

Touch Computer TC78^{ex}-NI

Quick Start Guide



Quick Start Guide - Translation

TC78^{ex}-NI

Touch Computer

Type B7-A2D* - ****/*****

ATEX / IECEx / UKEX Zone 2 / 22

Class I, II, III Division 2

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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 Touch Computer is a prerequisite for its perfect and correct functioning.

1.3 Intended use

1.3.1 Exclusive purpose

The Touch 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 potentially explosive atmospheres.

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 Touch Computer who are acquainted with the basic regulations on safety and accident prevention, and who have been inducted in the use of the Touch 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 potentially explosive atmospheres!

Do not open devices in potentially explosive atmospheres.

Do not replace or charge battery in potentially explosive atmospheres.

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 potentially explosive atmosphere 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 potentially explosive atmospheres 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 authorised personnel with original spare parts and according to the state of the art.

Therefore all repairs to the Touch 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 Touch Computer. Labelling see Chapter: Technical data.

The guidelines and standards applicable to the Touch Computer for devices and protected systems for intended use in potentially explosive atmospheres are provided in Chapter: 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 Touch 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 Touch 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 Touch Computer TC78^{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 Touch Computer TC78^{ex}-NI	This Quick Start Guide describes the safety-related information, first use and further data of the Touch Computer TC78 ^{ex} -NI.
Data sheet Touch Computer TC78^{ex}-NI	This technical data sheet contains the most important explosion-relevant technical data as well as general technical data.
Document ZEBRA	Explanation
<ul style="list-style-type: none"> ▪ TC78 Touch Computer Quick Start Guide ▪ TC78 Touch Computer Product Reference Guide (EN) Best practice and handling manuals 	Instructions for commissioning, operating, configuring, programming and maintaining of the Touch 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
TC	=	Touch 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 6490 Octa-Core, 2.7 GHz
Display	6"Color Display with 2160 x 1080 Pixel resolution
Memory	4 GB
Mass storage	64 GB
Operating system	The TC78 ^{ex} -NI is delivered by BARTEC according to the currently available Android™ version. (Details see data sheet) <small>Android is a trademark of Google LLC.</small>
WAN	5G/4G/3G/2G
WLAN	IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v/w/mc/ax
Bluetooth	Klasse 2, Bluetooth v5.2
NFC	ISO 14443 Type A and B; FeliCa and ISO 15693 cards; card emulation via host; contactless payment support; ECP1.0 and ECP2.0 polling support; Apple VAS certified; NFC Forum certified
GPS	GPS, GLONASS, Galileo, Beidou, QZSS Dual-Band GNSS - concurrent L1/G1/E1/B1 (GPS/QZSS, GLO, GAL, BeiDou) + L5/E5a/BDSB2a (GPS/QZSS, GAL, BeiDou); a-GPS; supports XTRA
Scanner	SE55: 1D/2D Advanced Range Scan Engine with IntelliFocus™ technology

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 chargers.

Do NOT attempt to charge damp/wet mobile computers, printers 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 Vehicle Installation

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles (including safety systems). Check with the manufacturer or its representative regarding your vehicle. Ensure the equipment is installed to avoid driver distractions. You should also consult the manufacturer about any equipment that has been added to your vehicle.

Position the device within easy reach. User should be able to access the device without removing their eyes from the road.



Before installing or using, check national and local laws regarding distracted driving.

Safety on the Road

Give your full attention to driving. Obey the laws and regulations on the use of wireless devices in the areas where you drive.

The wireless industry reminds you to use your device / phone safely when driving.

CAUTION

In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

2.1.3 Restricted Use Locations

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

2.1.4 Safety in Hospitals and Aircraft

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.

2.1.5 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

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.

To satisfy RF exposure requirements, this device must operate with a minimum separation distance of 1.5 cm or more from a user's body and nearby persons.

2.3 Optical devices

2.3.1 Laser

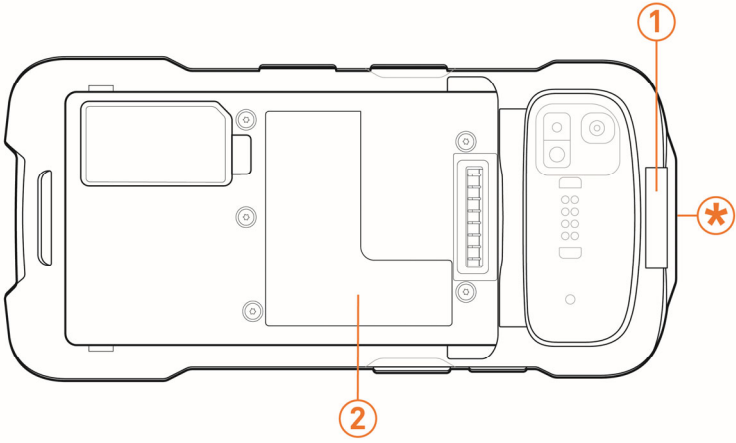

Class 2 laser scanners use a low power, visible light diode. As with any very bright light source such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

CAUTION

Use of controls, adjustments, or the performance of procedures other than those specified in the supplied product documentation may result in hazardous laser light exposure.

SE5500	Wavelength: 500-570 nm
	Maximum output: 1 mW
	Pulse duration: 4 ms
	Beam divergence: 18 °
	Repetition rate: 16.7 ms

2.3.2 Scanner Labeling

	
<p>1</p>	<p>Laser Light — do not stare into beam. Class 2 Laser product. 500-570mm, 1mW</p> <div style="border: 1px solid black; padding: 5px;"> <p>LASER LIGHT - DO NOT STARE INTO BEAM. CLASS 2 LASER PRODUCT. LUMIÈRE LASER - NE PAS REGARDER DANS LE FAISCEAU. APPAREIL À LASER DE CLASSE 2. 激光辐射 勿直视光束 2类激光产品</p>  </div>
<p>2</p>	<p>Complies with 21 CFR1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 56, dated May 08, 2019 and IEC/EN 60825-1:2014.</p>
<p>*</p>	<p>CAUTION: Laser light emitted from this aperture.</p>

2.3.3 LED

Risk Group classified according to IEC 62471:2006 and EN 62471:2008.

SE5500	Pulse Duration: CW Exempt Group (RG0)
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2.4 Power Supply

WARNING ELECTRICAL SHOCK

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

2.5 Batteries and Power Packs

2.5.1 Battery information

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-A2Z0-0088/**** (3.85 V / 4680 mAh)
Extended battery – Type B7-A2Z0-0089 (3.85 V / 7000 mAh)

BARTEC approved rechargeable battery packs 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.

2.5.2 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.
 - Batteries subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.
-
- 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.
 - 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.

2.6 United States and Canada Regulatory

2.6.1 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.

2.6.2 Radio Frequency Interference Requirements – Canada

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

2.6.3 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 the Display Grant section of fcc.gov/oet/ea/fccid.

To satisfy RF exposure requirements, this device must operate with a minimum separation distance of 1.0 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 1.5 cm ou plus de corps d'une personne.

Hotspot Mode

To satisfy RF exposure requirements in hotspot mode, this device must operate with a minimum separation distance of 1.0 cm or more from a user's body and nearby persons.

Pour satisfaire aux exigences d'exposition RF en mode hotspot, cet appareil doit fonctionner avec une distance de séparation minimale de 1,0 cm ou plus du corps de l'utilisateur et des personnes à proximité.

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 filing.

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.

2.6.4 Use with Hearing Aids – FCC

When some wireless devices are used near some hearing devices (hearing aids and cochlear implants), users may detect a buzzing, humming, or whining noise. Some hearing devices are more immune than others to this interference noise, and wireless devices also vary in the amount of interference they generate. In the event of interference, you may want to consult your hearing aid supplier to discuss solutions.

The wireless telephone industry has developed ratings for some of their mobile phones to assist hearing device users in finding phones that may be compatible with their hearing devices. Not all phones have been rated.

The ratings are not guarantees. Results will vary depending on the user's hearing device and hearing loss. If your hearing device happens to be vulnerable to interference, you may not be able to use a rated phone successfully. Trying out the phone with your hearing device is the best way to evaluate it for your personal needs.

ANSI C63.19 Rating System

In accordance with FCC hearing aid compatibility rules, certain phones be tested and rated under the American National Standard Institute (ANSI) C63.19 hearing-aid compatibility standard. This standard contains two types of ratings:

- **M-Rating:** For reduced radio-frequency interference to enable acoustic coupling with hearing aids that don't operate in telecoil mode
- **T-Rating:** For inductive coupling with hearing aids operating in telecoil mode (t-switch or telephone switch)

These ratings are on a scale from one to four, where four is the most compatible. A phone is considered hearing-aid compatible under the FCC requirements if it's rated M3 or M4 for acoustic coupling and T3 or T4 for inductive coupling.

Hearing devices may also be measured for immunity to this type of interference. Your hearing device manufacturer or hearing health professional may help you find results for your hearing device. The more immune your hearing aid is, the less likely you are to experience interference noise from mobile phones.

Hearing Aid Compatibility

This phone has been tested and rated for use with hearing aids for some of the wireless technologies that it uses. However, there may be some newer wireless technologies used in this phone that have not been tested yet for use with hearing aids. It is important to try the different features of this phone thoroughly and in different locations using your hearing aid or cochlear implant to determine if you hear any interfering noise. Consult your service provider or the manufacturer of this phone for information on hearing aid compatibility. If you have questions about return or exchange policies, consult your service provider or phone retailer.

This phone has been tested to ANSI C63.19 and rated for use with hearing aids; it received a M4/T3 rating.

This device is marked HAC showing compliance with the applicable requirements of the FCC.

2.6.5 UL Listed Products with 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.

Marquage UL des produits équipés d'un GPS

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.

2.7 United Kingdom



Statement of Compliance

BARTEC hereby declares that this radio equipment is in compliance with the Radio Equipment Regulations 2017 and the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.

UK Importer: Bartec UK Ltd

Address: Arundel House, Hollins Brook Park, Bury BL9 8RN, United Kingdom

3 Product description

3.1 TC78^{ex}-NI

The TC78^{ex}-NI is a tough Touch Computer with 4.7" 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 potentially explosive atmospheres.



3.2 Purpose of use

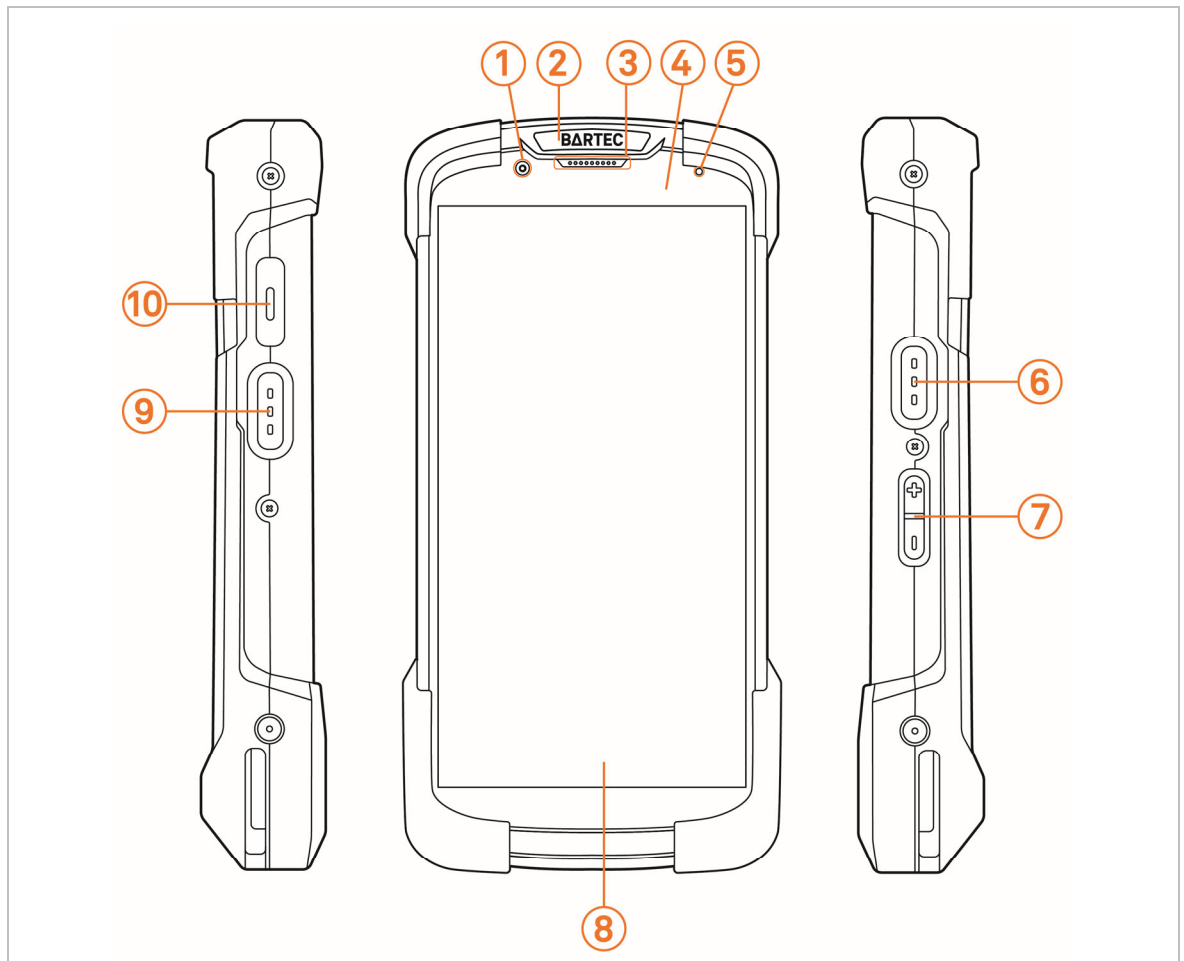
The Touch Computer TC78^{ex}-NI are handheld electrical devices. They serve the purpose of entry, processing and (radio) transmission of data within potentially explosive atmospheres.

The Touch Computer TC78^{ex}-NI are used exclusively in combination with devices which comply with the requirements placed on the overvoltage category I.

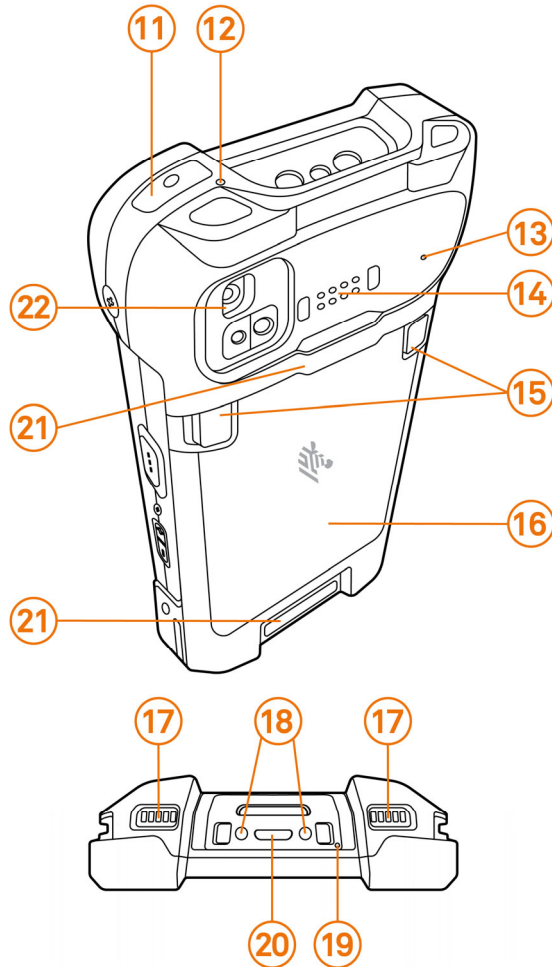
The **Touch Computer TC78^{ex}-NI, Type B7-A2D*-****/******* have been modified for use in the following potentially explosive atmospheres:

- ATEX / IECEx / UKEX Zone 2 and Zone 22
- Class I, II, II Div. 2, Groups A, B, C, D, F, G; T4

4 Structure







1	Front camera (8MP)	Takes photos and videos.
2	Scan LED	Indicates data capture status.
3	Receiver	Use for audio playback in Handset mode.
4	Proximity/light sensor	Determines proximity and ambient light for controlling display backlight intensity.
5	Battery status LED	Indicates battery charging status while charging and application-generated notifications.
6	Scan button	Initiates data capture (programmable).
7	Volume up/down button	Increase and decrease audio volume (programmable).
8	Touch screen	Displays all information needed to operate the device.
9	Scan button	Initiates data capture (programmable).
10	PTT button	Typically used for PTT communications. User reprogrammable to generate other keycodes or to launch applications.



11	Power button	Turns the display on and off. Press and hold to reset the device, to power it off, or to swap the battery.
12	Microphone	Use for noise cancellation.
13		
14	Back common I/O 8 pins	Provides host communications, audio, device charging via cables, and accessories.
15	Battery release latches	Pinch both latches in and lift up to remove the battery.
16	Battery	Provides power to the device.
17	Speaker	Provides audio output for video and music playback. Provides audio in speakerphone mode.
18	DC input pins	Power/ground for charging (5V through 9V).
19	Microphone	Use for noise cancellation.
20	USB Type C receptacle	Provides power and communications via standard USB-C cable.
21	Hand strap attachment points	Attachment points for the hand strap.
22	Rear camera (16 MP with flash)	Takes photos and videos with flash to provide illumination for the camera.

5 Technical data

5.1 Explosion protection

ATEX Zone 2 / Zone 22	
Type	B7-A2D3- [*] B**/***** TC78 ^{ex} -NI
Labelling	 II 3G Ex ic op is IIC T4 Gc  II 3D Ex ic op is IIIC T135 °C Dc IP64 -20 °C ≤ Ta ≤ +50 °C
Test certificate	EPS 23 ATEX 1 053 X
Standards	See chapter: EU Declaration of Conformity
IECEx Zone 2 / Zone 22	
Type	B7-A2D3- [*] B**/***** TC78 ^{ex} -NI
Labelling	Ex ic op is IIC T4 Gc Ex ic op is IIIC T135 °C Dc IP64 -20 °C ≤ Ta ≤ +50 °C
Test certificate	IECEx EPS 23.0008X
Standards	See chapter: EU Declaration of Conformity
UKEX Zone 2 / Zone 22	
Type	B7-A2D3- [*] B**/***** TC78 ^{ex} -NI
Labelling	 II 3G Ex ic op is IIC T4 Gc  II 3D Ex ic op is IIIC T135 °C Dc IP64 -20 °C ≤ Ta ≤ +50 °C
Test certificate	EPS 23 UKEX 1 053 X
Class I, II, III, Division 2	
Type	B7-A2D2- [*] A**/***** TC78 ^{ex} -NI
Labelling	Class I, Division 2, Groups A,B,C,D Class II, Division 2 Group F and G Class III; T4 Class I, Zone 2, AEx ic op is IIC T4 Gc Zone 22, AEx ic op is IIIB T135°C Dc Ex ic op is IIC T4 Gc Ex ic op is IIIB T135°C Dc
Test certificate USA and Canada	E321557
Standards	See Certificate

X - labelling (special conditions of use for secure operation within the potentially explosive atmosphere)

The battery may only be replaced or charged outside potentially explosive atmospheres.

Only use battery with type B7-A2Z0-0088/**** or B7-A2Z0-0089 for the TC78^{ex}-NI.

Connecting and disconnecting all external connections, opening the housing or replacing the battery pack under power is only permitted if it is proven that no explosive atmosphere is present.

The device must be protected against impacts with high impact energy and against processes that generate a strong charge.

The manufacturer's safety instructions must be strictly observed.

5.2 Features

5.2.1 Performance features

CPU	Qualcomm 6490 Octa-Core, 2.7 GHz
Operating system	The TC78 ^{ex} -NI is delivered by BARTEC according to the currently available Android™ version. (Details see data sheet) <small>Android is a trademark of Google LLC.</small>
Android Enterprise Recommended (AER)	Certified AER by Zebra Google
Memory	4 GB RAM; 64 GB Flash
Extension slot	MicroSD card slot supports up to 2 TB
SIM card slot	1x Nano SIM and 1x eSIM

5.2.2 Physical features

Dimensions: (Length x Width x Height)	176.8 x 85.8 x 28.4 mm (6.96 x 3.38 x 1.12 inch)
Weight (including battery)	approx. 349 g (approx. 12.3 oz)
Display	6" FHD (Full High Definition+) color display; high resolution; 1080 x 2160 pixel optically bonded to touch panel
Touchscreen	Dual mode capacity touch Touch function with stylus, finger or glove depending on the mode selected Corning® Gorilla® Glass water droplet rejection
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: Adjusts display backlight brightness ▪ Magnetometer: Detects direction and orientation ▪ Motion Sensor: 3-axis accelerometer with MEMS Gyro ▪ Pressure Sensor: Detects altitude information for locating ▪ Proximity Sensor: Detects when the user places the handset against head during a phone call to disable display output and touch input ▪ Gyro: Senses linear orientation

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 90 % (non-condensing)
Class of protection (IEC 60529)	IP 65 and IP 68

5.2.4 Voice and data transmission WiFi

Radio standard	IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v/w/mc/ax; 2x2 MU-MIMO; Wi-Fi 6E (802.11ax); Wi-Fi™ certified; Wi-Fi™ 6E Certified; Dual Band Simultaneous; IPv4, IPv6
Data Rates	5 GHz: 802.11a/n/ac/ax - 20 MHz, 40 MHz, 80 MHz, 160 MHz - up to 2402 Mbps; 2.4 GHz: 802.11b/g/n/ax - 20 MHz up to 286.8 Mbps 6 GHz: 802.11ax - 20 MHz, 40 MHz, 80 MHz, 160 MHz - up to 2402 Mbps
Operating Channels	Channel 1-13 (2401-2483 MHz): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 Channel 36-165 (5150-5850 MHz): 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 149, 153, 157, 161, 165 Channel 1-233 (5925-7125 MHz) Channel Bandwidth: 20/40/80/160 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, and AES); WPA3 Personal (SAE); WPA/WPA2 Enterprise (TKIP and AES); WPA3 Enterprise (AES) — EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2, PEAPv1-EAP-GTC, LEAP, EAP-PWD; TC78 WWAN models only — EAP-SIM, EAP-AKA; WPA3 Enterprise 192-bit mode (GCMP256) - EAP-TLS; Enhanced Open (OWE)

Certifications	Wi-Fi Alliance Certifications: Wi-Fi CERTIFIED n; Wi-Fi CERTIFIED ac; Wi-Fi CERTIFIED 6; Wi-Fi Enhanced Open; WPA2-Personal; WPA2-Enterprise; WPA3-Personal; WPA3-Enterprise (includes 192-bit mode); Protected Management Frames; Wi-Fi Agile Multiband; WMM; WMM-Power Save; WMM-Admission Control; Voice-Enterprise; Wi-Fi Direct; QoS Management; OCE
Fast Roam	PMKID caching; Cisco CCKM; 802.11r; OKC



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

5.2.5 Voice and data transmission WAN



The available radio frequency bands depend on the device configuration.

Radio frequency band	<p>North America: 5G FR1: n2, 5, 7, 12, 13, 14, 25, 26, 29, 38, 41, 48, 66, 71, 77, 78 4G: B2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 29, 38, 41, 48, 66, 71 3G: B2, 4, 5 2G: 850, 1900</p> <p>Rest of World: 5G FR1: n1, 2, 3, 5, 7, 8, 20, 28, 38, 40, 41, 66, 71, 77, 78 4G: B1, 2, 3, 4, 5, 7, 8, 17, 20, 28, 38, 39, 40, 41, 42, 43, 66, 71 3G: 1, 2, 3, 4, 5, 8 2G: 850, 900, 1800, 1900</p>
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5.2.6 Voice and data transmission Bluetooth

Bluetooth	Class 2, Bluetooth v5.2 and Secondary BLE for beaconing within BLE battery
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5.2.7 Global Positioning System (GPS)

GPS	GPS, GLONASS, Galileo, Beidou, QZSS Dual-Band GNSS - concurrent L1/G1/E1/B1 (GPS/QZSS, GLO, GAL, BeiDou) + L5/E5a/BDSB2a (GPS/QZSS, GAL, BeiDou); a-GPS; supports XTRA
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5.2.8 NFC/HF RFID Reader

NFC/HF RFID is a short-range wireless connectivity technology standard that enables secure transaction between a reader and a contactless smartcard. The technology is based on ISO/IEC 14443 type A and B (proximity) and ISO/IEC 15693 (vicinity) standards, using the HF 13.56 MHz unlicensed band.

NFC/HF	ISO 14443 Type A and B; FeliCa and ISO 15693 cards; Card Emulation via Host; Contactless payment support; ECP1.0 and ECP2.0 polling support; Apple VAS certified; NFC Forum Certified
---------------	---



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 underground)
- Magnetic influences from outside
- Ambient conditions (e.g. Temperatur, humidity, ...)

Further detailed information on the used RFID Reader can be found in the TC78 Touch Computer - Product Reference Guide (EN) from ZEBRA.

5.2.9 Barcode capture

1D-/2D Barcodes	
SE55	1D/2D Advanced Range Scan Engine with IntelliFocus™ technology



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

See the data sheet for the list of supported barcodes/symbologies.

The scanner used comply with laser class CDRH Class II laser/IEC 60825-1 Class 2 laser devices.

Further detailed information on the used Scanners can be found in the TC78 Touch Computer - Product Reference Guide (EN) from ZEBRA.

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	(only change and charge in the safe area)
Type B7-A2Z0-0088/****	Lithium ion battery 3.85 V/4680 mAh (18.0 Wh)
Type B7-A2Z0-0089	Lithium ion battery 3.85 V/7000mAh (26.95 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	less than 5 hours
UN38.3 compliant	Yes

Charge batteries at room temperature with the device in sleep mode.

The device or accessory always performs battery charging in a safe and intelligent manner.

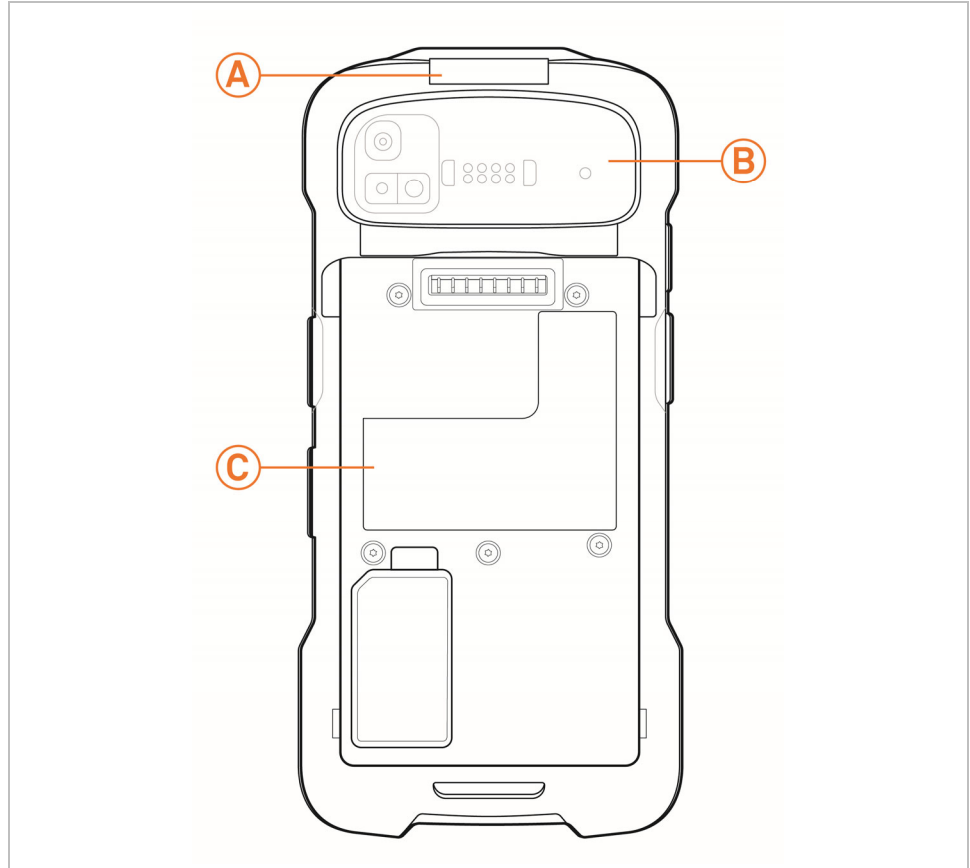
The device or accessory indicates when charging is disabled due to abnormal temperatures via its LED, and a notification appears on the device display.




20 °C to 45 °C (68°F to 113°F)	Optimal charging range.
0 °C to 20 °C (32°F to 68°F) 45 °C to 50 °C (113°F to 122°F)	Charging slows to optimize the JEITA requirements of the cell.
Below 0 °C (32°F) Above 50 °C (122°F)	Charging stops.
Above 58 °C (136°F)	The device shuts down.

5.4 Product labelling

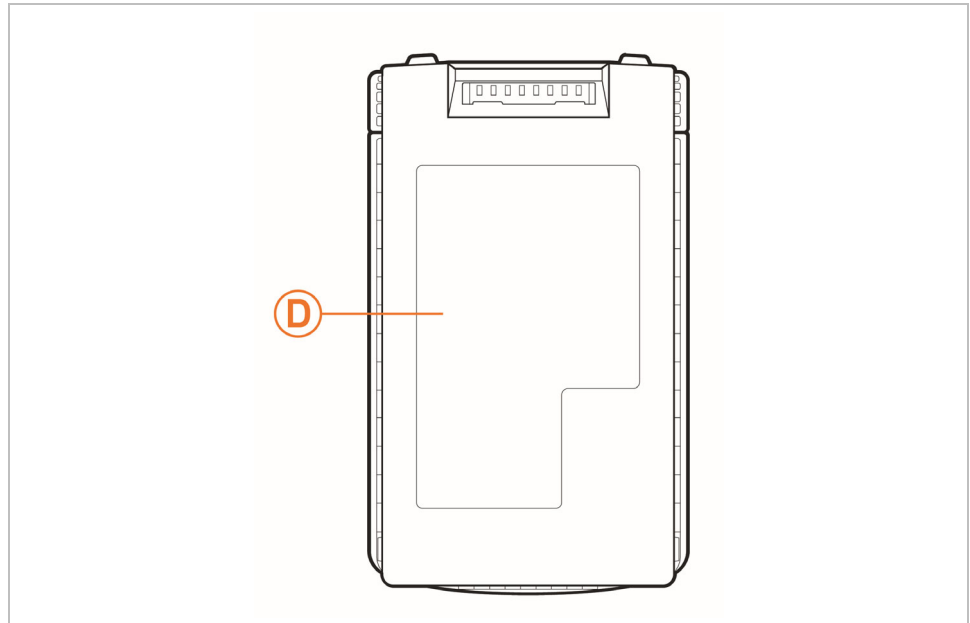
5.4.1 Touch Computer



<p>A</p>	<p>Laser warning</p>	<p>LASER LIGHT - DO NOT STARE INTO BEAM. CLASS 2 LASER PRODUCT. LUMIERE LASER - NE PAS REGARDER DANS LE FAISCEAU. APPAREIL À LASER DE CLASSE 2. 激光辐射 勿直视光束 2类激光产品</p> 
<p>B</p>	<p>Marking Typ B7-A2D3-*B**/*****</p>	<p>Type B7-A2D3-2B11121110A6 EPS 23 ATEX 1 053 X EPS 23 UKEX 1 053 X</p> <p>UK CA</p> <p>II 3G Ex ic op is IIC T4 Gc II 3D Ex ic op is IIC T135°C Dc IP64 IECEX EPS 23.0008X -20°C ≤ Ta ≤ +50°C</p> <p>CE</p> <p>WARNING Do not charge and change battery in hazardous area</p> <p>BARTEC</p>
	<p>Marking Typ B7-A2D2-*A**/*****</p>	<p>Type B7-A2D2-2A11121110NA Warning: Read Quick Start Guide B1-A2D0-7E0001 before use. Avertissement: Lire le guide de démarrage rapide B1-A2D0-7E0001 avant l'utilisation. Do not charge, change battery or use data connections in hazardous area. Ne pas charger, changer la batterie ou utiliser les connexions de données dans la zone à risque d'explosion.</p> <p>BARTEC</p> <p>Class I, Division 2, Groups A, B, C, D Class II, Division 2, Groups F and G Class III, T4</p> <p>Class I, Zone 2, AEx ic op is IIC T4 Gc Zone 22, AEx ic op is IIB T135°C Dc Ex ic op is IIC T4 Gc Ex ic op is IIB T135°C Dc</p>

	<p>Type label Typ B7-A2D3-*B**/*****</p>	 <p>The label contains the following information: CEFC, UKCA, E145483, UL US LISTED I.T.E. BARTEC TC78^{ex}-NI Type: B7-A2D3-2B11121110A6 Max-Eyth-Strasse 16, 97980 Bad Mergentheim / Germany ZEBRA ZEBRA TECHNOLOGIES CORP. HOLTSMILLE, NY 11742 Pats.: ip.zebra.com EPS 23 ATEX 1 053 X, EPS 23 UKEX 1 053 X, II 3G Ex ic op is IIC T4 Gc, II 3D Ex ic op is IIC T135°C Dc IP64, IECEx EPS 23.0008X, -20°C ≤ Ta ≤ +50°C COMPLIES WITH 21 CFR 1040.10 AND 1040.11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO. 56, DATED MAY 08, 2019 AND IEC/EN 60825-1:2014. 注意：打開時及聯鎖失效時有2類激光輻射，勿直視光束 5V --- 2.5A</p>
	<p>Type label Typ B7-A2D2-*A**/*****</p>	 <p>The label contains the following information: FC, E321567, UL US LISTED I.T.E. EQ. for Haz. Loc. BARTEC TC78^{ex}-NI Type: B7-A2D2-2A11121110NA Max-Eyth-Strasse 16, 97980 Bad Mergentheim / Germany ZEBRA ZEBRA TECHNOLOGIES CORP. HOLTSMILLE, NY 11742 Pats.: ip.zebra.com FCC ID: U27TC7301, IC:109AN-TCT301, US: 1K0IPNANTC7301 COMPLIES WITH 21 CFR 1040.10 AND 1040.11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO. 56, DATED MAY 08, 2019 AND IEC/EN 60825-1:2014. 5V --- 2.5A</p>

5.4.2 Battery



D

Battery marking
 Type
 B7-A2Z0-0088/0001

Max-Eyth-Strasse 16
 97980 Bad Mergentheim / Germany
 BATTERY TYPE: B7-A2Z0-0088/0001
 FOR USE WITH TC78^{ex-NI} - TYPE: B7-A2D^{*}

ZEBRA ZEBRA TECHNOLOGIES CORP.
 赛马技术公司 HOLTSVILLE, NY 11742

Model (型号/號): BT-000442 1ICP6/55/83
 二次鋰電池組/鋰離子電池 LI-ION BATTERY
 RECHARGEABLE (3.85V) / 充電限制電壓: 4.4V

MIN. (額/ 額定容量) 4600mAh 17.71Wh
 TYP.: 4680mAh 18.01Wh 中國製造/中國製造 중국산
 Cell Origin: China / Finished in: China
 Factory: TWS TECHNOLOGY(GUANGZHOU) LIMITED

WARNING: Do not disassemble, short circuit, or dispose of in fire.
CAUTION: Risk of explosion if battery is replaced by an incorrect type.
 Dispose of used batteries according to instructions.

警告: 請勿拆裝, 短路, 撞擊, 擠壓或投入火中及水中。
 注意: 如果電池被不正確型號替換, 或出現鼓脹, 會存在爆炸及其他危險。請按說明處置使用過的電池。浸水後嚴禁使用。

R39706

전지
 A S 문의 080-681-0880
 XU100655-22030A

3
 Li-ion 廢電池請回收

E309412
 C US
LISTED
 I.T.E. ACCESSORY

TIS 2217-2548
 Sektor Distributors
 (Thailand) Co., Ltd

P/N: BT-000442-0820
 MFD: 28DEC22
 S/N: T6075 Rev. B

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>

- Touch Computer TC78^{ex}-NI
- Tab „General“

6.2 Storage

ATTENTION

Property damage through incorrect storage!

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

Additional information on the batteries

The batteries of BARTEC (Type B7-A2Z0-0088/**** and Type B7-A2Z0-0089) 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.

When storing batteries for 6 months or longer, the charge level should be verified at least once in 3 months and charged to half of full charge.

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 potentially explosive atmosphere.

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 Touch Computer.
- ▶ In the case of function disturbances or damage to the enclosure, the device should be removed immediately from the potentially explosive atmosphere 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 potentially explosive atmosphere

Touch Computer

- The Touch 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 Touch Computer from impact!
- Do not expose the Touch Computer to caustic/aggressive liquids, vapours, mists!
- Avoid the impact of moisture outside the specifications.
- Avoid thermal impact outside the specified temperature range.

Battery

- The battery may not be opened.
- Only charge the battery (Type B7-A2Z0-0088/**** and Type B7-A2Z0-0089) outside the potentially explosive atmosphere.
- Only charge the battery (Type B7-A2Z0-0088/**** and Type B7-A2Z0-0089) with the chargers specified by BARTEC.
- Only use the battery for the purpose listed in this Quick Start Guide. Is only suitable for the Touch Computer series Type B7-A2D*-****/*****.
- 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 the potentially explosive atmosphere.
- User accessories exclusively which have been tested or certified by BARTEC for this purpose.
- The end user can replace the Battery, MicroSD card, Nano SIM cards, Scan handle, Screen protector, Leather holster and Handstrap himself.
- The end user is free to choose which MicroSD card or Nano SIM card to use, as these components are not specified in the certificate.
- The touch display can be touched with the fingers, gloves or with the optionally available capacitive stylus (Type 17-S1Z0-0008).

7.2 First steps

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

Description	Charging process	
	Battery (in Touch Computer)	Spare battery
Base station Type: G7-A0Z0-0068	Yes	Yes
Charging station Type: G7-A0Z0-0065	Yes	Yes
4-slot battery charging station Type: G7-A0Z0-0070	No	Yes

- ▶ Switch on the Touch Computer.

Optional:

- ▶ Insert the nano SIM cards.
- ▶ Insert a MicroSD card.
- ▶ Attach/remove/replace screen protector.
- ▶ Mount the scan handle.
- ▶ Use the leather holster.
- ▶ Attach hand strap.

8 Operation

8.1 Handling accessories

⚠ DANGER

**Non certified accessories endanger explosion protection.
Danger to life exists in potentially explosive atmospheres!**

- ▶ Only use original accessories from BARTEC.

Only permitted outside the potentially explosive atmosphere:

- ▶ Insert/replace nano SIM cards.
- ▶ Insert/replace microSD card.
- ▶ Insert/charge battery.
- ▶ Attach/remove accessories such as scan handle, screen protector, leather holster, and handstrap.

8.1.1 Insert Nano SIM card

ATTENTION

Damage to the Nano SIM card through electrostatic discharges!

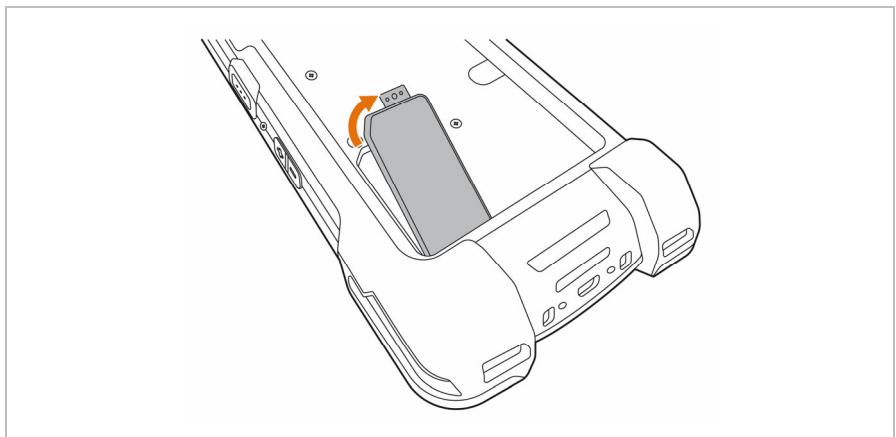
- ▶ Use an antistatic base.
- ▶ Ensure that the operator is correctly earthed.



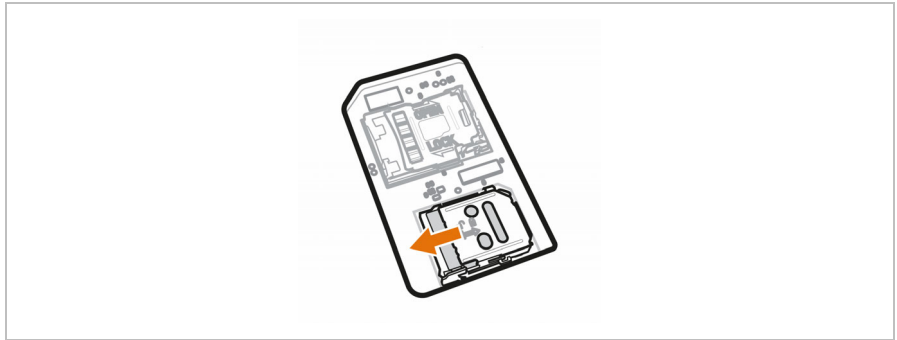
The end user is free to choose which Nano SIM card to use, as these components are not specified in the certificate.

Work steps:

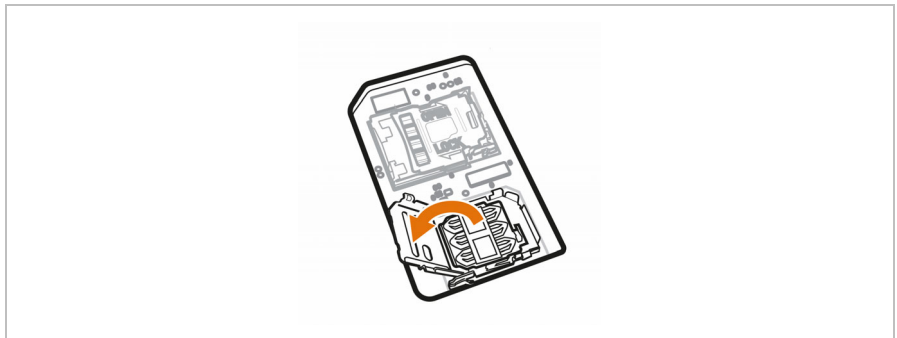
1. Only install or replace the Nano SIM card outside the potentially explosive atmosphere.
2. Remove the hand strap, if installed.
3. Lift the access door.



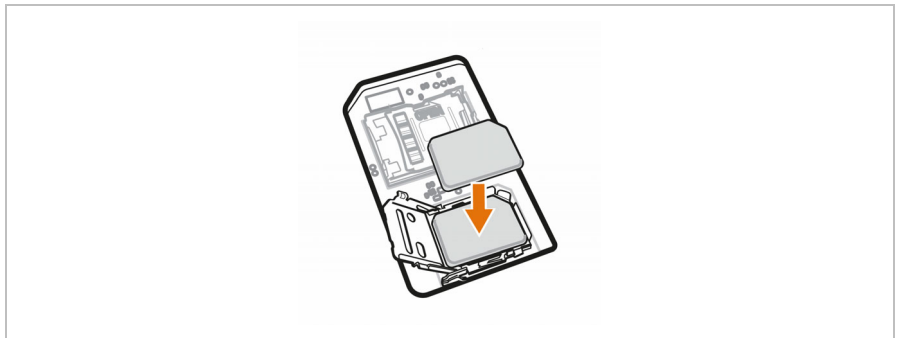
- Slide the SIM card holder to the unlock position.



- Lift the SIM card holder door.



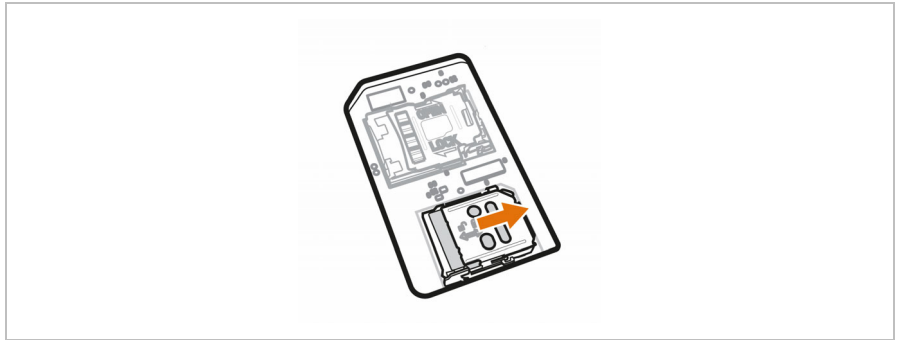
- Place the Nano SIM card into the card holder with contacts facing down.



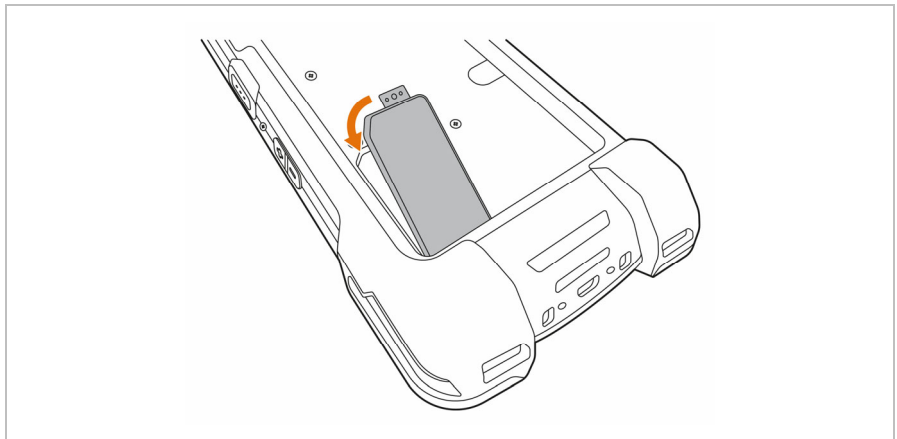
- Close the SIM card holder door.



- Slide to SIM card holder door to the lock position.



- Replace the access door.



- Access 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!**

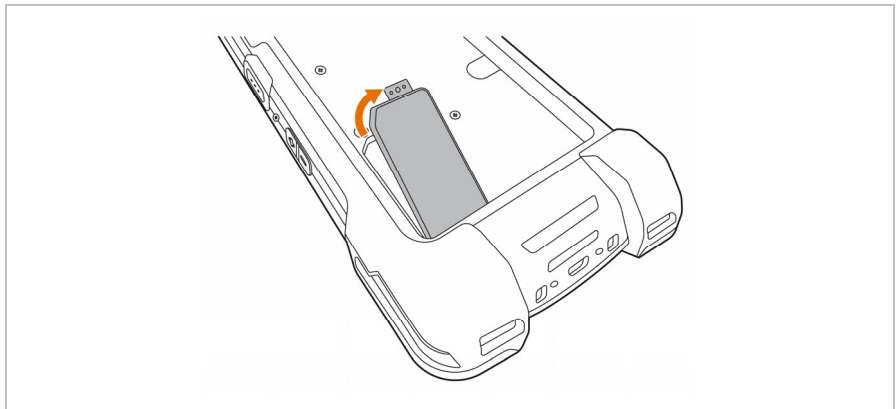
- ▶ Use an antistatic base.
- ▶ Ensure that the operator is correctly earthed.



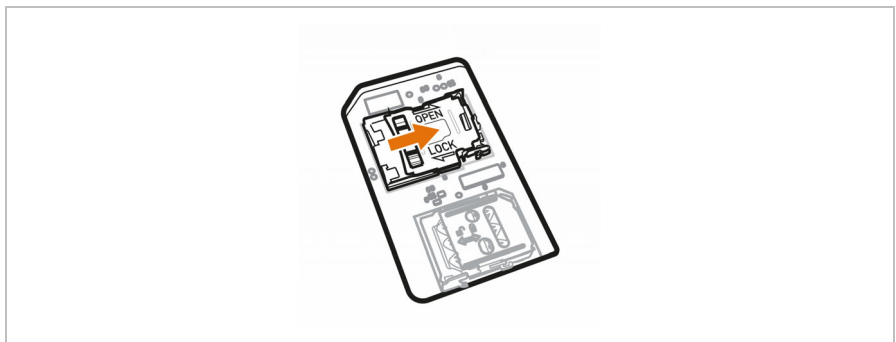
The end user is free to choose which Micro SD card to use, as these components are not specified in the certificate.

Work steps:

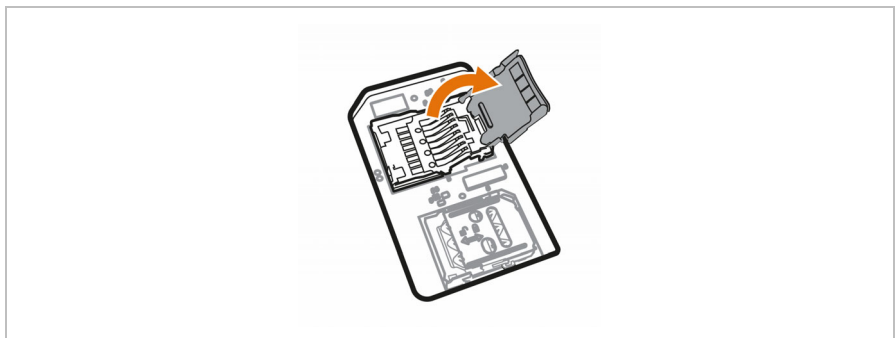
1. Only install or replace the MicroSD card outside the potentially explosive atmosphere.
2. Remove the hand strap, if installed.
3. Lift the access door.



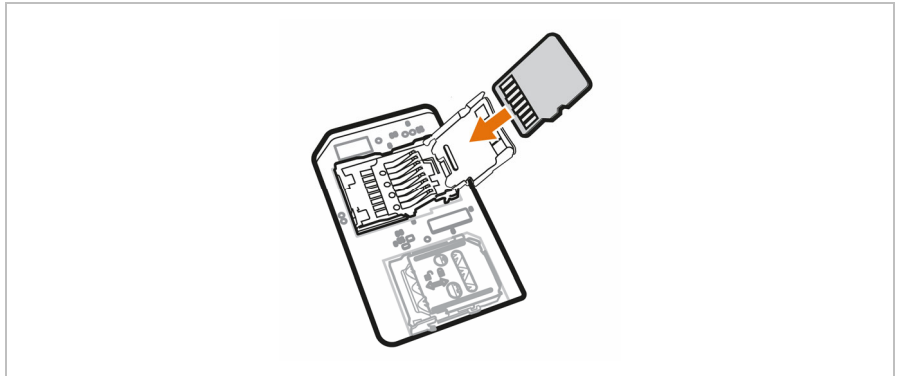
4. Slide the MicroSD card holder to the Open position.



5. Lift the MicroSD card holder.



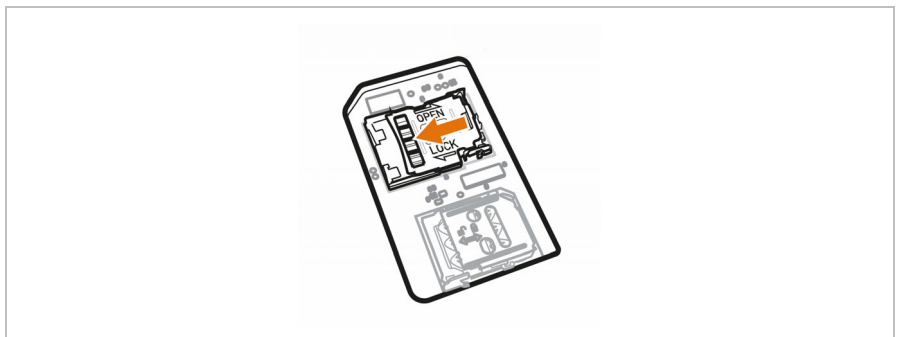
6. Insert the MicroSD card into the card holder door ensuring that the card slides into the holding tabs on each side of the door.



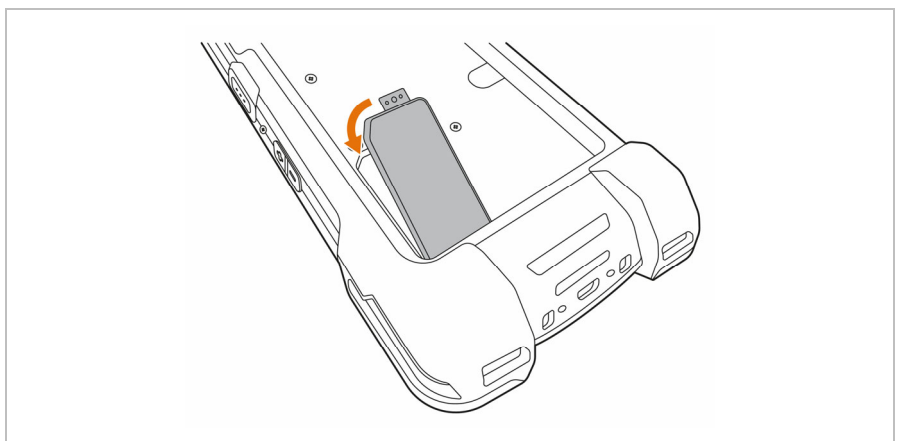
7. Close the MicroSD card holder door.



8. Slide the microSD card holder door to the Lock position.



9. Replace the access door.



10. Access door must be replaced and securely seated to ensure proper device sealing.

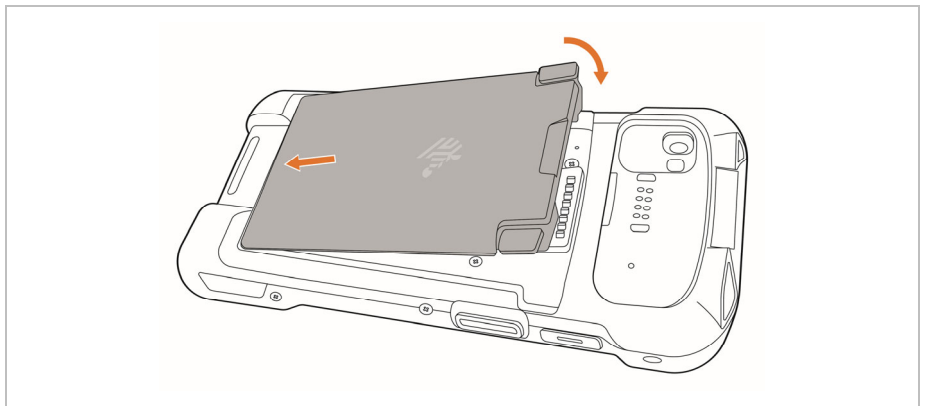
8.1.3 Insert/change battery

The TC78^{ex}-NI is supplied with a standard battery:

Type	Order number
Lithium-ion battery 3.85 V/4680 mAh	B7-A2Z0-0088/0001

Insert battery - work steps:

1. Charge the battery only outside hazardous areas.
2. The battery (Type B7-A2Z0-0088/**** and Type B7-A2Z0-0089) 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, bottom first, into the battery compartment in the back of the device.
5. Press the battery down into the battery compartment until the battery release latches snap into place.



Change battery - work steps:

The device provides a Battery Swap mode where you can replace the battery without powering off the device.



For detailed information about the battery swap function, please refer to the TC78 Touch Computer - Product Reference Guide (EN) from ZEBRA.

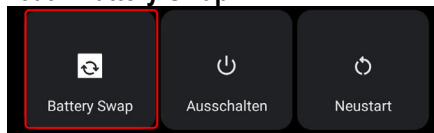
Chapter: Replacing the Battery Using Battery Swap

ATTENTION

Incorrect handling may cause damage to property!

- ▶ Use only batteries which have been tested or certified by BARTEC for this purpose.
- ▶ Do not add or remove a microSD card during battery replacement.
- ▶ Do not remove the battery until after the red LED completely turns off. Loss of data may result.

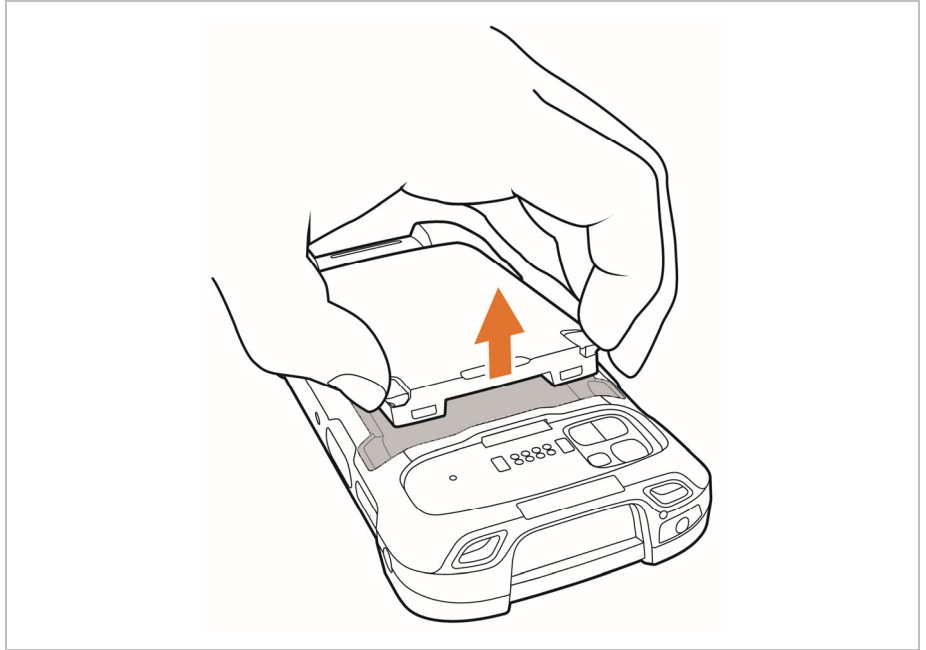
1. Remove any accessory attached to the device.
2. Press the Power button until the menu appears.
3. Touch **Battery Swap**.



4. Follow the on-screen instructions.
5. Wait for the red LED to completely turn off.
6. Press the two battery latches in.



- Lift the battery from the device.



- Insert the replacement battery, bottom first, into the battery compartment in the back of the device.
- Press the battery down until the battery release latch snaps into place.
- Press and hold the Power button to turn on the device.

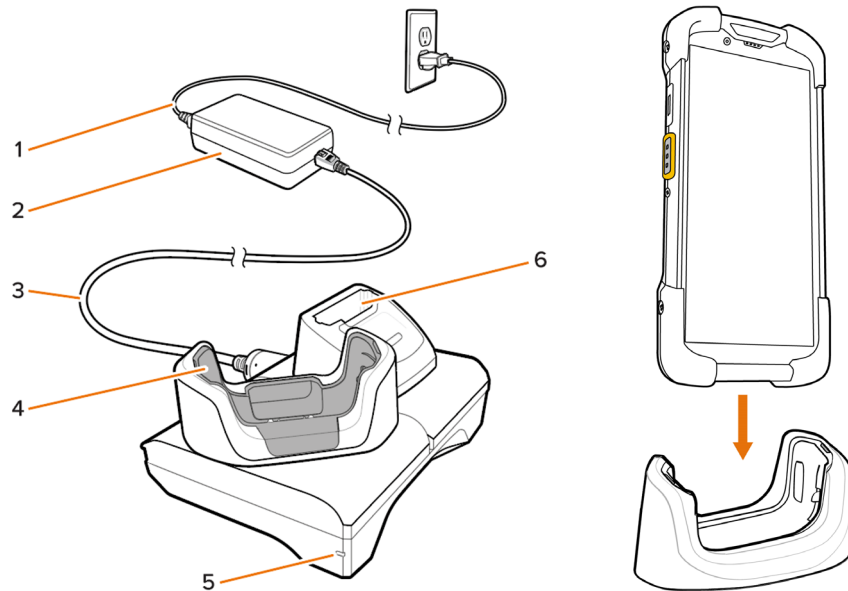
8.1.4 Charging the device/the battery



A standard battery charges from fully depleted to 90% in approximately 2 hours and from fully depleted to 100% in approximately 3 hours. In many cases, a 90% charge provides enough charge for daily use. Depending on the usage profile, a full 100% charge may last for approximately 14 hours of use.

8.1.4.1 Charging the main battery in the device with base or charging station

1. Charge the battery only outside hazardous areas.
2. Connect the base or charging station to the appropriate power source.
3. Insert the device into a slot to begin charging. Ensure that the device is properly seated.
4. The device turns on and begins charging. The Charging/Notification LED blinks amber while the device is charging and then turns solid green when the device is fully charged.

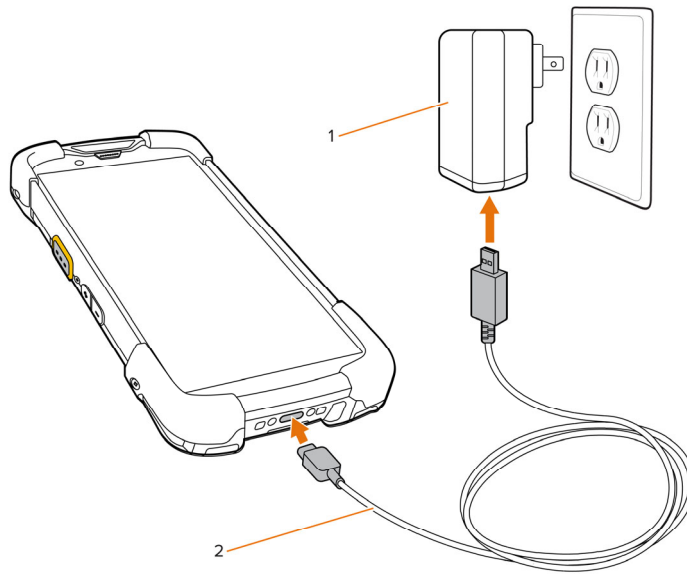


1	AC power cable
2	Power supply
3	DC connecting cable
4	Device charging slot
5	Power LED
6	Spare battery charging slot



Charging the Touch Computer with the mounted Scan handle is possible.

8.1.4.2 Charging the main battery in the device with charging cable



1	Wall charger
2	USB cable

8.1.4.3 Charging a spare battery

1. Charge the battery only outside hazardous areas.
2. Insert a spare battery into the spare battery slot.
Ensure the battery is seated properly.
3. The Spare Battery Charging LED blinks indicating charging.

8.1.4.4 Charge LED Indicator

Status	Indications
Off	The device is not charging. - The device has not been inserted correctly into the base/charging station or has not been connected to a power source. - Charger/base station/charging station is not connected to the power supply.
Slow Blinking Amber (1 blink every 4 seconds)	The device is charging.
Slow Blinking Red (1 blink every 4 seconds)	The device is charging, but the battery is at the end of its useful life.
Solid Green	Battery charging is complete.
Solid Red	Charging is complete, but the battery is at the end of its useful life.
Fast Blinking Amber (2 blinks/second)	Charging error. For example: - The temperature is too low or too high. - Charging has gone on too long without completion (typically 12 hours).
Fast Blinking Red (2 blinks/second)	Charging error, and the battery is at the end of its useful life. For example: - The temperature is too low or too high. - Charging has gone on too long without completion (typically 12 hours).

8.2 Using the touch screen

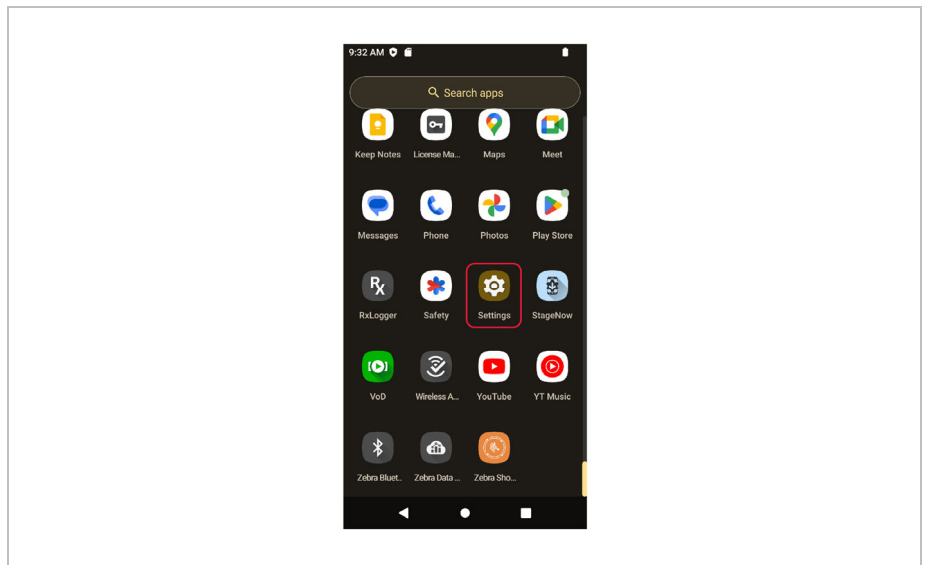
Der Touch Bildschirm kann mit folgenden Methoden bedient werden.

- Finger
- Gloves
- Capacitive stylus (Type 17-S1Z0-0008)

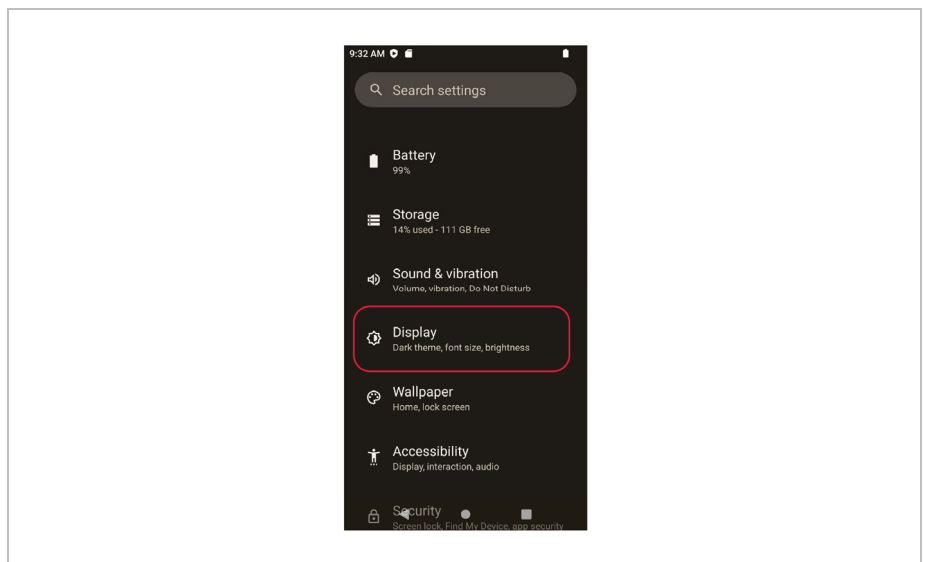
It should be noted that the touch mode must be adjusted depending on the method used

Work steps:

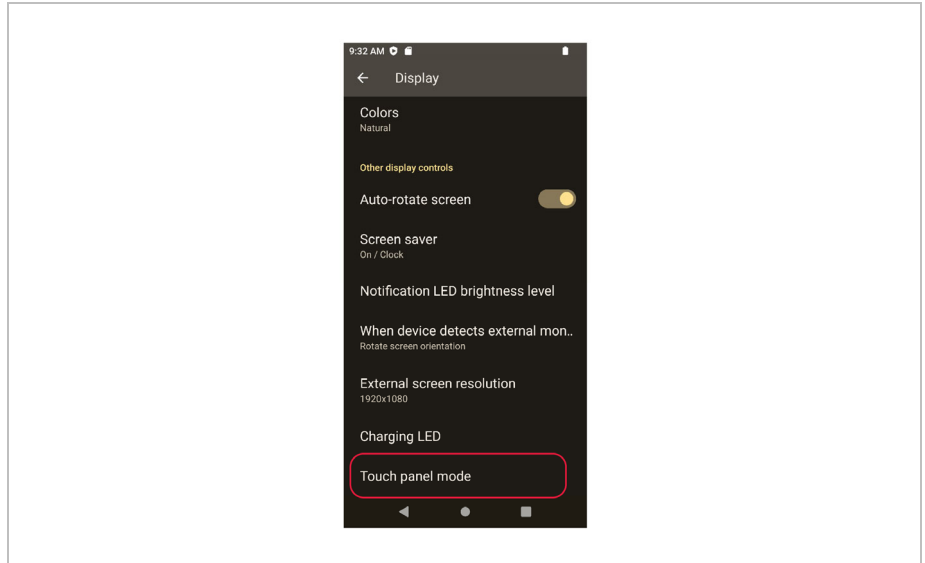
1. Go to the **Settings**.



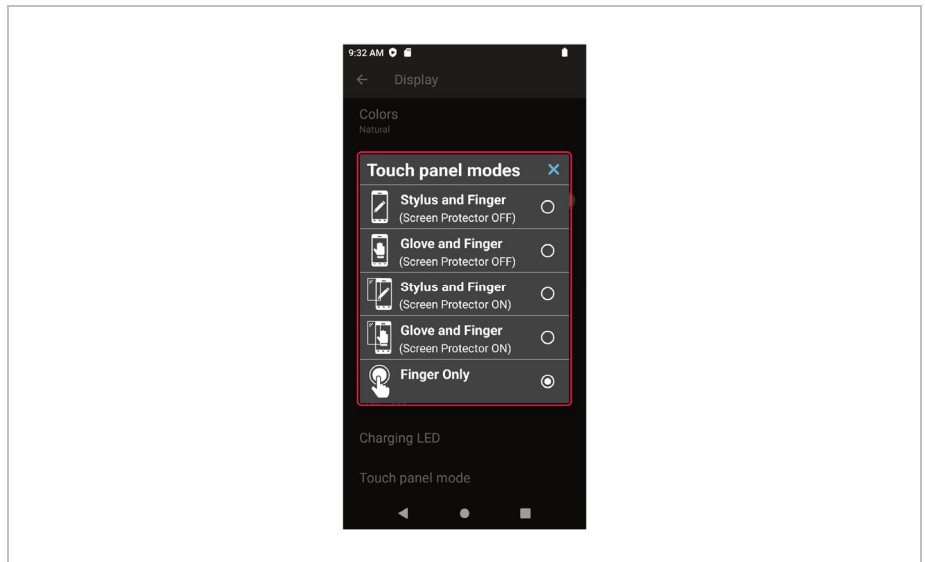
2. Scroll down and select the **"Display"** menu.



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



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



- Stylus and Finger (Screen protector off), for touching the screen with stylus or fingers.
 - Glove and Finger (Screen protector off), for touching the screen with glove or fingers.
 - Stylus and Finger (Screen protector on), for touching the screen with stylus or fingers.
 - Glove and Finger (Screen protector on), for touching the screen with glove or fingers.
 - Finger only, for touching the screen only with fingers.
5. Exit the menu by clicking on **“Home Screen”**.



For further instructions on how to operate the touch screen, refer to the TC78 Touch Computer – Product Reference Guide (EN) from ZEBRA.

8.3 Scanning

1. Ensure that an application is open on the device 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.
The green dash-dot-dash target LED is activated to help you aim.
4. Make sure that the barcode is within the illuminated green bar-dot-dash scan field.
The aiming dot is used for increased visibility in bright lighting conditions.
The Scan LEDs light green and a beep sounds, by default, to indicate the barcode was decoded successfully.

The Zebra DataWedge application is pre-installed on the touch computer.

This freeware application allows for custom setup of the scanner and handles scanner data in the background like a keyboard input in the currently active application.

For more information on DataWedge, please visit:

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

Instructions for DataWedge:

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

Detailed information on data capture can be found in the TC78 Touch Computer - Product Reference Guide (EN) from ZEBRA.

Chapter: Data Capture



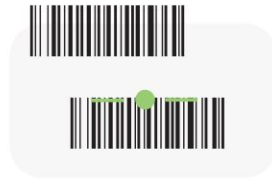
Aiming Pattern



Pick List Mode with Multiple Barcodes in the target field



Decoding of the image data is normally immediate. When the device is in Picklist Mode, the imager does not decode the barcode until the green bar-dot bar touches the barcode.



9 Disposal



Touch 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.

10 Declaration of Conformity



The latest versions of the Declarations of Conformity and other certificates can be found on the BARTEC website at: www.bartec.com

10.1 EU Declaration of Conformity

EU Konformitätserklärung EU Declaration of Conformity Déclaration UE de conformité		BARTEC	
N ^o B1-A2D0-7C0001			
Wir	We	Nous	
BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim Germany			
erklären in alleiniger Verantwortung, dass das Produkt TC78^{ex}-NI	declare under our sole responsibility that the product TC78^{ex}-NI	attestons sous notre seule responsabilité que le produit TC78^{ex}-NI	
Typ B7-A2D*-****/*****			
auf das sich diese Erklärung bezieht den Anforderungen der folgen- den Richtlinien (RL) entspricht ATEX-Richtlinie 2014/34/EU RED-Richtlinie 2014/53/EU RoHS-Richtlinie 2011/65/EU WEEE-Richtlinie 2012/19/EU E112 Standortbestimmung 2019/320/EU und mit folgenden Normen oder normativen Dokumenten übereinstimmt	to which this declaration relates is in ac- cordance with the provision of the follow- ing directives (D) ATEX-Directive 2014/34/EU RED-Directive 2014/53/EU RoHS-Directive 2011/65/EU WEEE-Directive 2012/19/EU E112 Location Positioning 2019/320/EU and is in conformity with the following standards or other normative documents	se référant à cette attestation correspond aux dispositions des directives (D) suivantes Directive ATEX 2014/34/EU Directive RED 2014/53/EU Directive RoHS 2011/65/EU Directive WEEE 2012/19/EU E112 Positionnement des lieux 2019/320/EU et est conforme aux normes ou documents normatifs ci-dessous	
EN IEC 60079-0: 2018 EN 60079-11: 2012 EN 60079-28: 2015 EN 301 511 V12.5.1 EN 301 908-1 V15.1.1 EN 301 908-2 V13.1.1 EN 301 908-13 V13.1.1 EN 301 908-13 V13.2.1 Draft EN 301 908-25 V15.1.1_0.0.9 EN 300 328 V2.2.2 EN 301 893 V2.1.1 Draft EN 303 687 V1.0.0 EN 300 330 V2.1.1 EN 300 440 V2.2.1 EN 303 413 V1.2.1 EN IEC 63000:2018	EN 301 489-1 V2.2.3, EN 301 489-52 V1.2.1 EN 301 489-1 V2.2.3, Draft EN 301-489-17 V3.2.5 EN 301 489-1 V2.2.3, Draft EN 301 489-3 V2.3.0 EN 301 489-1 V2.2.3, EN 301 489-19 V2.2.1 EN 55032:2015/A11:2020 (Class B) EN 55035:2017 EN 55035:2017/A11:2020 EN 61000-3-2:2014 (Class A) EN IEC 61000-3-2:2019/A1:2021 (Class A) EN 61000-3-3:2013 EN 61000-3-3:2013/A2:2021 EN 60601-1-2:2015 EN 50121-3-2:2016 EN 50121-3-2:2016/A1:2019	EN 62368-1:2014/AC:2015 EN 62368-1:2014/A11:2017 EN IEC 62368-1:2020/A11:2020 EN 50360:2017 (Max average 10g SAR: Head 0.891 W/Kg) EN 50566:2017 (Max average 10g SAR: Body 1.590 W/Kg) (Max average 10g SAR: Limb 3.172 W/Kg) EN 50364:2018 EN 50663:2017 EN 62479:2010 EN 50665:2017 EN 62311:2008 EN IEC 62311:2020 EN 60825-1:2014 (Laser) EN 60825-1:2014/A11:2021 (Laser) EN 62471:2008 (LED) EN 50121-4:2016 EN 50121-4:2016/A1:2019	
Verfahren der internen Fertigungskontrolle	Procedure of internal control of production	Procédure de contrôle interne de fabrication	
EPS 23 ATEX 1 053 X 2004, Bureau Veritas CPS Germany GmbH, Businesspark A96, 86842 Türkheim			
 Andrej Sonkin 26.09.2023 16:34:54 [UTC+2] SVP Business Unit Enterprise Mobility		 Michael Krüger 28.09.2023 13:33:00 [UTC+2] VP Quality & Certification	
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