aitronic

LogiScan-2000

Operating Manual

Edition 05.12.2017

Manual

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We don't deliver just our Mobile Terminals with Standard Software...

but also develop to customers specific

- Applications for this Devices
- PC Applications
- Hardware

and advise you on

- Creating concepts for mobile and stationary data collection
- Queries surrounding Bar Code and RFID
- Hardware problems

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1. General

The robust industrial tablet PC LogiScan-2000 with its octa-core processor with a clock speed of 1.3 GHz is operated under an Android 5.1 operating system. The 8-inch LCD screen with multipoint capacitive touch and a resolution of 1024 x 768 is also readable under strong light. The battery is designed for more than 600 hours of standby operation. The degree of protection IP65 guarantees dustproofness and protection against temporary submersion. The device can survive free fall up to 1.5 m height without damage. The device can be configured for barcode scanning, RFID tag read / write (LF / HF / UHF) and fingerprint identification to meet customer needs. In addition, the device provides sufficient space for the connection or integration of custom hardware (e.g., sensors, actuators, etc.). The freely available development tool Android Studio allows comfortable application development in Java.

A special highlight is the availability of the hardware options LF-RFID (125/134 kHz), HF-RFID (13.56 MHz) and 2D barcode scanner (How do 1D and 2D barcode scanners differ?) together in one device.

The free apps devin and aiBrowser for barcode and RFID management with Android apps and Android web applications, as well as the app ScannerDemo (including source code) are already pre-installed and enabled on this device. These apps have been developed specifically for android-based LogiScan and can only be run on these devices.

2. Precautions for using Batteries

- Do not damage the batteries, heat, compress, open (eg with a drill) or soak in water: danger of explosion! Make sure to store batteries out of the reach of children or animals.
- Do not use the product in explosion hazardous areas.
- If the product gets wet, do not heat or heat (eg heating, microwave, etc.). Heated battery can cause an explosion, deform or become unusable. On contact with water and other liquids, the sticker changes color inside the terminal. In this case, the warranty claim expires.
- Do not use in an airplane or hospital.
- Do not expose batteries to direct sunlight (eg car dashboard), because they are deformed by heat and become unusable.
- Do not let the battery unused for long periods in the device or in storage. If the battery has not been used for 6 months or longer, check the charge status and charge or dispose of the battery if necessary.
- The typical estimated life of a lithium-ion battery is approximately 2 to 3 years, or 300 to 500 charge cycles, whichever occurs first. A charge cycle is the useful life of fully charged to fully discharged and fully recharged. For batteries with which no full charge cycles are run through, the life expectancy is about 2 to 3 years.
- Rechargeable lithium ion batteries have a limited lifespan, and gradually lose their ability to hold a charge. This loss in capacity (aging) is irreversible. Since the battery capacity decreases, so does the time from about the device can be operated with a fully charged battery.
- Lithium-ion batteries gradually, if they are not in use or during storage (self-discharge). The battery charge status should be checked regularly. The instructions contain information such as the state of charge to check and how the batteries must be recharged.
- Observe and register the term, which can be reached with a new, fully charged battery with your device. Use the term of a new battery as a basis to compare the runtimes with older batteries. The duration of the batteries varies depending on the configuration of the device and applications that are running.
- Batteries that have almost reached the end of their estimated life is to carefully monitor.

Replace the battery with a new one of the following conditions applies:
- The battery life is less than about 80% of the initial term.
- The battery charge time increases significantly.
- If a battery is stored for long periods of time or otherwise not used, please see the instructions for the storage of batteries in this document. If you have not followed the instructions and the battery has no charge, you look at it as damaged and replace it with a new one.
- Observe the loading instructions in the user manual of the product and / or the detailed online help to recharge your batteries.

- Charging or discharging the battery to approximately 50% of capacity before storage.
- Charge the battery to approximately 50% of capacity at least once every 6 months.
- Remove the battery and store these separately from your device.
- Store the battery at a temperature between 5 °C and 20 °C (41 °F and 68 °F).

3. Controls

RFID Antenna ⸺   ⸻ Front Camera

Power LED ⸺   ⸻ Flash

Back ⸺   ⸻ Scan RFID Tag

Menu ⸺   ⸻ Scan Barcode

Enter ⸺   ⸻ Enter

Scroll Keys ⸺   ⸻ F2 and F4 n.u.

Power On ⸺   ⸻ Power On

Back   Home   Show active Apps

4. Battery

Charging the Battery

This is preferably done with the Magnetic Charging Adapter. The max. Charging time with fully discharged battery is 13 hours.

To maintain the battery charge, charging can be done via USB cable. However, full charging via USB cable takes considerably longer than charging with the Magnetic Charging Adapter, since the charging current is much lower.
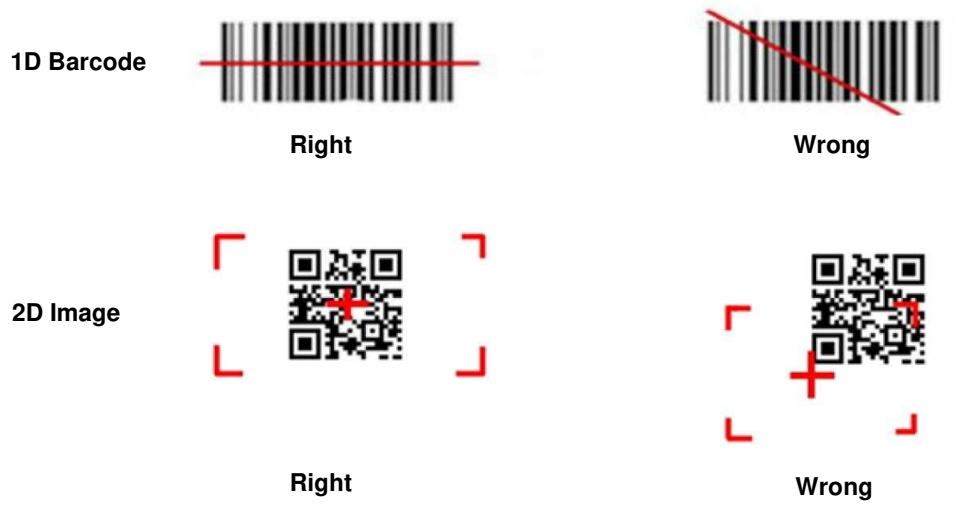
Deeply discharged Batteries

- **Symptoms**: A device with a deeply discharged battery can no longer be switched on. After the AC adapter has been plugged in or the device has been put into the cradle, the flash symbol can flash for a short time. Until then the red charge LED at the top left of the device can go up to 10 minutes.
- **Leave the device connected in the cradle or the AC adapter!**
- **Observe the notes in "Charging the Battery".**

Thus, a deep discharge of the battery can be avoided:

- Charge the batteries regularly. For intensive use should be loaded daily.
- Charge the battery as soon as possible after you receive the prompt from the device.
- If a device is not used for more than 2 days, turn it off as follows: Press and hold the power button on the side of the device, and then press "Turn off" in the menu that appears.

5. Barcode Scanning

1D Barcode		

Right   **Wrong**

2D Image

Right   **Wrong**

6. Pre-installed Android apps from aitronic

The following Android apps by aitronic are preinstalled on Android-based devices from aitronic:

- **devin**
  allows the transfer of the scanned barcode scanner or RFID reader data of an android-based LogiScan to the keyboard buffer or the clipboard. Alternatively, a broadcast message is possible. Thus, the bar code scanner and RFID reader can serve as a data source for each app.
- **aibrowser**
  interacts with the Android app devin and allows the transfer of the scanned barcode scanner or RFID reader data of an android-based LogiScan into web applications. The aiBrowser is HTML-5 compliant and is useful for modern JavaScript-based web applications (such as Microsoft Dynamics NAV). The optional kiosk mode prevents access to the system.
- **ScannerDemo**
  serves as a demonstration for the barcode and transponder tag pickup, on the other hand it serves app developers as an example of the integration of barcode scanners and RFID scanner features in a native app. We provide this demo app to incl. source code for download.
- **aiInventur**
  The Android app aiInventur interacts with the Android app devin. aiInventur is used for the demonstration of barcode scanners and/or RFID readers and can be used for simple inventory with android based LogiScan.

The manual "Android Aps from aitronic.pdf" contains a detailed description of these apps.

7. Disposal

Disposal of Batteries
Duty to inform in accordance with battery legislation (BattG)

Batteries and rechargeable batteries do not belong in household waste. The consumer is obliged to dispose of no longer used batteries properly. Let please dispose of them only through retailers or battery collection points. Hereby you make an actual contribution to environmental protection. Since 2009, the German battery legislation obligates all citizens to dispose of used batteries exclusively via the trade or specially equipped collection points (statutory obligation to return). Retailers and manufacturers are obliged to take back these batteries free of charge and properly and batteries to be recycled or disposed of as hazardous waste (legal obligation). Batteries may only be disposed in the discharged state at the return points, and / or (e.g. by isolating the poles with adhesive strips), precaution against short-circuits has to be taken.

The built-in Li-Polymer battery of this device is marked with the adjacent Disposal characters (consisting of a crossed out dustbin and the type of batteries used).

The symbols shown on the batteries have the following meaning:

= Battery must not be placed in household waste
Pb = Battery contains more than 0.004 percent lead
Cd = Battery contains more than 0.002 percent cadmium
Hg = Battery contains more than 0.0005 per cent of mercury

Legal notice for waste disposal

In accordance with the European legislation, it is forbidden to dispose of electrical and electronic equipment in the domestic waste. The aitronic GmbH takes back all of it placed on the market or sold electronic devices and accessories. So environmentally sound disposal is ensured.

8. Technical Specifications

STANDARD EQUIPMENT	
Dimension	270 x 176 x 20 mm
Weight	> 820 g (depending on equipment)
Display	8 inch IPS 1024 x 768, Multi-point touch capacitive screen
Keyboard	12 Hardware Keys
Battery	wiederaufladbarer Li-Ion-Akku 13.600 mAh, Standby-Zeit 600 Std., Gesprächsdauer bis zu 6 Std., Ladezeit 8 Std. (Magnetic Charging)
CPU, RAM, Memory	Octa Core CPU 1,3 GHz ARM® Cortex-A53, RAM: 2 GByte DDR3, Flash: 16 GByte,
Operating System	Android 5.1
Bluetooth	v2.1+EDR / 3.0+HS / v4.0 Low Energy (LE)
GPS	yes
WIFI	IEEE 802.11a/b/g/n
4G LTE	FDD B1B3B7, TDD B38B39B40, WCDMA B1B2B5B8, EVDO BC0, GSM B2B3B5B8
Interfaces	Micro-USB Connector (USB 2.0 OTG), Micro-SIM-Card-Slot, TF-Card-Slot, Magnetic-Charging, Audio Jack
External Interfaces	USB-Host, RS-232
External Interfaces	± 15 kV Air Discharge, ± 8 kV Contact Discharge
Drop Resistance Level	Free fall from 1,5 m height
Environmental Conditions	Operating temperature: -20°C bis +50°C, storage temperature: -30°C bis +70°C, relative humidity: 10% - 90% (operating), 5% - 95% (storage), not condensing
Protection Class	IP65
EMC Regulation	CE
OPTIONS	
Barcode-Scanner	1D/2D Barcode Scanner
RFID LF/HF Reader Version A	125 kHz/134.2 kHz: 4100, 4102, 4200(10), 4050, 4150, 4450, 4550, AWID, CASI-RUSCO, DEISTER, HITAG 1(11), HITAG 2(11), HITAG S(11), Keri, Miro, Pyramid, TIRIS/HDX, UNIQUE, FDX-B, Q5, TITAN, T55x7, ZODIAC; 13.56 MHz/ISO14443A: MIFARE Classic 1k & 4k EV1(7), Mini, DESFire EV1, Plus S&X, Pro X(8), SmartMX, Ultralight, Ultralight EV1(7), Ultralight C, SLE44R35, SLE66Rxx (my-d move)(8), LEGIC Advant(5), PayPass, NTAG2XX(7), 13.56 MHz/ISO14443B: Calypso(8) incl. Innovatron radio protocol 14443-B(6), CEPAS(8), HID iCLASS5), Moneo(8), PicoPass(8), SRI512,SRT512,SRI4K,SRIX4K, 13.56 MHz/ISO15693: EM4x33(8), EM4x35(8), HID iCLASS(5), ICODE SLI, LEGIC Advant(5), M24LR16/64, Tag-it, SRF55Vxx (my-d vicinity)(8), PicoPass(8), 13.56 MHz/ISO18092/NFC/NFCIP-1: Active and passive communication mode, Peer-to-Peer, NFC Forum Tag Type 1-5, Sony FeliCa(9)

RFID LF/HF Reader Version B	125 kHz/134.2 kHz: 4100, 4102, 4200(10), 4050, 4150, 4450, 4550, AWID, CASI-RUSCO, DEISTER, HITAG 1(11), HITAG 2(11), HITAG S(11), Keri, Miro, Pyramid, TIRIS/HDX, UNIQUE, FDX-B, Q5, TITAN, T55x7, ZODIAC; 13.56 MHz: LEGIC Advant, LEGIC Prime, 13.56 MHz/ISO14443A+B compatible to part 4: MIFARE DESFire EV1, MIFARE Plus, MIFARE SmartMX, my-d move(7), PayPass, MIFARE Classic EV1(9), MIFARE Ultralight EV1(9), MIFARE Ultralight C, NTAG2xx(9), HID iCLASS(5), 13.56 MHz/ISO15693: EM4035(7), Tag-it, my-d vicinity(7), ICODE SLI, M24LR16/64, PicoPass(5), HID iCLASS(5), 13.56 MHz/ISO18092/NFC/NFCIP-1: NFC Forum Tag Type 2-5, Sony FeliCa(9)
RFID UHF Reader	UHF RFID 860-960MHz ISO18000-6C (EPC Gen2) / ISO18000-6A,B
NFC	13.56 MHz NFC
Camera	5 Megapixel Front Camera, 13 Megapixel Rear Kamera
Fingerprint Identification	Crossmatch TCS1(mit FBI, FIPS-201, ISO19794, ANSI, WSQ), other customer-specific fingerprint modules on request
Iris Recognition	Capacitance touch pen
Smart Card Reader	Contact SMART Card ISO7816 compliant
PSAM	ISO7816 (SIM Card Interface)
Infrared Meter Reading	IEC62056-21(IEC1107) Communication Protocol
Magnetic Bracket	Apply to car or desktop fixation
Wrist Strap	360 degree rotation
Stylus	Capacitance touch pen