAN ICES-3([B])/NMB-3([B])

This device complies with Innovation, Science and Economic Development Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et*
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radio électrique subi même si le brouillage est susceptible d'en compromettre le fonctionnement.*

This device is restricted to indoor use when operating in the 5150 to 5350 MHz frequency range.

Lorsqu'il fonctionne dans la plage de fréquences 5 150- 5350 MHz, cet appareil doit être utilisé exclusivement en extérieur.

2.5.3 RF Exposure Requirements - FCC and ISED

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated in compliance with the FCC RF emission guidelines. SAR information on this device is on file with the FCC and can be found under www.fcc.gov/oet/ea/fccid.

Handheld Devices

To satisfy RF exposure requirements, this device must operate with a minimum separation distance of 1 cm or more from a user's body and nearby persons.

Pour satisfaire aux exigences d'exposition aux radio fréquences, cet appareil doit fonctionner avec une distance de séparation minimale de 1 cm ou plus de corps d'une personne.

Co-located Statement

To comply with FCC RF exposure compliance requirement, the antenna used for this transmitter must not be co-located (within 20 cm) or operating in conjunction with any other transmitter/antenna except those already approved in this filling.

Hotspot ISED Notice

When operating in hotspot mode, this device is restricted to indoor use when operating in the 5150 - 5350 MHz frequency range.

En mode de connexion partagée (hotspot), l'utilisation de cet appareil doit se faire exclusivement en extérieur lorsqu'il fonctionne dans la plage de fréquences 5 150 - 5 350 MHz.

2.5.4 UL Listed Products with GPS/Marquage UL des produits équipés d'un GPS

Underwriters Laboratories Inc. (UL) has not tested the performance or reliability of the Global Positioning System (GPS) hardware, operating software, or other aspects of this product. UL has only tested for fire, shock, or casualties as outlined in UL's Standard(s) for Safety for Information Technology Equipment. UL Certification does not cover the performance or reliability of the GPS hardware and GPS operating software. UL makes no representations, warranties, or certifications whatsoever regarding the performance or reliability of any GPS related functions of this product.

Les tests menés par Underwriters Laboratories Inc. (UL) ne portent ni sur les performances, ni sur la fiabilité du matériel et du logiciel d'exploitation du GPS (Global Positioning System), ni sur tout autre aspect de ce produit. UL a uniquement testé la résistance au feu, aux chocs et aux sinistres, comme le définit la norme UL60950-1 relative à la sécurité des matériels de traitement de l'information. La certification UL ne couvre ni les performances, ni la fiabilité du matériel et du logiciel d'exploitation GPS.

UL ne formule aucune déclaration, ni ne délivre aucune garantie ni aucun certificat concernant les performances et la fiabilité des fonctions GPS de ce produit.

2.6 Colombia

Señor usuario, la siguiente información se entrega de conformidad con lo establecido en el Régimen de protección de los derechos de los usuarios, expedido por la Comisión de Regulación de Comunicaciones.

Recomendaciones de uso:

1. Utilice siempre que pueda dispositivos manos libres.
2. Evite utilizar el equipo mientras conduce un vehículo.
3. En caso que el teléfono sea utilizado por niños, ancianos, mujeres embarazadas y población inmunocomprometida, consulte a su médico y el manual del equipo.
4. Si usted utiliza algún dispositivo electrónico de uso médico, asegúrese que el mismo esté protegido contra las ondas de radiofrecuencia externas.
5. Apague su teléfono en lugares tales como: hospitales, centros de salud, aviones, estaciones de suministro de combustible, en presencia de gases explosivos y lugares donde se realizan explosiones.
6. Evite que terceros hagan uso de su teléfono para prevenir la implantación de dispositivos como programas espías (spyware) o identificadores ocultos, que atentan contra la seguridad de la información contenida en el mismo.

2.7 México

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

3 Product description

3.1 MC27^{ex}-NI

The MC27^{ex}-NI is a tough Mobile Computer with 4" color display, which has been designed for use in the industrial environments and especially developed by BARTEC in close cooperation with ZEBRA for use in hazardous areas.



3.2 Purpose of use

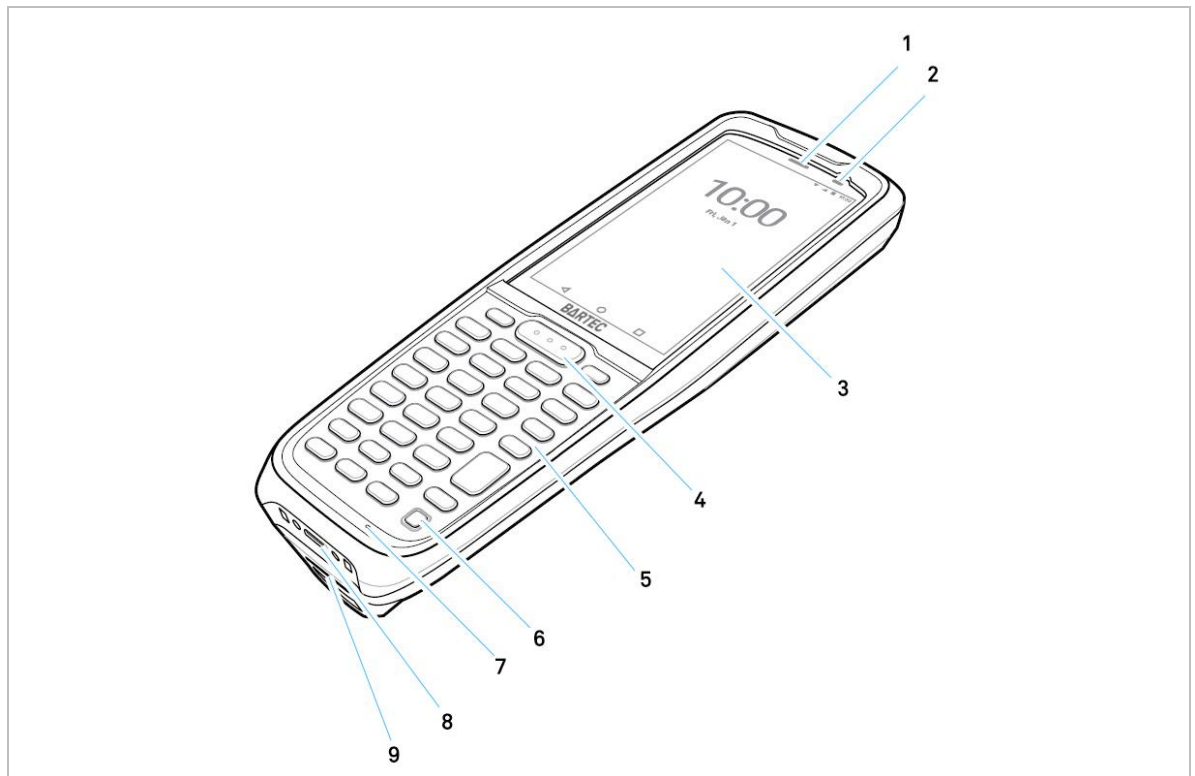
The Mobile Computer MC27^{ex}-NI are handheld electrical devices. They serve the purpose of entry, processing and (radio) transmission of data within hazardous areas.

The Mobile Computer MC27^{ex}-NI are used exclusively in combination with devices which comply with the requirements placed on the overvoltage category I.

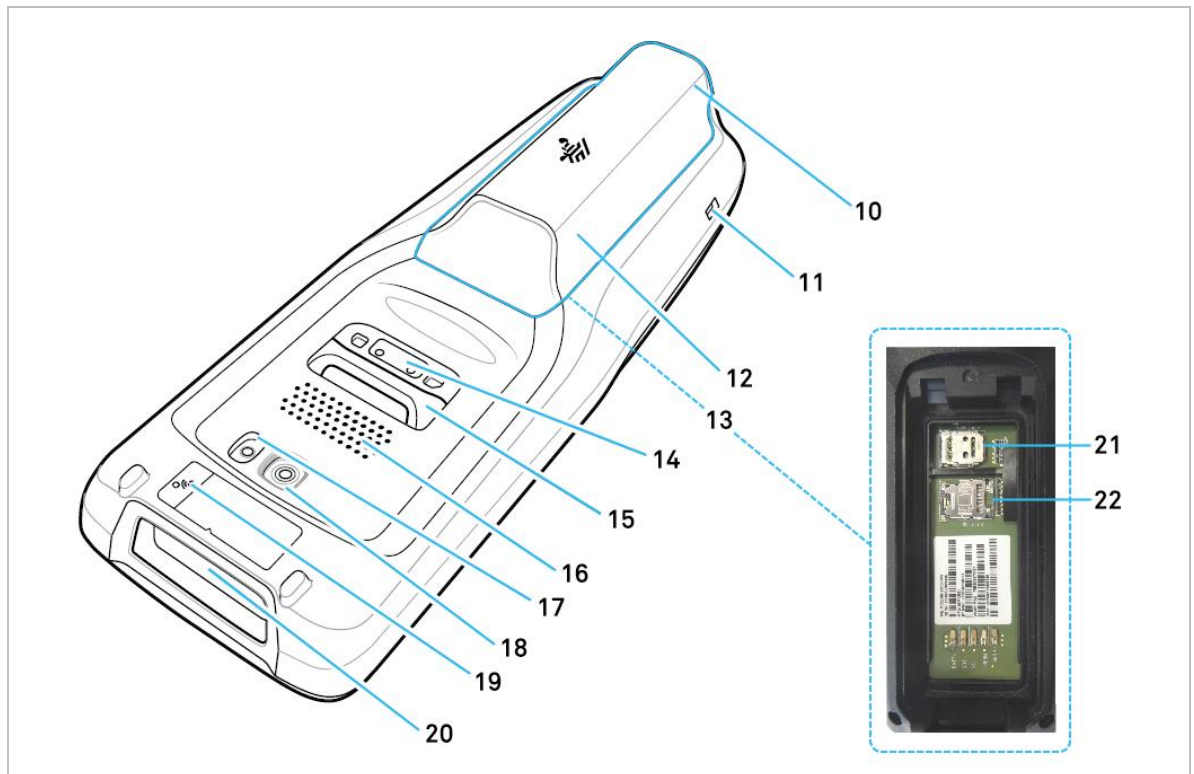
The **Mobile Computer MC27^{ex}-NI, Type B7-A2N*-****/******* have been modified for use in the following hazardous areas:

- ATEX / IECEx / UKEX Zone 2 and 22

4 Structure







1	Data Capture LED	Indicates data capture status.
2	Charging/Notification LED	Indicates battery charging status while charging and app generated notifications.
3	Touch Screen	Displays all information needed to operate the device.
4	Scan Button	Initiates data capture (programmable).
5	Keypad	The 34-key keypad includes a power key, application keys, scroll keys, and function keys. The keypad is color-coded to indicate the alternative function keys (orange). Note that the functions of the keypad can be changed by an application, so the mobile computer keyboard may not function as described.
6	Power Button	Turns the display on and off. Press and hold to reset the device, power off or swap battery. Press quickly twice when the screen is locked to open the camera app.
7	Microphone	Use for communications in Handset mode.
8	USB-C connector	Enables USB host and client communication and device charging via cables and accessories.
9	Cover for battery lock slot	Use for securing the battery in hazardous area.



10	Battery Lock	Press to remove the battery.
11	Alignment feature/ Latch recess	Use to help guide the USB-C connector into one of the charging base stations
12	Battery	Provides power to the device.
13	Card slots	Underneath of the battery are the slots for the cards. <ul style="list-style-type: none"> ▪ 1x Card slot for Nano SIM card ▪ 1x Card slot for MicroSD card
14	Back port	The two-pin back I/O is an electrical contact that activated by the trigger handle
15	Hand strap mount	Provides mounting point for hand strap accessory
16	Speaker	Provides audio output for video and music playback. Provides audio in speakerphone mode.
17	Camera Flash	Provides illumination for the camera.
18	Camera	Takes photos and videos.
19	NFC antenna	Enables communication with other NFC-enabled devices.
20	Exit Window	Provides data capture using the imager.
21	Card slot	Card slot for Nano SIM card
22	Card slot	Card slot for MicroSD card

5 Technical data

5.1 Explosion protection

ATEX Zone 2 / 22	
Type	B7-A2N*-****/***** MC27 ^{ex} -NI
Labelling	 II 3G Ex ic IIB T4 Gc  II 3D Ex ic IIIC T130°C Dc IP64 -20 °C ≤ Ta ≤ +50 °C
Test certificate	EPS 22 ATEX 1 012 X
Standards	see: EU Declaration of Conformity
IECEx Zone 2 / 22	
Type	B7-A2N*-****/***** MC27 ^{ex} -NI
Labelling	Ex ic IIB T4 Gc Ex ic IIIC T130°C Dc IP64 -20 °C ≤ Ta ≤ +50 °C
Test certificate	IECEx EPS 22.0004X
Standards	see: EU Declaration of Conformity
UKEX Zone 2 / 22	
Type	B7-A2N*-****/***** MC27 ^{ex} -NI
Labelling	 II 3G Ex ic IIB T4 Gc  II 3D Ex ic IIIC T130°C Dc IP64 -20 °C ≤ Ta ≤ +50 °C
Test certificate	EPS 22 UKEX 1 174 X
Standards	see: UK Declaration of Conformity

X - labelling

(special conditions of use for secure operation within the hazardous area)

- The battery pack shall be changed or charged only outside hazardous areas.
- In hazardous areas, the cover for battery lock (Type: B7-A2Z0-0087) must be snapped in.
- The equipment shall only be used with the Screen Protector (Type: B7-A2Z0-0086).
- Connection and disconnection of all external ports, opening enclosure, or replacing battery pack while live is only permitted if the potentially explosive atmosphere is shown to be absent.
- The equipment shall be protected from impacts with high impact energy and high electrostatic charge generating processes.
- The manufacturer's safety instructions shall be respected strictly.

5.2 Features

5.2.1 Performance features

CPU	Qualcomm Snapdragon 660 Octa-core, 1.8 GHz
Operating system	The MC27 ^{ex} -NI is delivered by BARTEC according to the currently available Android version (for details see data sheet). <small>Android is a trademark of Google LLC.</small>
Android Enterprise Recommended (AER)	Certified by Zebra for Google AER
Memory	3 GB RAM; 32 GB Flash
Extension slot	1 x MicroSD card slot up to 128 GB Optional MicroSD card from BARTEC: 32 GB Order number 17-A1Z0-0010
Nano SIM card slot	1 x Nano-SIM

5.2.2 Physical features

Dimensions: (Length x Width x Depth)	200.5 x 70 x 38.5 mm (7.89 x 2.76 x 1.52 inch)
Weight (including battery)	approx. 296 g (approx. 10.4 oz)
Display	4.5" Colour display 800 x 480 pixel Corning® Gorilla®-Glas
Touchscreen	Capacitive multi-touch Touch function with finger or glove depending on the mode selected
Background lighting	LED technology
Network connections	WWAN (cellular) WLAN (WiFi), WPAN (Bluetooth); USB 2.0 High Speed (host and client)

Interactive sensor technology	<ul style="list-style-type: none"> ▪ Light Sensor: Automatically adjusts display backlight brightness ▪ Motion Sensor: 3-axis accelerometer with MEMS Gyro ▪ Proximity sensor: Automatically detects when the user places the handset against head during a phone call to disable display and touch input ▪ Accelerometer: Measures the linear acceleration of movement to determine the orientation of the device. ▪ Digital compass - allows easy orientation in relation to the Earth's magnetic field.
Notifications	Audible tone, multi-color LED's
Keypad	Hardware: 34 keys numeric with function keys Software: virtual on-screen keyboard
Voice and Audio	Internal speaker and microphone; Bluetooth wireless headset support; high quality speaker phone
Buttons	Physical scan Volume up/down Power on/off

5.2.3 User environment

Operating temperature	-20 °C to +50 °C (-4 °F to +122 °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 % to 95 % (non-condensing)
Class of protection (IEC 60529)	IP 65

5.2.4 Data transmission WiFi

Radio standard	IEEE 802.11 a/b/g/n/ac/d/h/i/k/r/v; Wi-Fi™ certified; IPv4, IPv6, 1x1 MU-MIMO
Data Rates	2.4 GHz: 802.11 b/g/n - 20 MHz, 40 MHz, - up to 150 Mbps 5 GHz: 802.11 a/g/n/ac - 20 MHz, 40 MHz, 80 MHz - up to 433 Mbps
Operating Channels	Channel 1-13 (2412-2472 MHz); Channel 36-165 (5180-5825 MHz) Channel Bandwidth: 20, 40, 80 MHz Actual operating channels/ frequencies and bandwidths depend on regulatory rules and certification agency.

Security and Encryption	WEP (40 or 104 bit); WPA/WPA2 Personal (TKIP und AES); WPA3 Personal (SAE); WPA/WPA2 Enterprise (TKIP und AES); WPA3 Enterprise (AES) — EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2, PEAPv1-EAP-GTC, LEAP und EAP-PWD; WPA Enterprise 192-Bit-Modus (GCMP-256) - EAP-TLS; Enhanced Open (OWE*) <small>* Note that OWE is a separate Wi-Fi Alliance certification program and not WPA3</small>
Certifications	WFA (802.11n, WPA2-Personal, WPA3-Personal, WPA2-Enterprise, WPA3-Enterprise)
Fast Roam	802.11r (Over-The-Air); PMKID-Caching; Cisco CCKM; OKC



RESTRICTIONS

The use of 5 GHz WLAN throughout the EEA has the following restrictions:
 5.15 - 5.35 GHz is restricted to indoor use only

5.2.5 Wireless WAN Data & Voice Communications

Frequency band	Europe and other countries
	GSM: 850/900/1800/1900
	UMTS: B1/B2/B3/B4/B5/B8/B9/B19
	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B19/B20/B28
	LTE-TDD: B38//B40/B41
	LTE: Kategorie 6
Carriers	AT&T, VZ, Telus, Rogers

Voice Communications

Optional Push-to-Talk (PTT) Express¹ Mobility DNA software application for instant PTT walkie-talkie style calls inside the four walls.

Optional Workforce Connect Push-to-Talk (PTT) Pro² Mobility DNA easy-to-deploy, cost-effective subscription-based software application that provides instant PTT walkie-talkie style calls inside and outside the four walls via an easy-to-deploy subscription service.

Optional Workforce Connect Voice³ to turn MC27^{ex}-NI devices into fully-featured PBX handsets with a custom interface that makes it easy to execute even the most complex telephony features — eliminating the need to purchase and manage additional voice-enabled devices.

1) Workforce Connect PTT Express is pre-loaded with a 90-day evaluation license. A full license must be purchased to continue use after 90 days evaluation.

2) To enable maximum performance and voice quality for Workforce Connect PTT Express, PTT Pro and other VoWiFi solutions, the Mobility DNA Enterprise License is recommended.

3) Mobility DNA Enterprise License is required to deploy Workforce Connect Voice and other 3rd party full duplex voice solutions for optimal performance and support

5.2.6 Bluetooth Data & Voice Communications

Bluetooth	Class 2, Bluetooth 5.0 with BR/EDR and Bluetooth Low Energy (BLE) support
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5.2.7 Global Positioning System

GPS	Autonomous, Concurrent GPS; GLONASS; Galileo; BeiDou, and A-GPS. Supports IZAT (TM) XTRA
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5.2.8 Camera

Rear camera	13 MP – Megapixel phase detection auto focus, with LED flash
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5.2.9 NFC/HF RFID Reader

NFC/HF RFID is a short-range wireless connectivity technology standard that enables a secure transaction between a reader and a contactless smartcard.

The technology is based on ISO/IEC 14443 type A and B (proximity) ISO/IEC 15693 (vicinity) standards, using the HF 13.56 MHz unlicensed band.

NFC/HF	ISO14443 Type A and B; FeliCa and ISO15693 cards. P2P mode and card Emulation via Host (HCE) support. The device supports the following operating modes: <ul style="list-style-type: none"> ▪ Reader mode ▪ Card emulation mode
---------------	--



The read/write range of the RFID reader depends on various environmental influences:

- Transponder (tag), size of the installed antenna
- Mounting location (metal or other substrate)
- Magnetic influences from outside
- Environmental conditions (e.g. temperature, humidity, ...)

For detailed information on the RFID reader used, refer to the “Product Reference Guide MC2700 (EN)” from ZEBRA.

5.2.10 Barcode capture

1D-/2D Barcodes	
SE4100-SR	1D-/2D Standard Range Imager Engine



The scanning range of the scanner depends on the used barcode type, the print quality and the module width (in mil).

The scanner is classified as ‘EXEMPT RISK GROUP’ according to IEC 62471:2006 and EN 62471:2008.

Pulse Duration: 22.8 ms or CW (with SE4100)

Further detailed information on the used scanner can be found in the “Product Reference Guide MC2700 (EN)” from ZEBRA.

SE4100-SR supports following Symbolologies/Barcodes:

Barcode Class	Symbology/Barcode
1D Barcodes	Chinese 2 of 5, Codabar, Code 11, Code 128, Code 39, Code 93, Discrete 2 of 5, EAN-13, EAN-8, Interleaved 2 of 5, MSI, UPCA, UPCE, UPCE1, ISBN/Bookland, ISSN, Coupon Code, Matrix 2 of 5
2D Barcodes	Australian Post, Aztec Code, Canada Postal, Composite AB, Composite C, DataMatrix, Dutch Postal, GS1 DataBar, GS1 Expanded, GS1 Limited, GS1 Datamatrix, Han Xin, Japan Postal, Maxicode, Micro PDF, Micro QR Code, PDF-417, QR Code, TLC-39, PDF-417, UK Postal, US4state, US4State FICS, US Planet, US Postnet

SE4100-SR reading range:

The table below lists the typical distances for selected bar code densities. The minimum element width (or “symbol density”) is the width in mils of the narrowest element (bar or space) in the symbol.

Symbol Density/ Barcode Type	Typical Working Ranges	
	Near	Far
5 mil Code 39	6.1 cm (2.4 in.)	24.1 cm (9.5 in.)
5 mil Code 128	7.1 cm (2.8 in.)	22.9 cm (9.0 in.)
6,7 mil PDF417	6.1 cm (2.4 in.)	20.3 cm (8.0 in.)
100% UPCA	4.6 cm* (1.8 in.)	49.5 cm (19.5 in.)
10 mil Data Matrix	7.4 cm (2.9 in.)	21.6 cm (8.5 in.)
20 mil Code 39	5.1 cm* (2.5 in.)	66.0 cm (26.0 in.)
15 mil QR Code	3.1 cm (1.2 in.)	29.2 cm (11.5 in.)
20 mil QR Code	3.1 cm (1.2 in.)	35.6 cm (14.0 in.)

* Limited by width of bar code in field of view.

Note:

Photographic quality bar code at 18° tilt pitch angle under 30 fcd ambient illumination. Distances measured from front edge of scan engine chassis.

UPC, 20mil Code 39, 15mil QR and 20mil QR near distances correspond to the barcode located in the overlapping region of illumination and imaging fields of view.

5.3 Battery



The life of the battery will depend on different use factors and the device settings, e.g.:

- Use and setting of WLAN/Bluetooth
- Background lighting/screensaver
- The settings in power management
- Use and setting of scanner

Battery Type B7-A2Z0-0081	(only charge and charge in the safe area) Lithium ion battery 3.6 V/min. 3300 mAh (11.88 Wh) 3.6 V/typ. 3500 mAh (12.60 Wh)
Operating temperature	
▪ During charging	0 °C to +40 °C (+32 °F to 104 °F)
▪ During discharging	-20 °C to +50 °C (-4 °F to 122 °F)
Storage temperature	-20 °C to +50 °C (-4 °F to 122 °F)
Relative humidity	20 % to 95 % (non condensing)
Charging times	approx. 3 hours (from fully depleted to 90%)
UN38.3 compliant	Yes



Charge the batteries at temperatures from 0°C to 40°C (32°F to 104°F). The device or charging station always performs the battery charging in a safe and intelligent way. At higher temperatures, such as about +37°C (+98°F), the device or charging station can alternately activate and deactivate battery charging for a short time to keep the battery at acceptable temperatures. The device and the charging station indicate via their LED when charging is disabled due to abnormal temperatures.

5.4 Software

BARTEC already delivers all MC27^{ex}-NI with the "**Mobility DNA Enterprise License**". This means that all Zebra tools covered by the license are already available to all end users. Not all tools are pre-installed. However, the tools that are not pre-installed can be downloaded on demand via Google Play or on the Zebra Support & Download page.

For more detailed information on Mobility DNA: Enterprise Mobility Software, please visit BARTEC's website at:

<https://www.bartec.de/en/products/automation-enterprise-mobility/mobile-computer/mc27ex-ni/>



or on the ZEBRA website:

What is Zebra Mobility DNA:

<https://www.zebra.com/us/en/products/software/zebra-dna.html>

Mobility DNA Enterprise Upgrade Kit:

<https://www.zebra.com/us/en/cpn/mobility-dna-kit.html>

Guides to the various tools:

<https://techdocs.zebra.com/>

Get the most out of your explosion-proof BARTEC (Zebra) mobile device with Mobility DNA - the Zebra difference.

Mobility DNA is a unique toolset just for Zebra that offers valuable new features to put your Zebra devices in a class of their own. The ready-to-use Mobility DNA Professional toolkit is pre-installed and pre-licensed and ready to use out of the box, all at no additional cost. BARTEC has already installed the optional Mobility DNA Enterprise license on all MC27^{ex}-NI devices. This provides the end user with the full set of powerful voice and data tools.

5.5 Product labelling

5.5.1 Mobile Computer



<p>A</p>	<p>Type label</p>	<p>Max-Eyth-Strasse 16 97980 Bad Mergentheim Germany</p> <p>MC27^{ex}-NI / Type: B7-A2N3-B21112211RW</p> <p>ZEBRA TECHNOLOGIES CORP. HOLTSVILLE, NY 11742</p> <p>MODEL: MC27BK KS 5230 5V --- 2.5A MADE IN GERMANY -20°C ≤ Ta ≤ +50°C</p>
<p>B</p>	<p>Marking</p>	<p>EPS 22 ATEX 1 012 X II 3G Ex ic IIB T4 Gc II 3D Ex ic IIIC T130°C Dc IP64 IECEx EPS 22.0004X</p> <p>CE</p>
<p>C</p>	<p>Marking</p>	<p>The battery pack shall be changed or charged only outside hazardous areas. In hazardous areas, the Cover for battery lock (Type: B7-A2Z0-0087) must be snapped in. The equipment shall only be used with the Screen protector (Type: B7-A2Z0-0086).</p>

5.5.2 Battery



<p>D Type label</p>	<div style="background-color: #008000; color: white; padding: 10px;"> <p>BARTEC Max-Eyth-Strasse 16 97980 Bad Mergentheim Germany</p> <p>BATTERY TYPE: B7-A2Z0-0081 FOR USE WITH MC2X^{ex}-NI - TYPE: B7-A2N* -****/*****</p> <p>ZEBRA ZEBRA TECHNOLOGIES CORP. HOLTSVILLE, NY 11742</p> <p>MODEL (型号): BT-000418 RECHARGEABLE (3.6V) LI-ION BATTERY FOR USE WITH MC2X SERIES 二次鋰電池組/鋰離子電池 11NR19/66 MIN. (額/額定容量): 3300mAh / 11.88Wh TYP. 3500mAh / 12.60Wh</p> <p>FACTORY: ICC ELECTRONICS (DONGGUAM) LTD. CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO INSTRUCTIONS. WARNING: DO NOT DISASSEMBLE, SHORT CIRCUIT, OR DISPOSE OF IN FIRE.</p> <p>Rev. A SN: P1DC16P1133 MFD: 19FEB21 P/N: BT-000418-10</p>  </div>
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6 Transport and storage

6.1 Transport



Report any transport damage or incomplete deliveries immediately after receipt in writing to the forwarding company and BARTEC GmbH.

Any damage caused through incorrect storage shall not be covered by the warranty provisions of BARTEC GmbH.



Battery is UN38.3 conform.

Due to the transport guidelines for air freight, all batteries are delivered ex works charged to max. 30 %.

Further information, like MSDS, can be found at
<http://automation.bartec.de/indexE.htm>

6.2 Storage

ATTENTION

Property damage through incorrect storage!

- ▶ Observe storage temperatures.
- ▶ Keep humidity away from the Mobile Computer.

Additional information on the batteries

The batteries of BARTEC (Type B7-A2Z0-0081) are developed and manufactured in accordance with the highest industrial standards. The operating time or storage period of a battery is restricted, however. The actual life of a battery is influenced by different factors, e.g. hot, cold, rough operating environment and falling from a great height. If a battery is kept longer than six months, the performance may be impaired on a permanent basis. Keep the batteries in a dry, cool place. For longer periods of storage, remove the batteries from the device to prevent self-discharge, rusting of the metallic and the escape of electrolyte.

Batteries kept for a duration of six months or longer should be charged and discharged again at least every three months. If electrolyte has escaped, do not touch the areas affected and dispose of the batteries as prescribed. Replace the battery if the operating time has shortened considerably.

7 Commissioning

DANGER

Avoid electrostatic charging in hazardous areas.

Danger to life in explosive atmosphere!

- ▶ Do not dry wipe or clean the devices.
- ▶ Wear suitable clothing and shoes.
- ▶ Do not use rubber gloves or similar.

DANGER

Unintended use endangers explosion protection.

Danger to life in explosive atmosphere!

- ▶ Do not make any changes to the Mobile Computer.
- ▶ In the case of function disturbances or damage to the enclosure, the device should be removed immediately from the hazardous area to a safe place. Remove battery to decommission the device!
- ▶ Do not use any battery replicas or batteries from other manufacturers.

7.1 Requirements in hazardous areas

Mobile Computer

- The Screen protector (Type: B7-A2Z0-0086) must be attached in hazardous areas!
- The cover for battery lock (Type: B7-A2Z0-0087) must be snapped into place in hazardous areas!
- The Mobile Computer may not be opened.
- Do not use, swap or replace any non-specified components.
- Do not retrofit any components to the internal plugs or slots. Exception is the slot for the microSD-card and the nano SIM cards.
- Protect the Mobile Computer from impact!
- Do not expose the Mobile Computer to caustic/aggressive liquids, vapours, mists!
- Avoid the impact of moisture outside the specifications.
- Avoid thermal impact outside the specified temperature range.
- Use the USB-C and the charging contacts only outside the hazardous areas and exclusively with the devices specified by the manufacturer!

Battery

- The battery may not be opened.
- Only charge the battery (Type B7-A2Z0-0081) outside the hazardous areas, using the chargers specified by BARTEC.
- To charge the battery, the battery and charging temperatures must be between 0°C and +40°C (+32°F and +104°F).
- Only use the battery for the purpose listed in this Quick Start Guide. Is only suitable for the Mobile Computer series Type B7-A2N*-****/*****.
- There is a danger of burning if used incorrectly. Do not expose the battery to temperatures of more than +50 °C (+122 °F).
- Defective batteries must be disposed of immediately, whereby the provisions on battery disposal applicable in the respective region must be observed.
- The battery may explode if it catches fire!
- Do not short circuit the battery!

Accessories

- Only install or replace accessories outside hazardous areas.
- User accessories exclusively which have been tested or certified by BARTEC for this purpose.
- The end user can replace Battery, Screen protector and Cover for battery lock.
- The end user can attach and remove MicroSD card, Nano SIM cards, Scan handle, Protective cover and Hand strap.
- The end user can freely choose which MicroSD card or Nano-Sim card to use. These components are not specified in the Ex certificate and are considered harmless.
- The touch display can be operated with fingers or gloves.

7.2 First steps

- ▶ Unpack the Mobile Computer.
 - ▶ Insert and charge the battery into the Mobile Computer.
- or
- charge the battery and then insert it into the Mobile Computer.
- Use one of the following accessories to charge:

Description	Charging process	
	Battery (in Mobile Computer)	Spare battery
Base station Type: G7-A0Z0-0059	Yes	Yes
4-slot battery charging station Type: G7-A0Z0-0062	No	Yes
USB cable Type: G7-A0Z0-0046 + Wall Charger Type: G7-A0Z0-0056/0057	Yes	No

- ▶ Switch on the Mobile Computer.

Optional:

- ▶ Insert the nano SIM cards. (Customer can choose freely)
- ▶ Insert a MicroSD card. (Customer can choose freely)
- ▶ Attach Scan handle. (Type: B7-A2Z0-0078)
- ▶ Attach Protective cover. (Type: B7-A2Z0-0084 or B7-A2Z0-0085)
- ▶ Attach Hand strap. (Type: B7-A2Z0-0082)

- ▶ Replace Screen protector. (Type: B7-A2Z0-0086)
- ▶ Replace Cover for battery lock. (Type: B7-A2Z0-0087)



Note:

Screen protector and Cover for battery lock must be attached/snapped into place in the hazardous area.

8 Operation

8.1 Handling accessories

DANGER

Non certified accessories endanger explosion protection.

Danger to life exists in hazardous areas!

- ▶ Only use original accessories from BARTEC.

Only permitted outside the hazardous areas:

- ▶ Insert/replace nano-SIM card.
- ▶ Insert/replace microSD card.
- ▶ Insert/charge Battery.
- ▶ Attach/remove accessories such as Scan handle, Protective cover and Hand strap.
- ▶ Replace accessories such as Screen protector and Cover for battery lock.

8.1.1 Insert SIM card

ATTENTION

Damage to the SIM card through electrostatic discharges!

- ▶ Use an antistatic base.
- ▶ Ensure that the operator is correctly earthed.



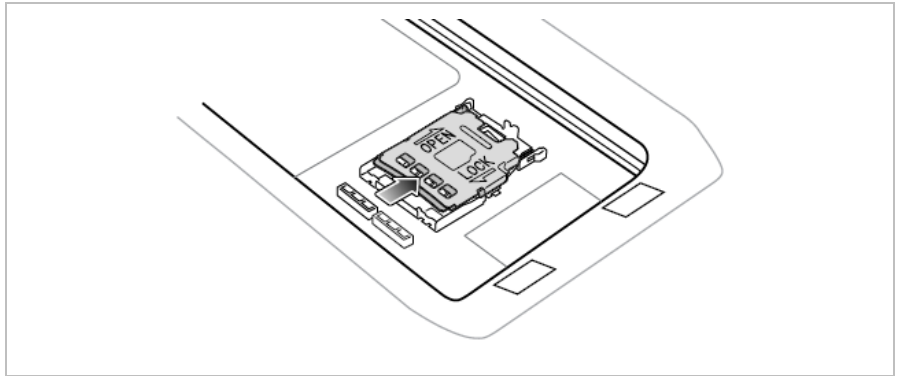
The end user can freely choose which nano-SIM card to use. These components are not specified in the Ex certificate and are considered harmless.

Work steps:

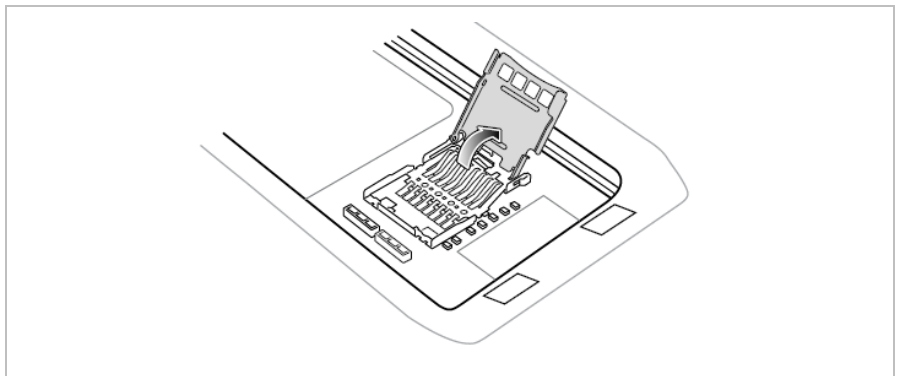
1. Only install or replace the nano-SIM card outside hazardous areas.
1. Remove the Hand strap, if installed.
2. Remove the battery.
3. Position of the nano SIM slot in the MC27^{ex}-NI.



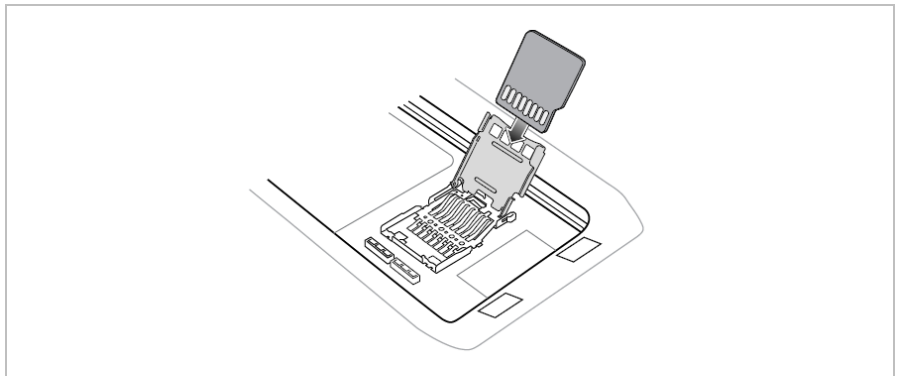
4. Slide the nano-SIM card holder to the unlock position.



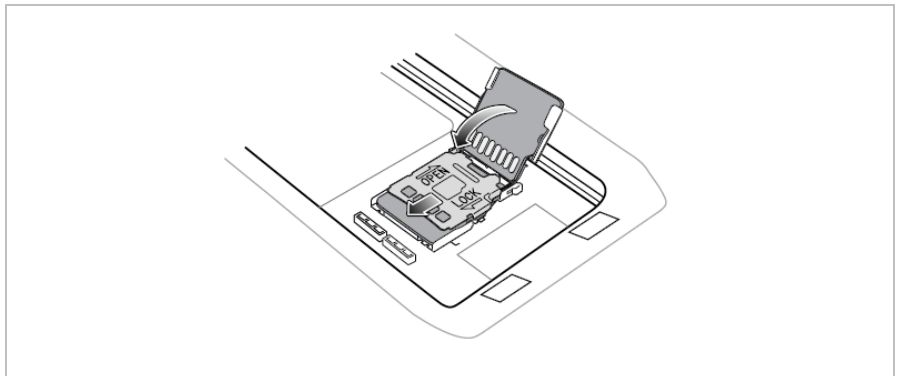
5. Lift the nano-SIM card holder door.



6. Place the nano-SIM card into the card holder with contacts facing down.



7. Close the nano-SIM card holder door and slide to the lock position.



8. The battery door must be replaced and securely seated to ensure proper device sealing.

8.1.2 Insert microSD card

ATTENTION

Damage to the microSD card through electrostatic discharges!

- ▶ Use an antistatic base.
- ▶ Ensure that the operator is correctly earthed.



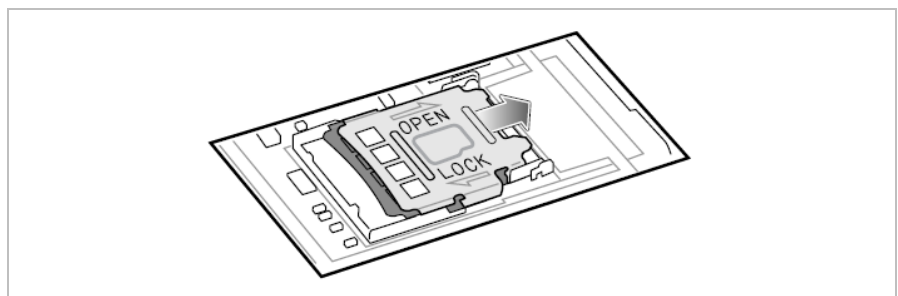
The end user can freely choose which microSD card to use. These components are not specified in the Ex certificate and are considered harmless.

Work steps:

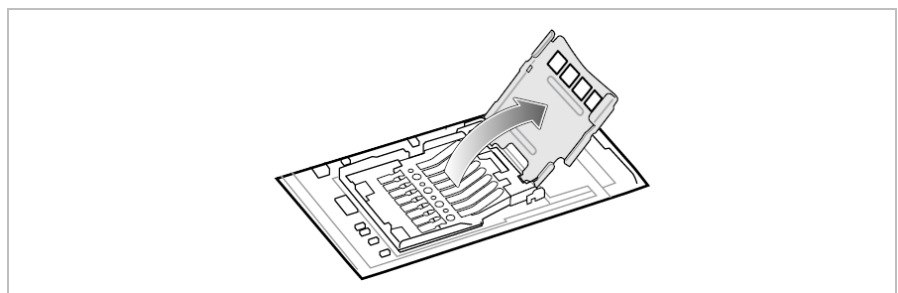
1. Only install or replace the microSD card outside the hazardous area.
2. Remove the Hand strap, if installed.
3. Remove the Battery.
4. Position of the microSD card slot in the MC27^{ex}-NI.



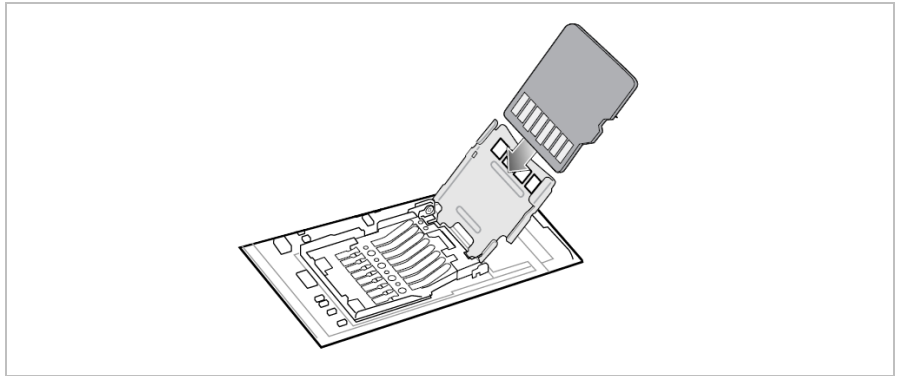
5. Slide the microSD card holder to the Open position.



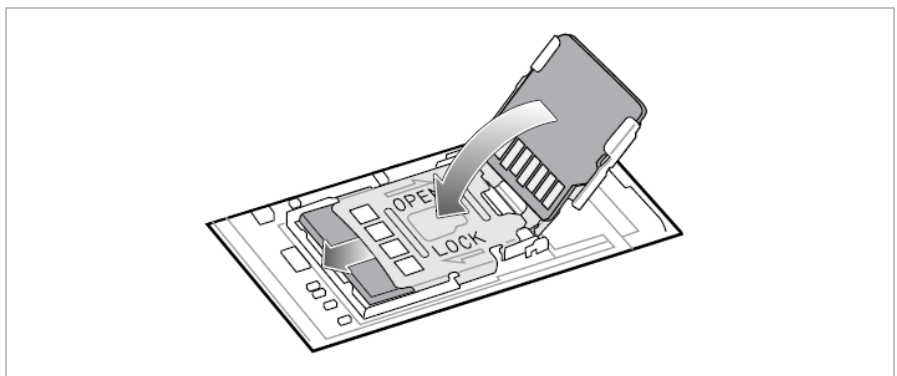
6. Lift the microSD card holder.



7. Insert the microSD card into the card holder door ensuring that the card slides into the holding tabs on each side of the door.



8. Close the microSD card holder door and slide the door to the Lock position.



9. The battery door must be replaced and securely seated to ensure proper device sealing.

8.1.3 Insert/change battery

The MC27^{ex}-NI is supplied with a battery:

Type	Order number
Lithium-ion battery 3.6 V/3500 mAh	B7-A2Z0-0081

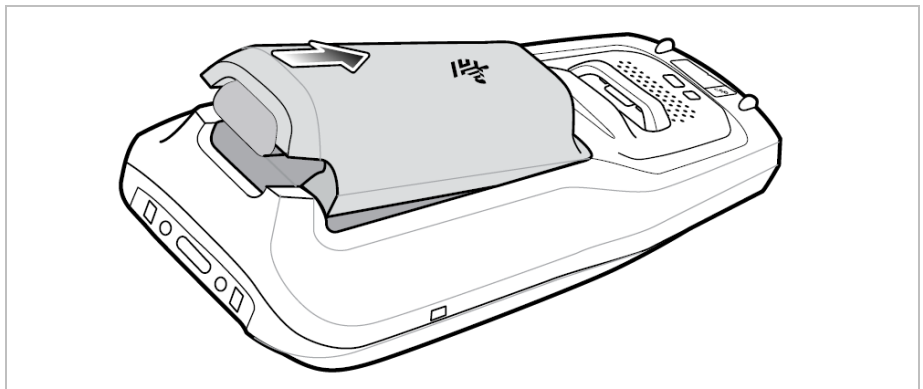


User modifications to the device, especially to the battery compartment, such as labels, engravings, or stickers, may affect the intended performance of the device or accessories.

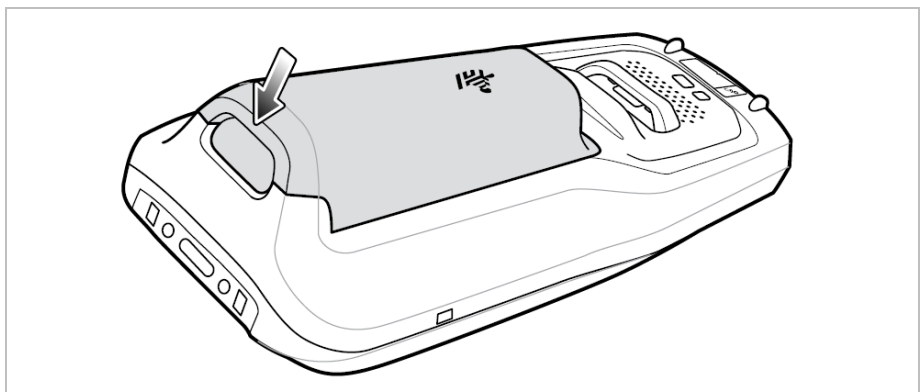
Performance levels such as tightness (Ingress Protection (IP)), shock resistance (drop and fall), functionality, and temperature resistance may be affected. **DO NOT** place labels, engravings, or stickers inside the battery compartment.

Insert battery - work steps:

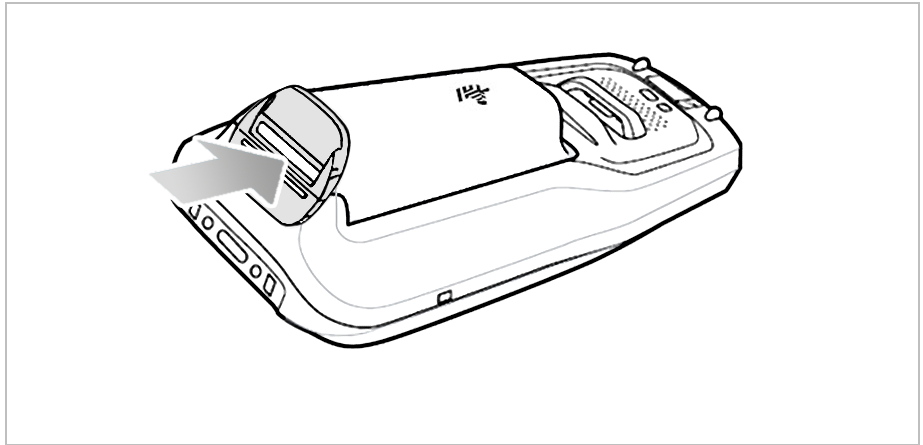
1. Charge the battery only outside hazardous areas.
2. The battery (Type B7-A2Z0-0081) may only be inserted/changed outside the hazardous area.
3. Use only batteries which have been tested or certified by BARTEC for this purpose.
4. Insert the battery, top first, into the battery compartment in the back of the device.



5. Press the bottom of the battery down into the battery compartment until the battery release button snaps into place.



6. Snap the Cover for the battery lock (Type: B7-A2Z0-0087) into place.



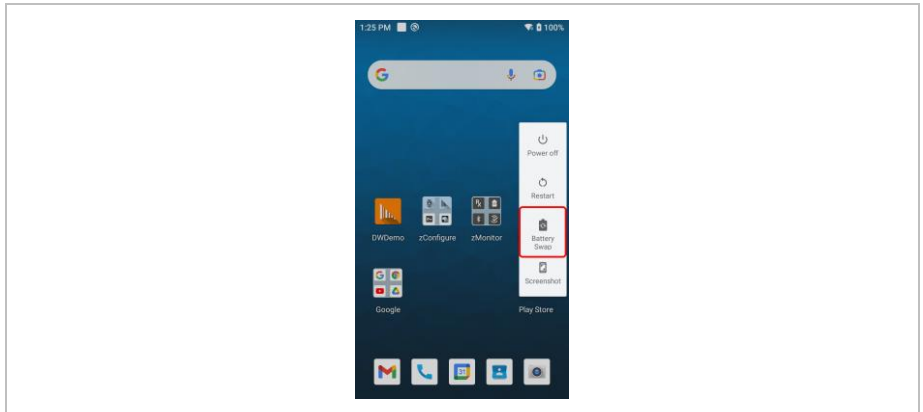
Change battery - work steps:

ATTENTION

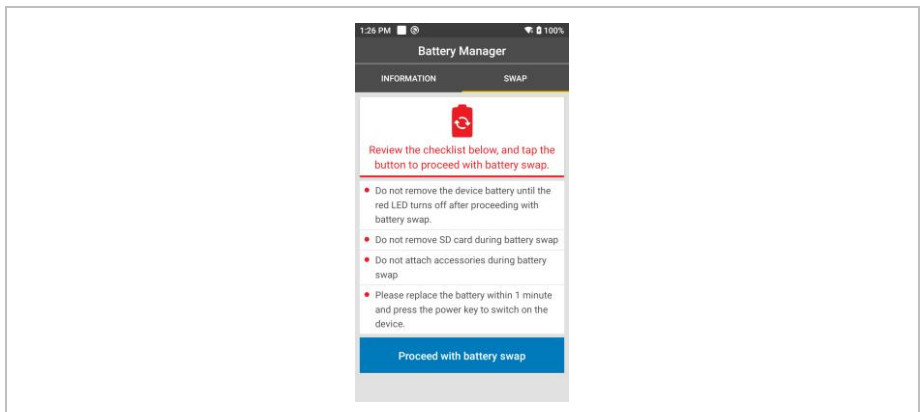
Incorrect handling may cause damage to property!

- ▶ Use only batteries which have been tested or certified by BARTEC for this purpose.
- ▶ The MC27^{ex}-NI has a battery change function when the device is switched on.

1. Remove any accessory attached to the device. (e.g. Scan handle)
2. Press the Power button until the menu appears.
3. Touch **Battery Swap**.

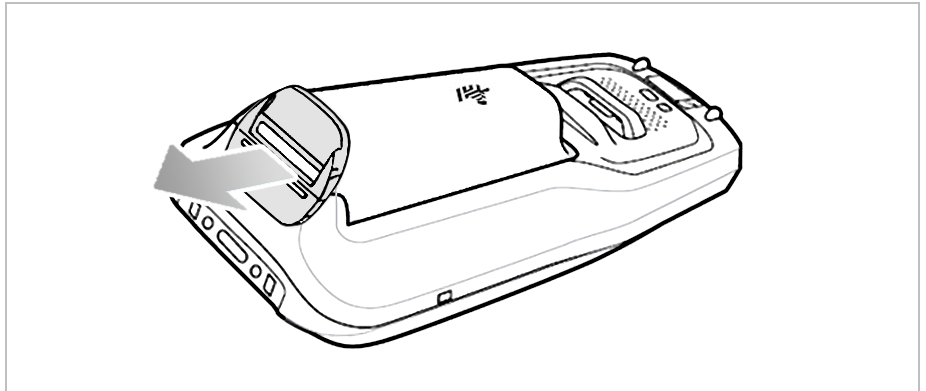


4. Follow the on-screen instructions.

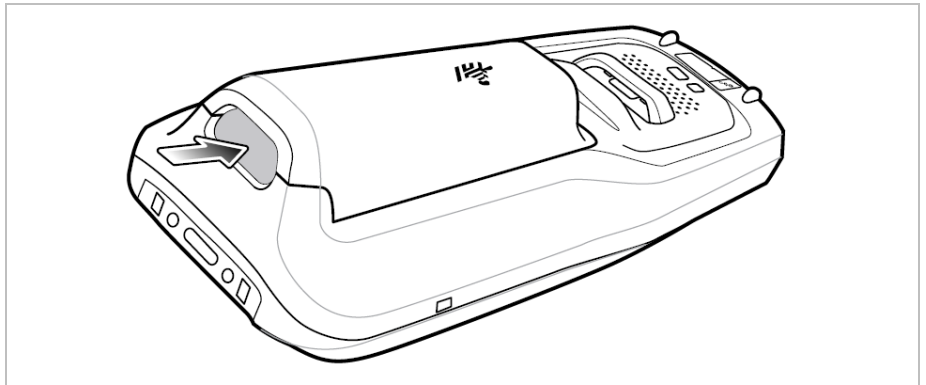


5. Wait for the LED to turn off.

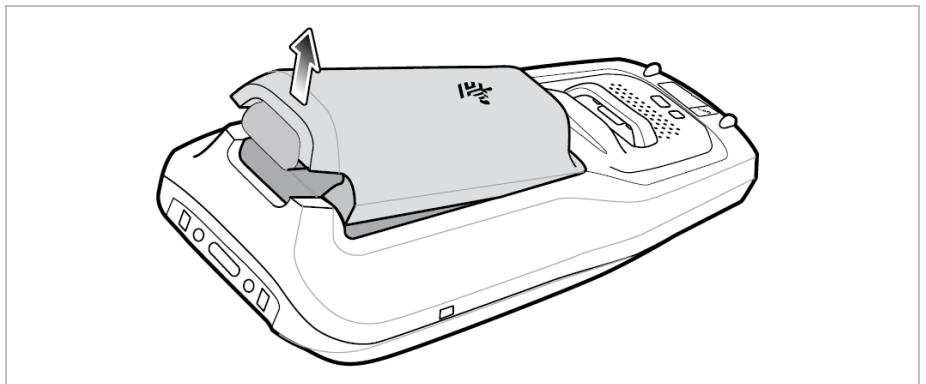
6. Remove the Cover for the battery lock (Type: B7-A2Z0-0087).



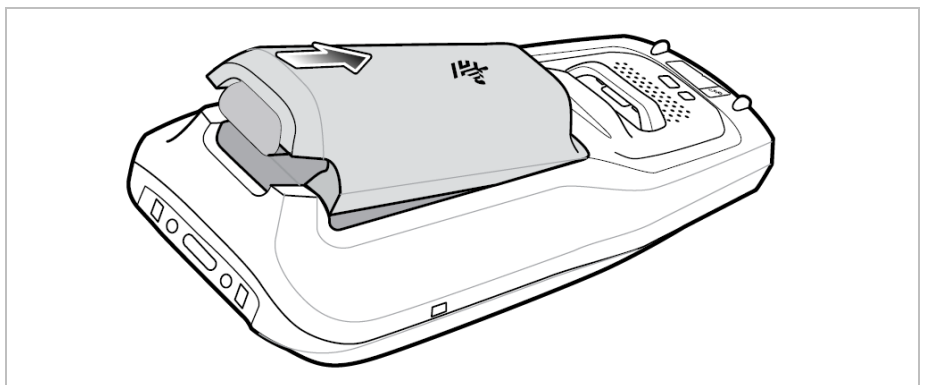
7. Press the battery lock inward.



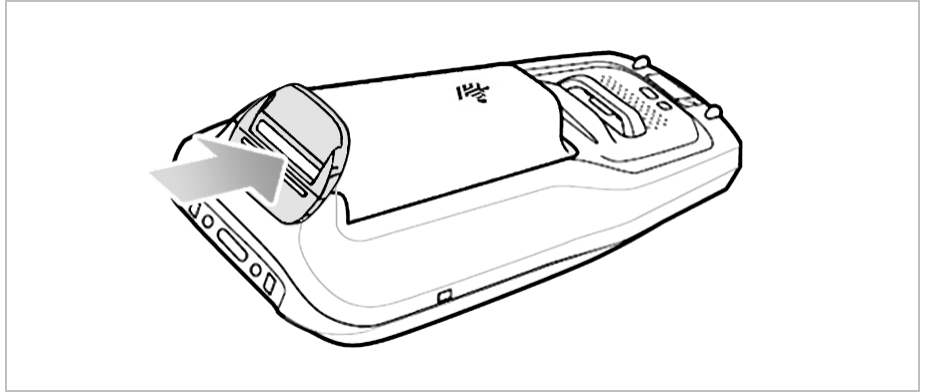
8. Lift the bottom of the battery up and remove it.



9. Insert the replacement battery, top first, into the battery compartment in the back of the device.



10. Press the battery down until the battery release latch snaps into place.
11. Snap the Cover for the battery lock (Type: B7-A2Z0-0087) into place.



12. Replace the accessory, if required.
13. The device is ready for operation again by pressing the Power key.

8.1.4 Charging the Main battery

Before using the device for the first time, charge the main battery until the green Charging/Notification light emitting diode (LED) remains lit. To charge the device, use a cable or a cradle with the appropriate power supply.



In many cases, charging the battery to 90% provides plenty of charge for daily use.

8.1.4.1 In Base station (USB)

- Provides 5 VDC power for operating the device.
- Charges the MC27^{ex}-NI with inserted battery.
- Charges one spare battery.
- Provides USB communication with host computer.

DANGER

Non certified accessories endanger explosion protection.

Danger to life exists in hazardous areas!

- ▶ Only use the Base station from BARTEC with type G7-A0Z0-0059.

1. Charge the battery only outside hazardous areas.
2. Connect the base station to a power source.
3. Place the bottom of the device into the base station.
4. Rotate the top of the device until the connector on the back of the device mates with the connector on the cradle.
5. Ensure the device is connected properly. The Charging/Notification LED on the device begins blinking amber indicating that the device is charging.



1.	Slot for MC27 ^{ex} -NI for charging and for communication
2.	Slot for spare battery for charging

8.1.4.1 With USB cable

- Provides 5 VDC power for operating the device.
- Charges the MC27^{ex}-NI with inserted battery.
- Enables USB communication with the host computer.

⚠ DANGER

**Non certified accessories endanger explosion protection.
 Danger to life exists in hazardous areas!**



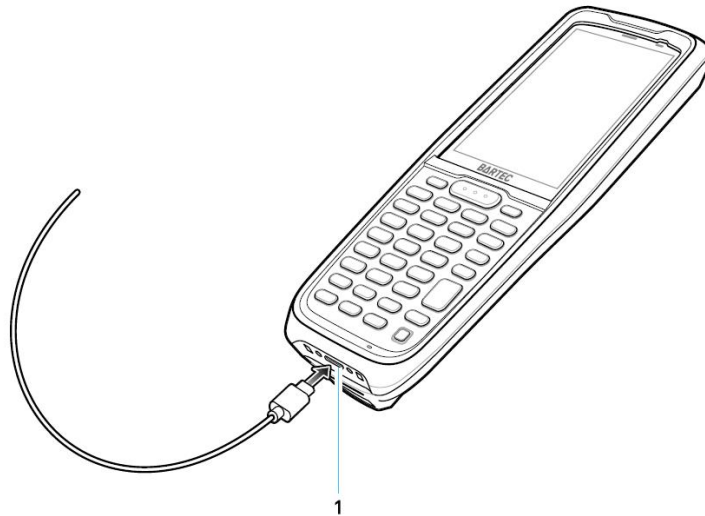
Only use accessories tested by BARTEC:

USB cable with type B7-A2Z0-0046

Wall charger - Version: US with type G7-A0Z0-0056

Wall charger - Version: EU with type G7-A0Z0-0057

1. Charge the battery only outside hazardous areas.
2. Connect the MC27^{ex}-NI with the USB cable.
3. Connect the USB cable either directly to the USB port on the PC or with a Wall charger.
4. Ensure the device is connected properly. The Charging/Notification LED on the device begins blinking amber indicating that the device is charging.



1.	USB-C port on MC27 ^{ex} -NI for charging and for communication
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8.1.4.2 Charging/Notifications-LED

The device's Charging/Notification LED indicates the status of the battery charging in the device.

- The Standard Battery charges in approximately 3 hours (from fully depleted to 90%).

State	Indication
Off	<ul style="list-style-type: none"> ▪ Device is not charging. ▪ Device is not inserted correctly in the cradle or connected to a power source. ▪ Charger/cradle is not powered.
Slow Blinking Amber (1 blink every 4 seconds)	Device is charging.
Slow Blinking Red (1 blink every 4 seconds)	Device is charging but the battery is at end of useful life.
Solid Green	Charging complete.
Solid Red	Charging is complete, but the battery is at end of useful life.
Fast Blinking Amber (2 blinks/second)	Charging error, for example: <ul style="list-style-type: none"> ▪ Temperature is too low or too high. ▪ Charging has gone on too long without completion (typically eight hours).
Fast Blinking Red (2 blinks/second)	Charging error, but the battery is at end of useful life. For example: <ul style="list-style-type: none"> ▪ Temperature is too low or too high. ▪ Charging has gone on too long without completion (typically eight hours).

8.1.5 Charging the spare battery

8.1.5.1 In 4-slot battery charging station



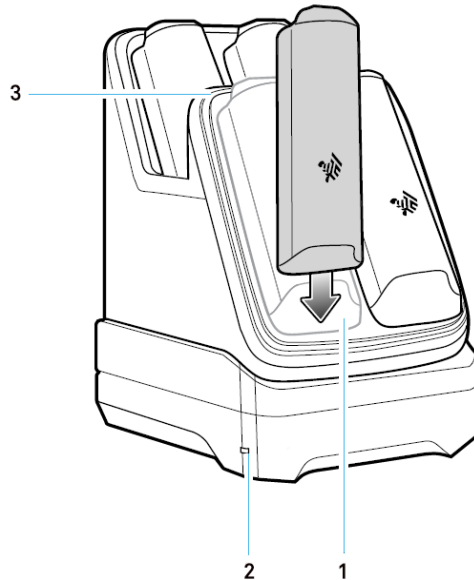
Make sure that you follow all the guidelines for battery safety and observe the following chapter: Requirements in hazardous areas.

DANGER

**Non certified accessories endanger explosion protection.
 Danger to life exists in hazardous areas!**

- ▶ Only use the 4-slot battery charging station from BARTEC with type G7-A0Z0-0062

1. Charge the battery only outside hazardous areas.
2. Connect the 4-slot battery charging station to a power source.
3. Insert the battery into a battery charging well and gently press down on the battery to ensure proper contact.



1.	Slot for spare battery
2.	LED status indicator of the 4-slot battery charging station
3.	LED for battery status indication

8.1.5.2 Charging LED

The device's Charging/Notification LED indicates the status of the battery charging in the device.

- The Battery charges in approximately 3 hours (from fully depleted to 90%).



Each battery charging LED indicates the status of the charging process in each slot.

State	Indication
Solid yellow	Spare battery is charging.
Solid Green	Spare battery charging is complete.
Solid Red	<ul style="list-style-type: none">▪ Charging complete and battery is at the end of useful life.
Fast Blinking Red	<ul style="list-style-type: none">▪ Charging error.▪ Check placement of spare battery▪ Check if battery is at the end of useful life.
Off	<ul style="list-style-type: none">▪ The battery is not charging.▪ The battery is not inserted in the battery charging station.▪ The battery is not correctly inserted in the battery charging station.▪ Base station/battery charging station is not powered.

8.1.6 Hand strap

The hand strap provides securing when holding the device.

⚠ DANGER

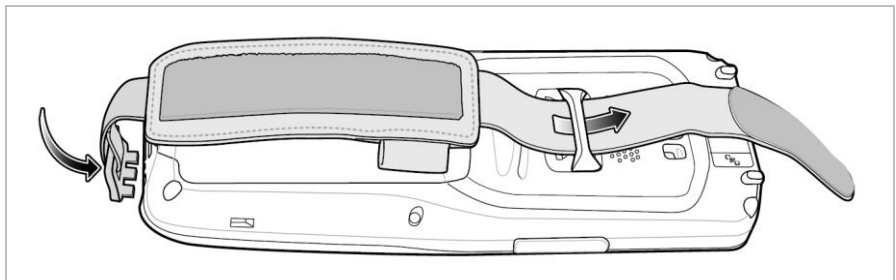
Non certified accessories endanger explosion protection.

Danger to life exists in hazardous areas!

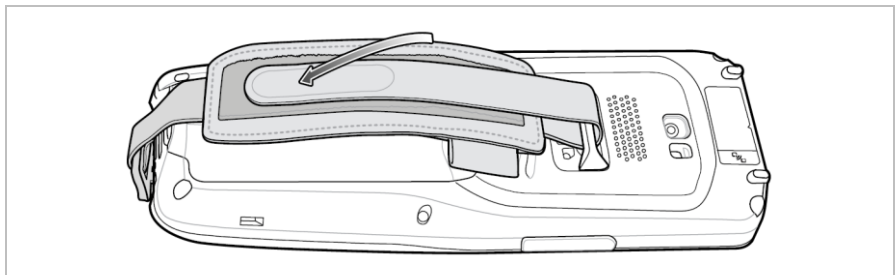
▶ Only use the Hand strap from BARTEC with type B7-A2Z0-0082.

To install the Hand strap on the device:

1. Install or replace the handstrap only outside hazardous areas.
2. Snap the Cover for battery lock of the hand strap into place on the bottom of the device and feed the top end of the hand strap through the mount at the top of the device.



3. Flip the strap over the hand strap mount and attach the end of the strap using the velcro.



4. Place hand between device and hand strap and adjust hand strap as necessary.

8.1.7 Scan handle

The Scan handle adds a gun-style handle with a scanning trigger to the device. It increases comfort when using the device in scan-intensive applications for extended periods of time.

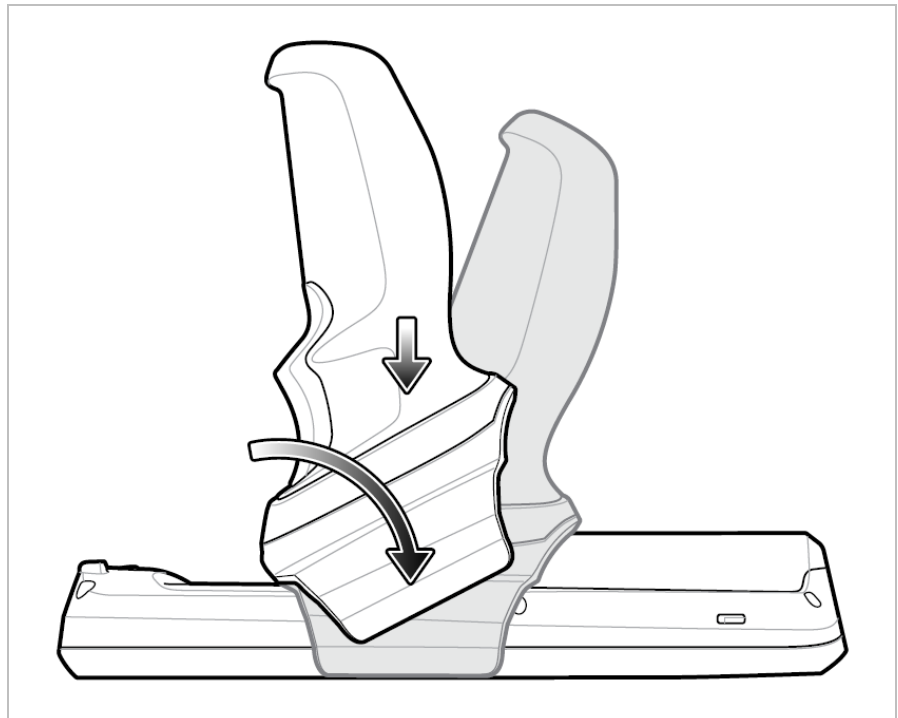
⚠ DANGER

**Non certified accessories endanger explosion protection.
Danger to life exists in hazardous areas!**

- ▶ Only use the Scan handle from BARTEC with type B7-A2Z0-0083.

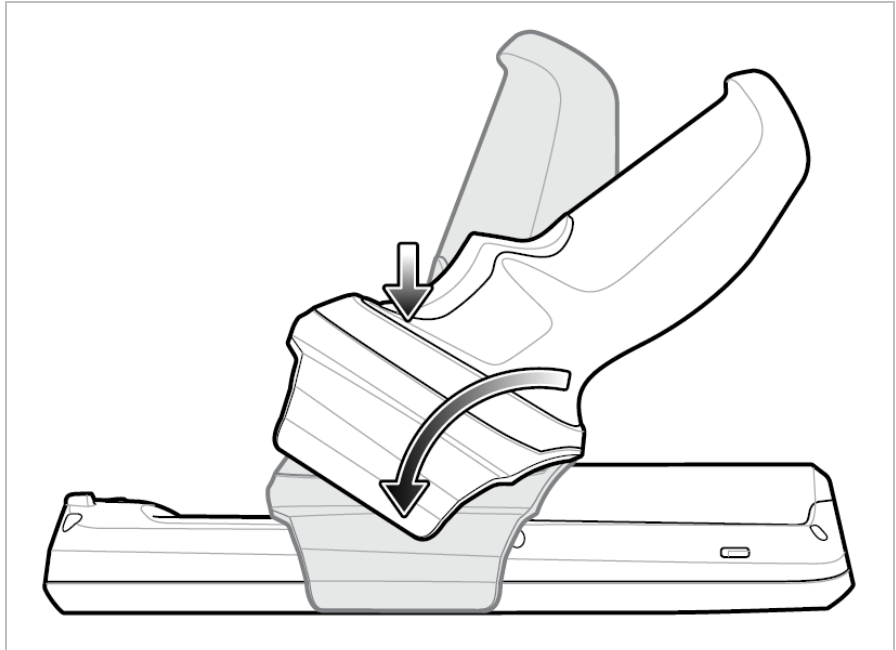
To insert the device into the Scan handle – using the Hand strap mount:

1. Install the MC27^{ex}-NI into the Scan handle only outside hazardous areas.
2. Align the hand strap mount on the back of the device with the recess on the scan handle.
3. Rotate the Scan handle down to grab the device.



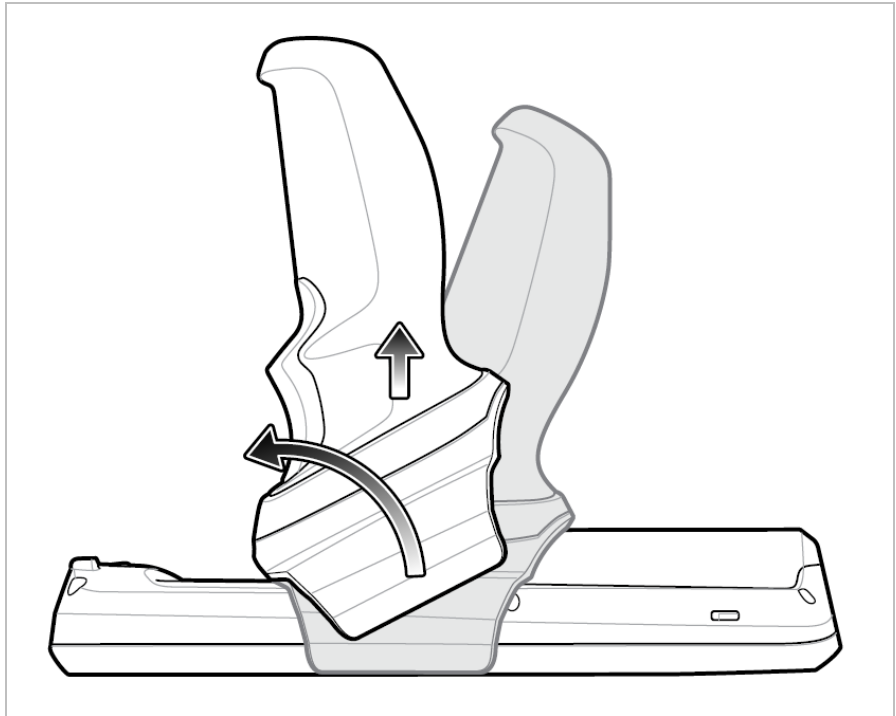
To insert the device into the Scan handle – using the battery finger scop:

1. Install the MC27^{ex}-NI into the Scan handle only outside hazardous areas.
2. Align the battery finger scoop with the recess on the Scan handle.
3. Rotate the Scan handle down to grab the device.



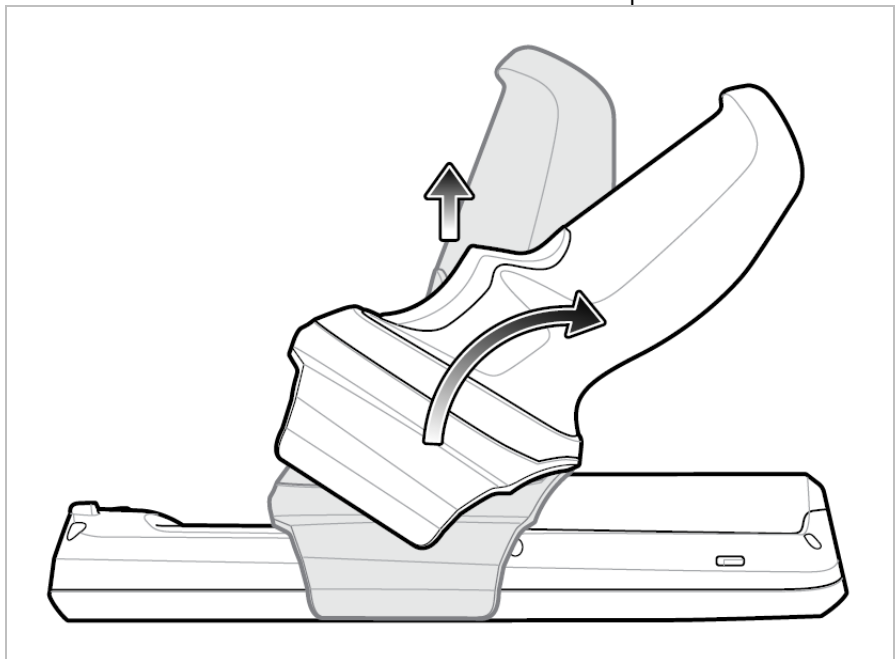
To remove the device from the Scan handle:

1. Only remove the MC27^{ex}-NI from the Scan handle outside of the hazardous area.
2. Rotate the Scan handle toward the top of the device and lift up to remove.



Alternative:

Rotate the Scan handle toward the bottom of the device and lift up to remove.



8.1.8 Protective cover

The Protective cover provides additional protection for the device.

⚠ DANGER

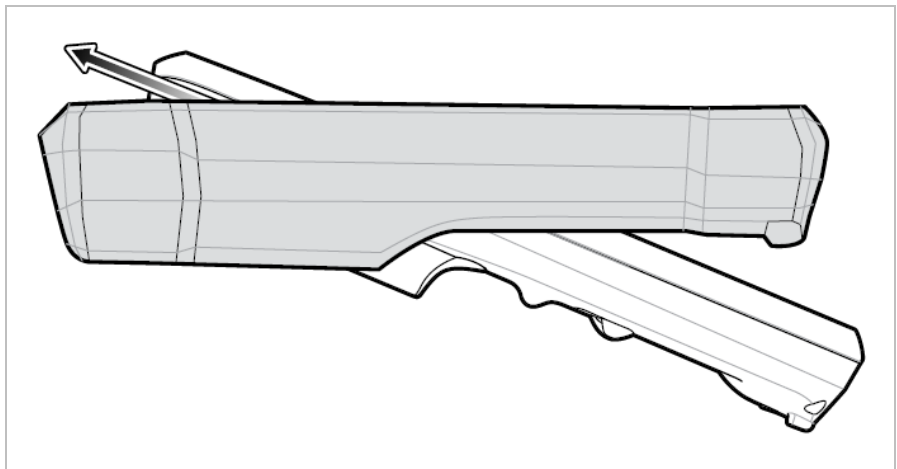
Non certified accessories endanger explosion protection.

Danger to life exists in hazardous areas!

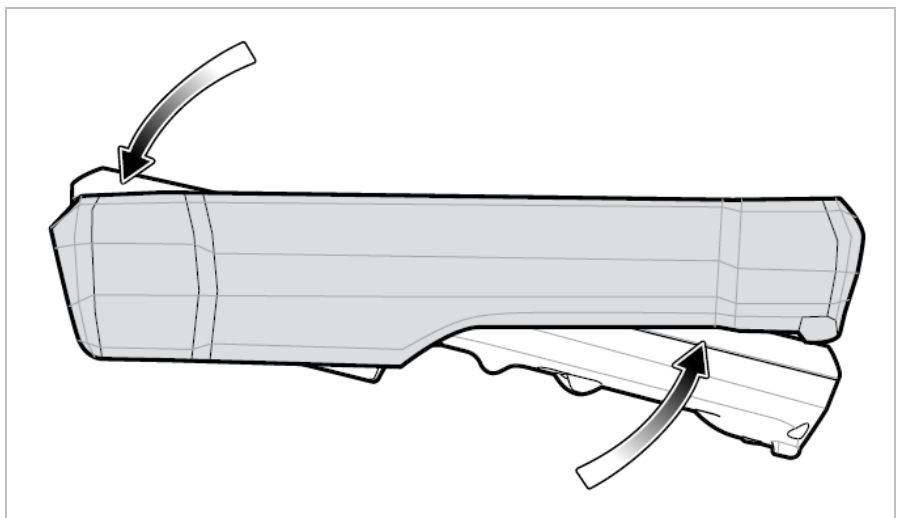
- ▶ Only use the Protective cover from BARTEC with following type B7-A2Z0-0083.
For Mobile Computer without Scan handle - Type B7-A2Z0-0084
For Mobile Computer with Scan handle - Type B7- A2Z0-0085

To insert the device into the Protective Cover - Mobile Computer without Scan handle:

1. Slide the bottom of the device into the bottom of the Protective cover.



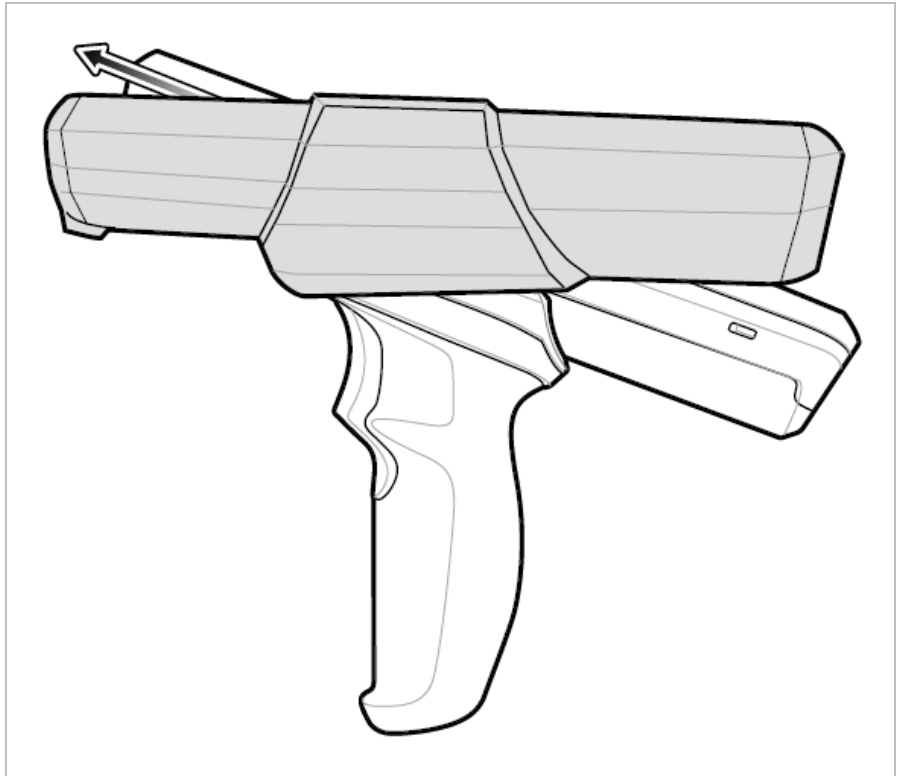
2. Grasp the top of the Protective cover and place over the top of the device.



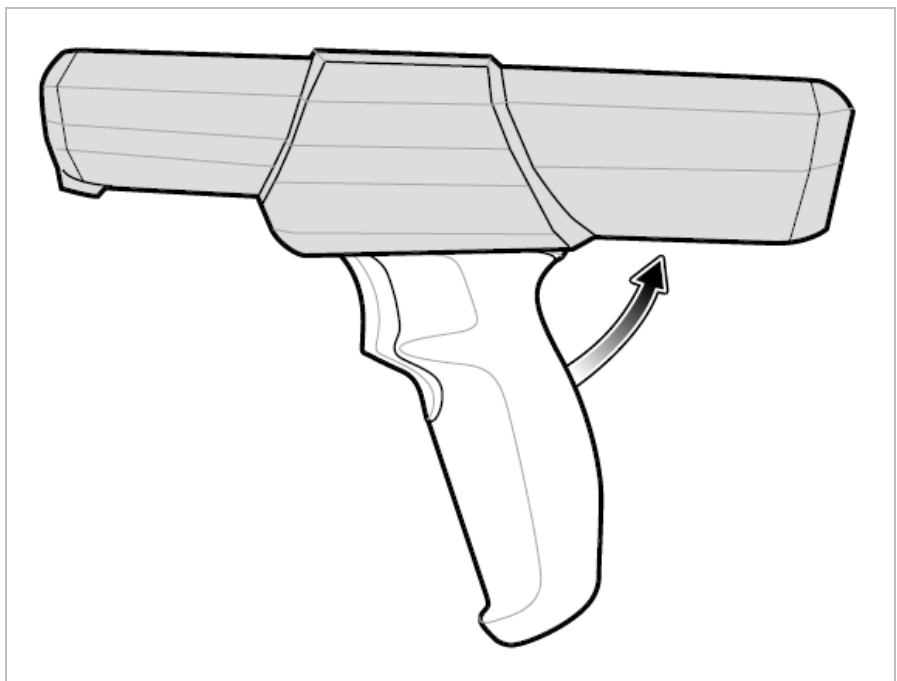
To function properly, remove the entire Protective Cover from the device before placing the device in a Base station.

To insert the device into the Protective Cover - Mobile Computer with Scan handle:

1. Slide the top of the device into the top of the Protective Cover.



2. Grasp the bottom of the Protective cover and place over the bottom of the device.
- 3.



To function properly, remove the entire Protective Cover from the device before placing the device in a Base station.

8.1.9 Screen protector

The MC27^{ex}-NI is supplied with a Screen protector and this must be attached in hazardous areas:

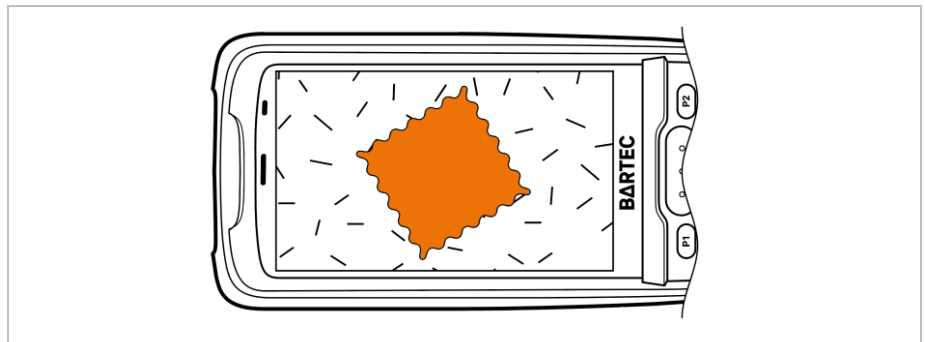
Type	Order number
Screen protector	B7-A2Z0-0086

⚠ DANGER

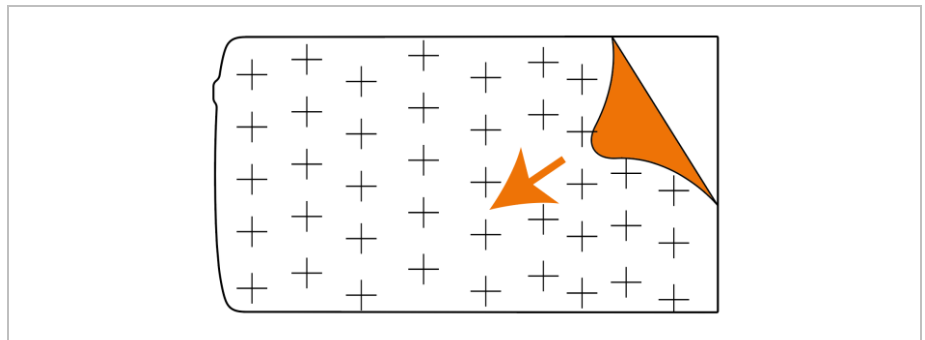
Non certified accessories endanger explosion protection.
Danger to life exists in hazardous areas!

▶ Only use the Screen protector from BARTEC with type B7-A2Z0-0086.

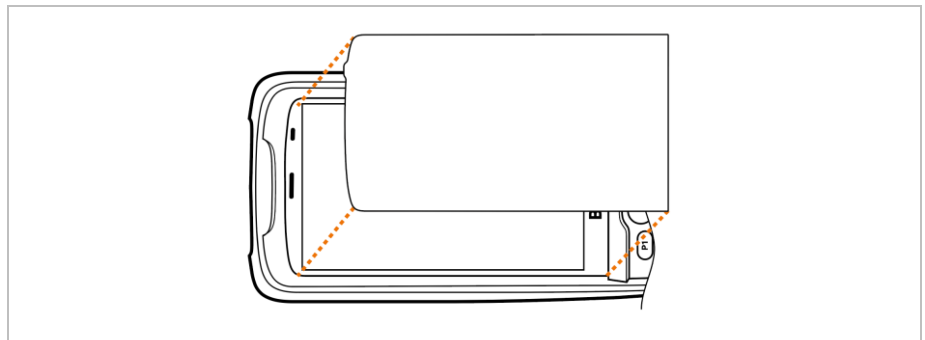
1. Clean the screen with the alcohol wipe, and then use the microfiber cloth to make it clean and dry. Use the dust removal sticker to remove any remaining dust.



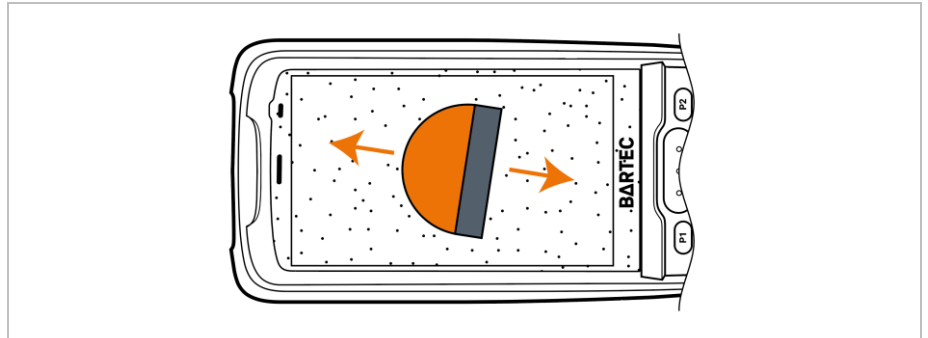
2. Peel off the protective film from the screen protector.



3. Align carefully and apply the screen protector to the screen.



4. Slowly press the squeegee from the middle of the screen and out toward the edges to remove the remaining bubbles.



8.1.10 Using the touch screen

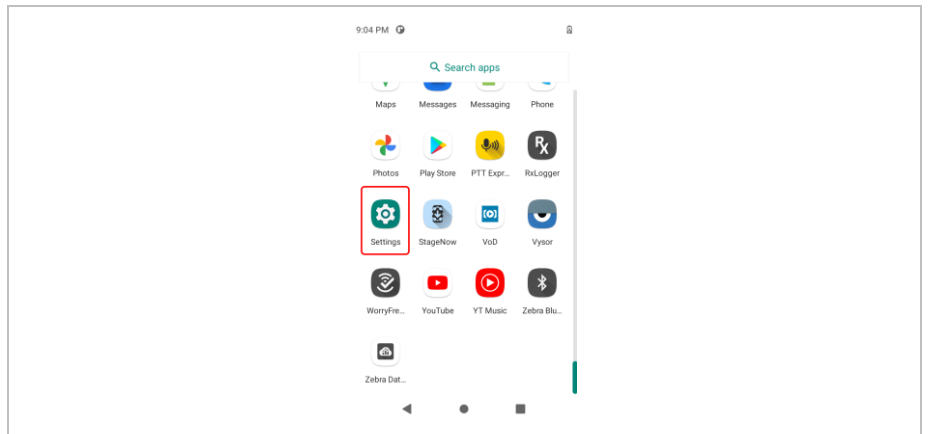
The touch screen can be operated using the following methods.

- Finger
- Gloves

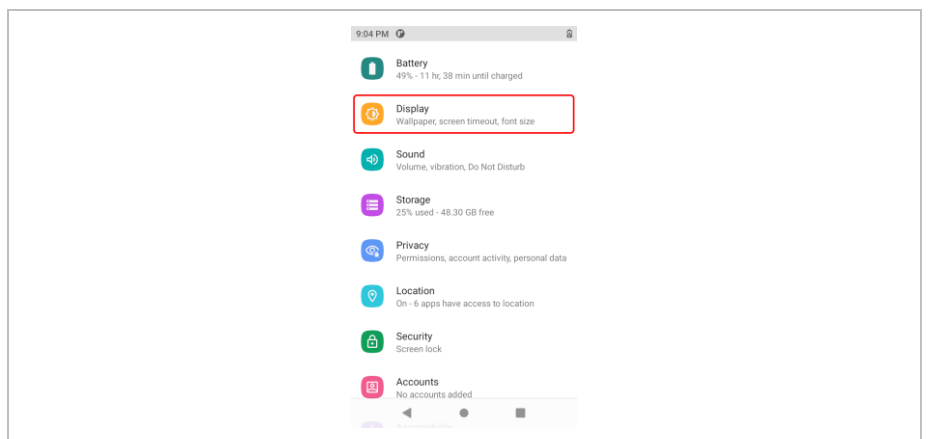
Please note that the touch mode must be adjusted depending on the method used.

Work steps:

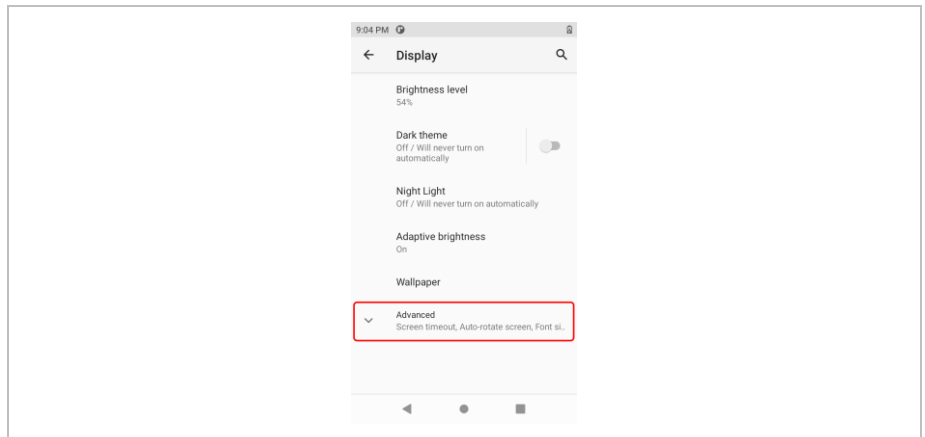
1. Go to the **Settings**.



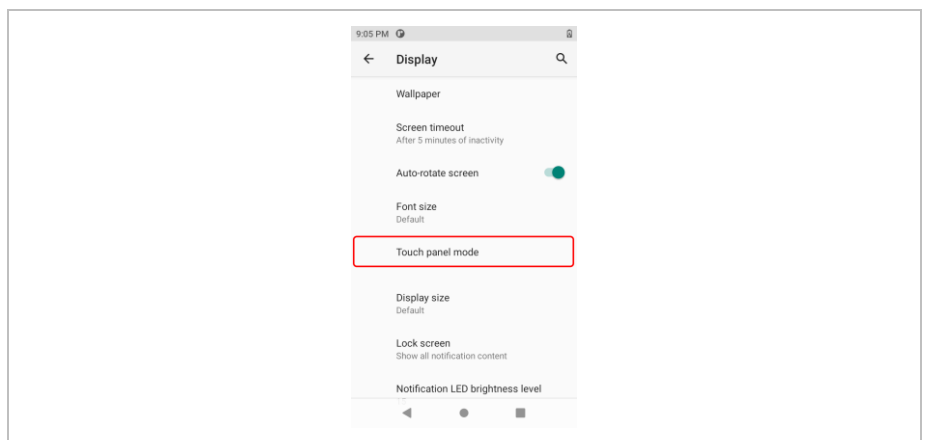
2. Scroll down and select the **"Display"** menu.



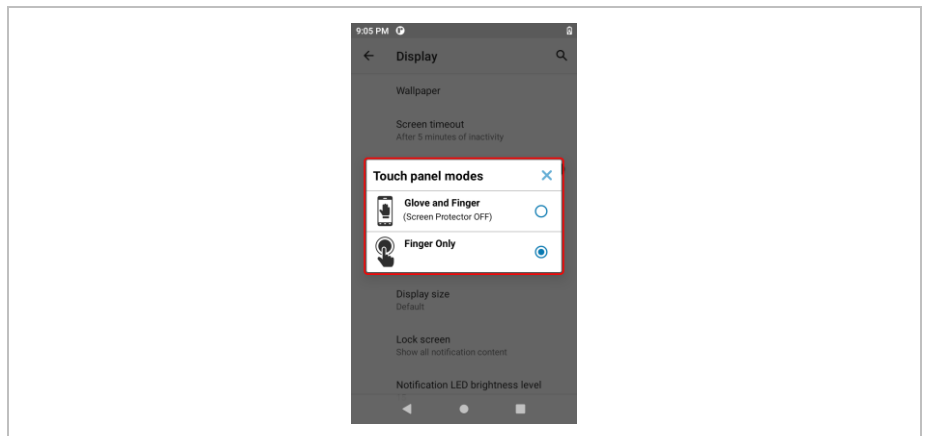
3. Select **“Advanced”** in the menu.



4. Select **“Touch panel mode”** in the menu.



5. Set the **“Touch Mode”** for your input method.



- Glove and Finger (screen protector off), to operate the screen with fingers or glove.
- Finger only, to operate the screen with finger only.

6. Exit the menu by touch on the backspace key  or the **“Home Screen”** key.



Detailed information and further instructions on the use of the touch screen can be found in the "Product Reference Guide MC2700 (EN)" from ZEBRA.

8.2 Scanning - Barcode

Use the internal 1D/2D imager to capture barcode data.

8.2.1 Scanning

1. Ensure that an application is open on the Mobile C and a text field is in focus (text cursor in text field).
2. Point the top of the device at a barcode.
3. Press and hold the Scan button or trigger.
4. The red laser aiming pattern turns on to assist in aiming.



NOTE:

When the device is in "**Picklist Mode**", the device will not decode the barcode until the center of the crosshairs touches the barcode.

5. Ensure the barcode is within the area formed by the cross-hairs in the aiming pattern. The aiming dot is used for increased visibility in bright lighting conditions.
6. The Scan LEDs light green and a beep sounds, by default, to indicate the barcode was decoded successfully.
7. Release the scan button or trigger key.

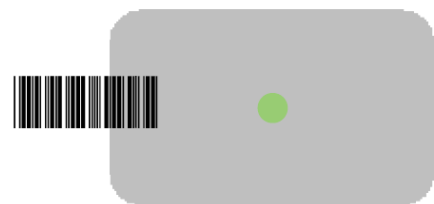
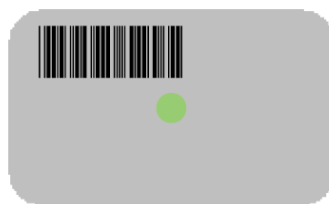


NOTE:

Decoding of the imager is normally instantaneous. The device repeats the steps required to make a digital image (Image) of a bad or difficult barcode as long as the scan button remains pressed.

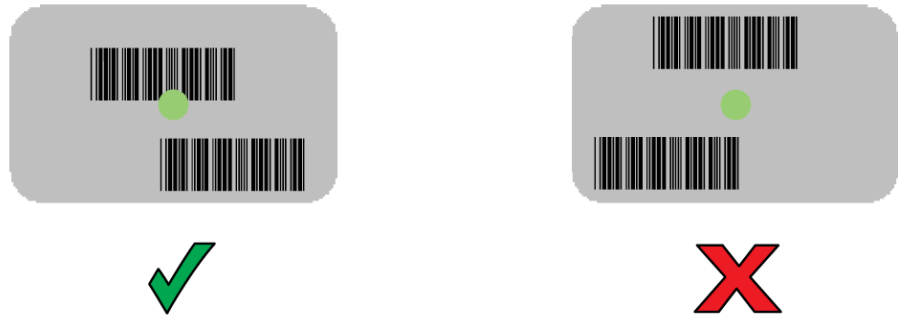
The content data of the barcode is displayed in the text field.

Aiming Pattern – Default Settings

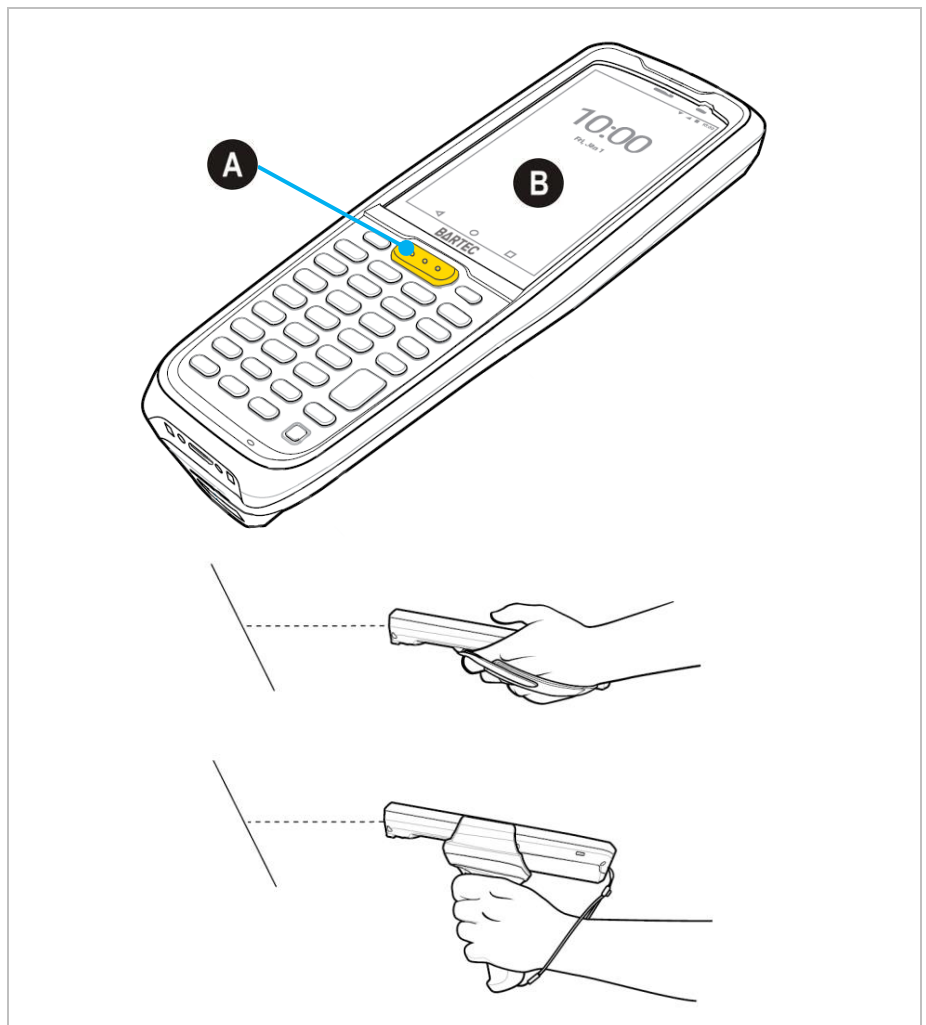


“Picklist Mode” with Multiple Barcodes

In Picklist Mode, the scan engine only decodes barcodes that are aligned under the laser crosshair or LED aiming point. It allows the user to select and scan a single barcode from an array of barcodes.



8.2.2 Scan buttons for the scanner



- A) Scan Button (Trigger button)
- B) Virtual trigger key
 - in the software application
 - "Swipe Assist" tool (part of Datawedge) allows free placement of a virtual scan trigger

8.2.3 Datawegde

The Zebra DataWedge application is preinstalled on the Mobile Computer. The application is freeware.



For more information on DataWedge, see:

<https://www.zebra.com/us/en/products/software/mobile-computers/datawedge.html>

Guide to DataWedge:

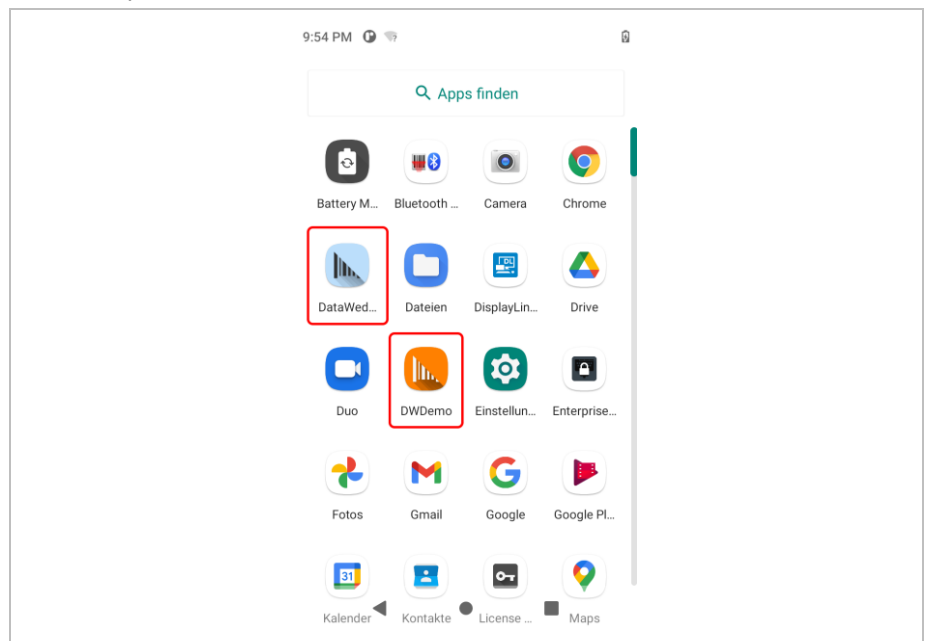
<https://techdocs.zebra.com/>

The DataWedge is a utility that adds advanced barcode scanning capabilities to any application without writing code. It runs in the background and manages the interface to built-in barcode scanners. Captured barcode data is converted to keyboard input and sent to the target application as if it had been entered from the keyboard.

With DataWedge, any application on the device can retrieve data from the barcode scanner and manipulate the data using options or rules.

Configure DataWedge for:

- Provide data collection services from any application.
- Use a specific scanner, reader, or other peripheral device.
- To properly format and transfer data to a specific application.



8.3 Scanning – RFID NFC/HF

NFC/HF RFID is a short-range wireless connectivity technology standard that enables a secure transaction between a reader and a contactless smartcard.

The technology is based on ISO/IEC 14443 type A and B (proximity) ISO/IEC 15693 (vicinity) standards, using the HF 13.56 MHz unlicensed band.

The device supports the following operating modes:

- Reader mode
- Card Emulation mode

With NFC, the device can:

- Read contactless cards such as contactless tickets, ID cards and ePassport.
- Read and write information to contactless cards such as SmartPosters and tickets, as well as devices with NFC interface such as vending machines.
- Exchange data with another NFC device.
- Emulate contactless cards such as payment, or ticket, or SmartPoster.

The device NFC antenna is positioned to read NFC cards from the top of the device while the device is being held.

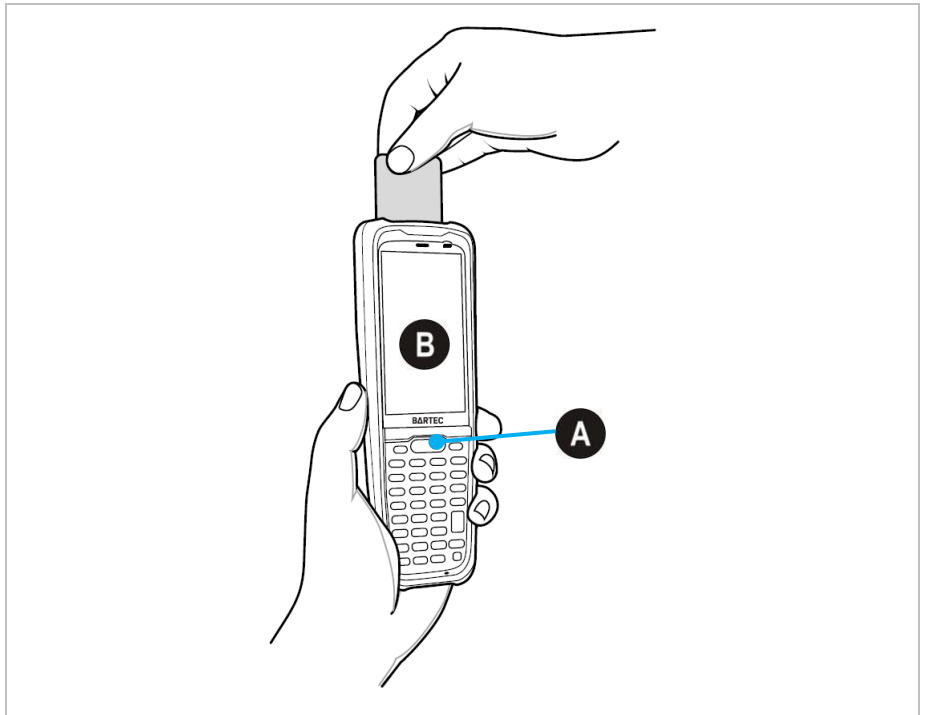
8.3.1 Scanning

1. Start an NFC-enabled application.
2. Move the device near the NFC card until the card is detected.
3. Hold the card in position until the read process is complete. This is usually indicated/acknowledged by the application.



For detailed information on the RFID NFC/HF reader used, refer to the "Product Reference Guide MC2700 (EN)" from ZEBRA.

8.3.2 Scan buttons and antenna position



- A) Trigger button
- B) Virtual trigger key
- in the software application

9 Disposal



Mobile Computer and accessories contains metallic and plastic parts and electronic components.

WEEE registration number of the BARTEC GmbH:
DE 95940350



As professional electrical devices, our devices are intended exclusively for commercial use, so-called B2B devices, in accordance with the WEEE Directive. The WEEE Directive provides the framework for the treatment of old electrical equipment throughout Europe. This means that you may not dispose of these devices in usual household waste but must dispose of them separately in an environmentally compatible manner and can also bring them to the collection points of public disposal companies. All products purchased from us can be returned to us by our customers for disposal. We will ensure disposal in accordance with the applicable laws. The sender shall bear the costs of postage and packaging.

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