



Instruction manual

Tablet PCs
ITC8113 / TabX®

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1 Notes

1.1 General remark

This instruction manual is intended to ensure safe and efficient handling and operation of IT Infrastructure products.

The instruction manuals must be read carefully by personnel before commencing any type of work.

All of the safety notices and handling instructions given in the manual must be obeyed in order to ensure that work is carried out safely.

Operation of the system is subject to the laws and regulations which are applicable in the respective country at national, federal, European and international level.

The generally accepted rules of technology, usually in the form of standards, directives, regulations, conditions and technical rules specified by national and federal organisations as well as trade associations and committees for the field of specialisation concerned, shall apply.

Figures used in this instruction manual are provided for basic understanding and may differ from the actual design.

The operator/operating company is independently responsible for compliance with and observance of any subsequently introduced technical innovations or new legal requirements, as well as for all usual obligations of the operator/operating company.

The original version of this instruction manual was written in German. All non-German versions of this instruction manual are translations of the German instruction manual.

1.2 Limitation of liability

ADS-TEC GmbH shall not be liable for personal injury, property damage or damage caused to the device as well as consequential damage that is/was the result of non-compliance with this instruction manual, improper use of the device, repairs and other actions on the device by unqualified electricians and electricians not certified by ADS-TEC, or that is/was the result of using unapproved replacement parts. Failure to observe the maintenance intervals shall also result in exclusion from liability.

Furthermore, it is strictly forbidden to make any unauthorised alterations or technical modifications to the device.

1.3 Manufacturer

The manufacturer of the product is ADS-TEC GmbH. The company is referred to in the following as ADS-TEC.

1.4 Relevant device documentation

The following documents are decisive to device setup and operation:

Instruction manual:

Contains information for installation, commissioning and operation of the device along with technical data of the device hardware.

Website

You can download drivers, software, user manuals, leaflets and flyers from the **Download** section of our website www.ads-tec.de.

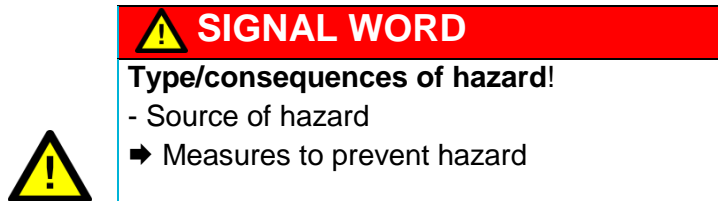
2 Safety instructions

2.1 Structure of safety instructions

The signal word classifies the hazard.

Reference to the type/consequences and source of the hazard is made underneath the signal word.

Instructions for preventing the hazard are identified by an arrow (➔).

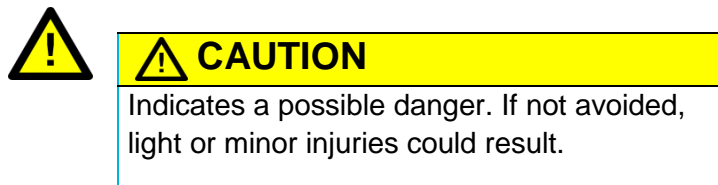
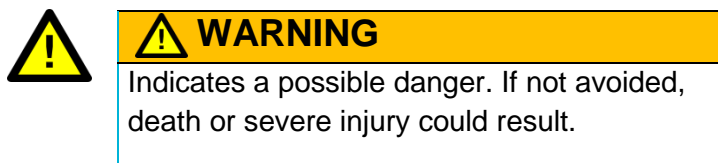
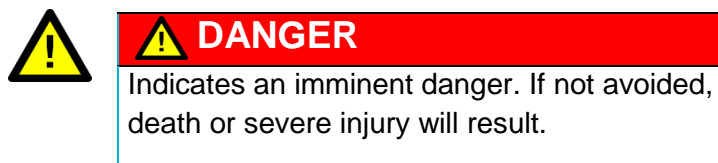


2.2 Graduation of risk level

The signal word classifies the hazard.

Instructions for preventing the hazard are identified by an arrow (➔).

2.3 Explanation of used symbols



ATTENTION




Indicates a possibly damaging situation. If not avoided, the system or something in its surroundings could be damaged.



Recommendation for use:

The symbol "Recommendation for use" indicates terms and/or conditions that strictly need to be observed to ensure optimised and/or zero-defect operation. Tips and suggestions for the efficient use of the device and software optimisation are also provided.

2.4 Symbols

Symbol	Meaning
	Designation of batteries in accordance with § 13 of the German Battery Act (BattG). Batteries may not be disposed of with household waste, but must rather be disposed of separately. Used batteries must be returned to the point of sale or a disposal system.
	Labelling of electrical and electronic devices in accordance with § 7 of the German Electrical and Electronic Equipment Act (ElektroG). Electrical and electronic devices must not be disposed of with household waste, but must rather be taken to a collection point for waste electrical equipment. Such a collection point is generally operated by public waste management authorities, i.e., by municipalities.
	Symbol for the protective earth connection

2.5 Data, figures and modifications

All data, text and figures were prepared to the best of our knowledge. They do not represent any assurance for the properties themselves. Despite taking utmost care, no liability can be assumed for accuracy, completeness and actuality of the information. Subject to changes.

2.6 Trademarks

It is noted that any software and/or hardware trademarks and any company brand names mentioned in this documentation are all subject to the general trademark protection rights. StoraXe®, TabX® and Big-LinX® are registered trademarks of ADS-TEC.

All other third-party trademarks used are hereby acknowledged.

In the case of infringement of trademark rights, ADS-TEC reserves the right to exercise all rights.

2.7 Copyright

This instruction manual is protected by copyright. For the authorised user, simple usage rights are granted within the scope of the intent of the contract. Any modified use or exploitation of the provided content, particularly duplication, modification or publishing in whatever form is permitted only with the prior consent of ADS-TEC.

In the case of copyright infringement, ADS-TEC reserves the right to exercise all rights.

2.8 Environmental conditions

The device can be put into operation and used under the following conditions. Failure to observe any one of these conditions will invalidate the warranty. ADS-TEC cannot be held liable for any damages arising from improper use and handling.

- Temperature for ITC8113
 - in operation 0 ... +40°C
 - for storage -20 to +60°C
- Humidity
 - in operation 10 ... 85% without condensate
 - for storage 10 ... 85% without condensate
- Vibration
 - in operation environmental class 7M3
2G, 2 – 500 Hz
(DIN EN 60721-3-7)
- Shock resistance
 - in operation environmental class 7M3
30 G, with a sinusoidal half-wave of 11 ms
(DIN EN 60721-3-7)

2.9 Standards

The manufacturer hereby declares that this device has been marked with the CE mark in accordance with the basic requirements and other relevant conditions of the following European Directives:

- 2011/65/EU, RoHs Directive
- 2014/30/EU, EMC Directive
- 2014/53/EU, RED Directive
- 2014/35/EU, Low Voltage Directive



The product is a class B device.

A corresponding EU conformity declaration is available for competent authorities at the manufacturer and can be viewed upon request.

The EU conformity declaration can be requested at

<http://www.ads-tec.de/support/support-anfrage.html> and is available for download at <http://www.ads-tec.de/support/download/eg-konformitaetserklaerung.html>.



Recommendation for use:

For full compliance with the EMC legislation, all components and cables used for device connection must also be compliant with these requirements. It is therefore necessary to employ BUS and LAN cables with shielded connectors and these must be installed as per the instructions contained in the instruction manual.

2.10 Scope of delivery

Check the contents of the package for completeness and for any damages:

Should the device have evident signs of damages caused, e.g., by improper operation or storage conditions or due to improper use or handling, the device and accessories must be shut down immediately. Ensure that they are secured against being started up accidentally.

- 1 x device
- 1 x power adapter 20VDC
- 2 x stick-style battery
- QuickStartGuide

Optional scope of delivery:

- ITC8113 accessories acc. to delivery note

2.11 Features of the ITC8113

The industrial tablet computer from ADS-TEC has been consistently further developed for professional and mobile use.

High performance, brilliant Full HD display and optimised for applications in service environments –

the new TabX - ITC8113 scores high marks both for indoor and outdoor use.

Front side



Fig. 1:

No.	Description
1	HD display with 10-finger touch-screen (1920 x 1080 pixels)
2	Monocoque frame
3	Status LEDs
4	Front keys with lighting

Rear side



Fig. 2:

No.	Description
4	Battery ejector
5	Set-up mechanism
6	Service slot
7	Docking connector

2.12 External dimensions ITC8113

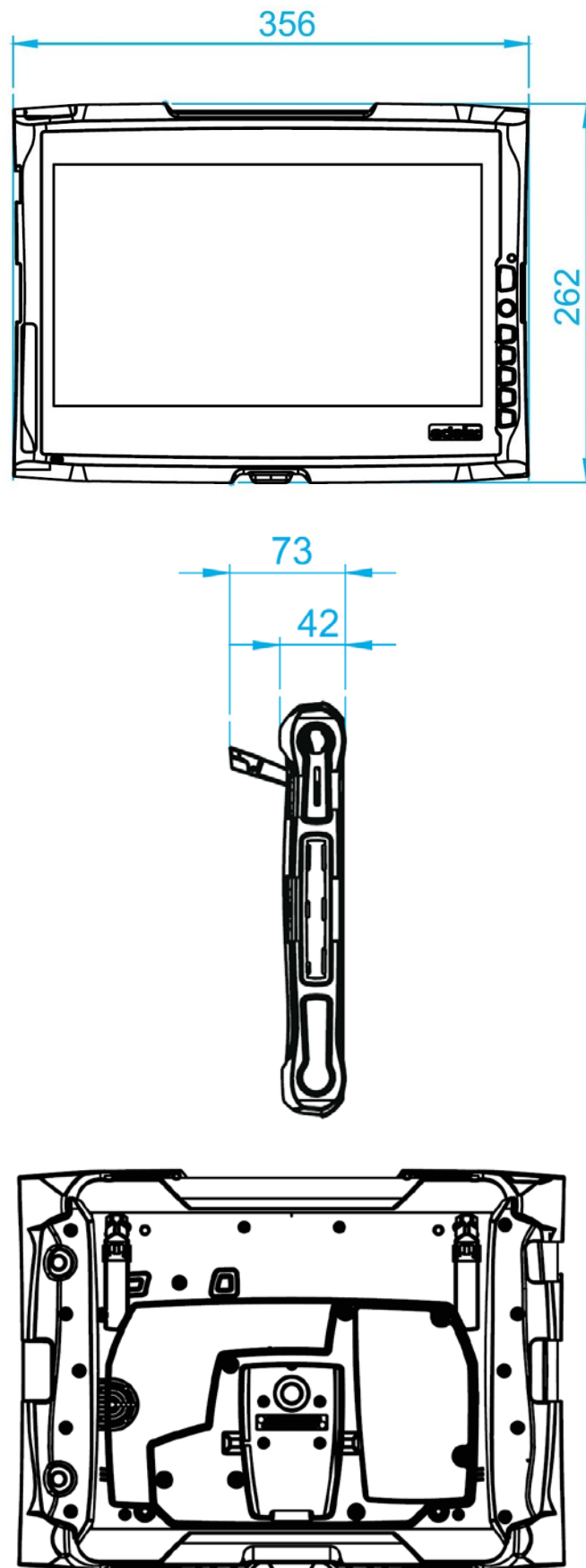


Fig. 3:

3 Operating and safety instructions

The device operates under electrical voltage and contains highly sensitive components. Intervention by the user is required only for connecting the power supply lines. Should any further modifications be required, it is necessary to consult either with the manufacturer directly or with service personnel authorised by the manufacturer. The device must be de-energised during work. Appropriate measures must be taken to prevent electrostatic discharges on components. If the device is opened up by an unauthorised person, the user may be subject to hazards and the warranty is invalidated.

General information

- All users must read this manual and have access to it at all times.
- Installation, commissioning and operation may only be performed by qualified and trained personnel.
- The safety notices and the manual itself must be observed by all persons who work with this device.
- At the installation site the valid guidelines and regulations for accident prevention must be observed.
- The manual contains the most important instructions on how to use this device in a safe way.
- Appropriate storage, proper transport, installation and commissioning, as well as careful operation are prerequisites for ensuring safe and proper operation of the device.
- The device can be cleaned by using a soft cloth and a commercially available glass cleaning agent (e.g. Sidolin) with low alcohol content.

ATTENTION

To prevent damage to the device, all cable lines (power supply, interface cables) must be only be connected while the device is switched off.

3.1 Operating location

The device is optimised for use with applications in a service environment. Make certain that the specified environmental conditions are maintained at all times. Use in non-specified environments, i.e., on board ships, in explosive atmospheres or at extreme elevations, is prohibited.

ATTENTION

The device may only be switched on after acclimatising to the ambient temperature in order to avoid condensate accumulation. This also applies if the device is exposed to extreme temperature fluctuations.

To avoid overheating in operation:
The device must not be exposed to direct radiation by sunlight or any other light source.

3.2 Damage due to improper use

Should the device have evident signs of damages caused, e.g., by improper operation or storage conditions or due to improper use or handling, the device must be shut down immediately. Ensure that it is secured against being started up accidentally.

3.3 Warranty / repairs

During the device warranty period, any repairs must only be performed by the manufacturer or by service personnel that has been authorised by the manufacturer.

3.4 Intended use

The device is used for diagnostics, visualisation and control of a wide range of processes in a service environment, among other places. The device is designed for indoor and outdoor applications.

The device is only to be assembled, installed and operated within the permissible specifications.

3.5 Improper use

Operation other than or beyond that described for the device shall be deemed improper use.

The device is not allowed to be used to control vehicles or for applications for which further approvals beyond the manufacturer's declaration are necessary, e.g. applications with explosion hazard, medical technology, shipping industry.

The device must not be put into operation in the case of transport damage or nonconformity with the specifications and, if necessary, must be taken out of operation in the case of changing conditions.

In the case of improper use, ADS-TEC shall not accept responsibility or liability for injury or damage that is directly or indirectly attributable to the handling of the device.

3.6 Treatment and disposal of batteries

This device contains a lithium battery for supplying the system clock with power as long as the supply voltage is not connected. The battery has a life cycle of 3 - 5 years depending on which load is applied.

WARNING



Danger of explosion if using incorrect battery types.

Batteries may only be replaced by the same type, or by a type recommended by the manufacturer.

WARNING



Batteries should not be exposed to fire, soldered, recharged, opened, short-circuited, reversed or heated above 100 °C and they should be protected against sunlight, moisture and condensation.

ATTENTION

The more the battery is exposed to higher temperatures, the faster it ages.

ATTENTION

Damage due to electrostatically sensitive components

Damage to the device can be caused by electrostatically sensitive components.

➔ All installation and service work performed on the device must be performed only under safe, secure and de-energised conditions.

Always adhere to the safety measures applicable when handling components at risk of being damaged by electrostatic discharges.

The provisions of DIN EN 61340-5-1 / DIN EN 61340-5-2 apply.

Defective batteries are to be disposed of in accordance with the valid legal regulations.



3.7 Cleaning the device

For cleaning we recommend applying a cleaning agent for household use.

Additionally, we have tested the following disinfectant: Meliseptol® produced by B. Braun Melsungen AG. It can be used following the recommendations for use and dosage indicated by the manufacturer.

4 Commissioning

The power supply connection and the interfaces on the device are located on the side of the housing. All supply leads and all required data leads have to be connected before commissioning.

ATTENTION

The device must be switched off before connecting or disconnecting any cables in order to prevent damage to the electronics!

The device may only be switched on after acclimatising to the ambient temperature in order to avoid condensate accumulation. Make sure to meet the permissible voltage for this device.

After switching off and before switching on you must wait for at least 5 seconds.



Recommendation for use:

The shielding of a data cable must always be connected with the connector housing (EMC).


For embedded operating systems, the interfaces must be explicitly enabled and the necessary drivers installed in order to use them.



Recommendation for use:

When using accessories, proceed according to chapter *Accessories*.

4.1 Procedure

No.	Description
	Check for operational readiness
1	Check the battery charge state (see chapter <i>Battery operation</i>)
2	Insert battery into the device and snap into place (see chapter <i>Battery operation</i>)
3	Connect power adapter (if necessary)
4	Start the device  (ON/OFF pushbutton) and activate in the operating system by entering the licence information

5 Operation

5.1 Full HD display

The device is equipped with a full-HD display with multifunction touch-screen.

The non-reflective display offers a maximum resolution of 1920 x 1080 pixels.



5.2 10-finger multifunction touch-screen

The device is equipped with a multifunction touch-screen that supports multifinger operation. The driver software necessary for use is already integrated in the respective operating system.



Recommendation for use:

The touch calibration data is stored independent of the operating system and requires no additional calibration by the user.



Recommendation for use:

With older operating systems, a driver is required for the touch-screen functionality.

The appropriate driver can be downloaded from <http://www.ads-tec.de/industrial-it/download/>

for the respective device series.




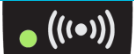
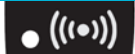




5.3 Front status LEDs



Fig. 4:

The device is equipped with various status LEDs on the front. These LEDs indicate current events such as system activity, battery state, and WLAN and Bluetooth activity.

System LED	Behaviour	Description
	-	Device is not connected to any voltage source (power supply/battery)
	Static	Device is connected to a power source (power supply/battery) and switched on.
	Flashing	The device is in suspend mode (mode can be set via the operating system, reactivation via the power button)
	Static	Device accesses the mass storage device
Power LED		
	-	Device is not connected to a voltage source
	Static	Device is supplied with charged battery
	Static	Device is supplied with external voltage
	Flashing	Stick-style batteries are being

		g	charged (The device must be connected to a voltage source (power adapter))
		Static	Device is operating with the remaining capacity of the battery(ies)
WLAN LED			
		Static	WLAN module is not switched on
		Static	WLAN module is switched on
 		Flashin g	Device is connected to a WLAN network and has data traffic
Bluetooth LED			
		Static	Bluetooth module is deactivated.
		Static	Bluetooth module is activated.
 		Flashin g	Device is connected to a Bluetooth subscriber and has data traffic

5.4 Front panel operation keys



Fig. 5:









Recommendation for use:

After activating the operating system, the soft keyboard can be opened using the corresponding front key.

If the soft keyboard is not installed, it can be added.

Details can be found in the instruction manual for the Configuration Center.

The keys on the front are assigned the following functions by a special driver in the soft keyboard:

	Hold down the ON/OFF pushbutton for 0.5 sec.
	Shift key (SHIFT) for activating the second keyboard level. This key must be pressed simultaneously with the desired function key.
	<p>Level 1: Change task (Alt+ESC) in Windows</p> <p>Level 2: Increase system volume</p>
	<p>Level 1: Switch from landscape display view to portrait display view</p> <p>Level 2: Decrease system volume</p>
	<p>Level 1: Right mouse-key function</p> <p>Level 2: Increase display brightness</p>
	<p>Level 1: Activate and deactivate the soft keyboard for letter/character input by using the touch screen</p> <p>Level 2: Decrease display brightness</p>

**Recommendation for use:**

With the exception of the ON/OFF pushbutton and the Fn key, each of the function keys on the front has two function levels.

The primary function can be executed by simply pressing the respective key.

The second function level of each key (small icon in the upper right) can be executed by first pressing the Fn key followed by the desired function key.

It is important that the Fn key always be kept held down to activate the second function level.

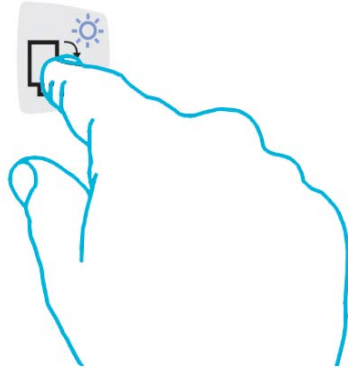
**Recommendation for use:**

If the soft keyboard is not installed, level 1 of the ABC key has no function.

Furthermore, no graphical feedback is provided when changing the display brightness.

5.5 Landscape/portrait function

Press the **Landscape/portrait** key to rotate from 0° to 90°. Press the key again to return to the initial state.



The function ensures that the preset calibration for 0° or 90° is always loaded.



ATTENTION

Keep the air outlet at the right near the card slots free of obstruction.

To protect the device from overheating, make certain that the air outlet slots are not covered or that the air outlet is not impeded.

6 Interfaces

All available interfaces are located on the side of the device. They are protected by a rubber cover.

ATTENTION

Breaching of IP protection

IP53 protection is no longer provided if the rubber covers are open.

➔ Only open the rubber covers when using the interfaces.

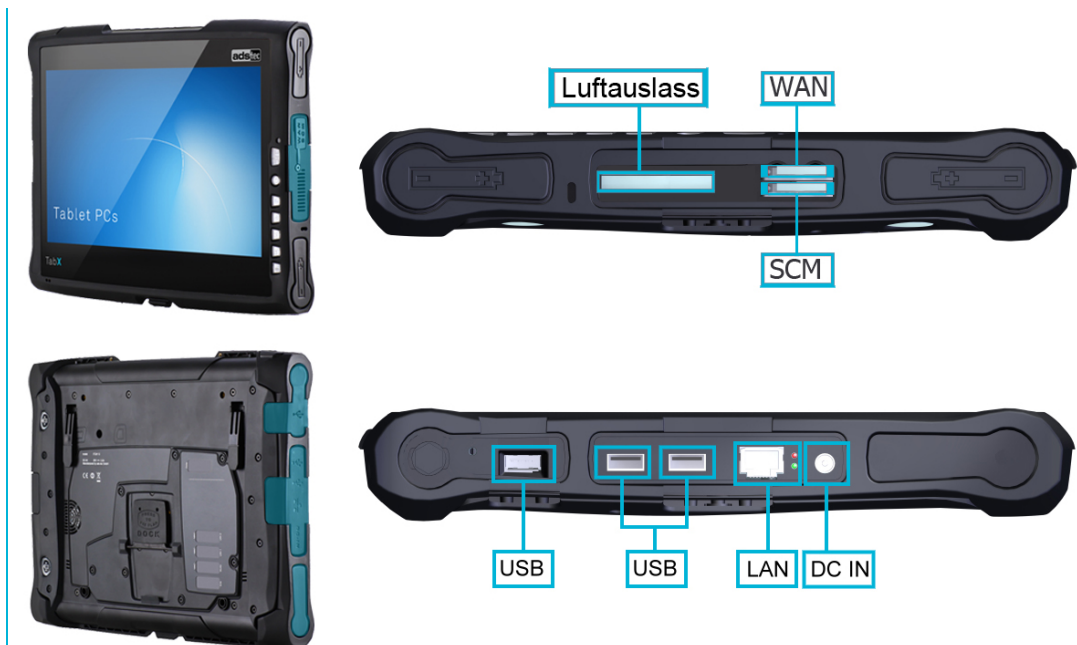


Fig. 6: Variant 1



Recommendation for use:

Only use the accessories and replacement parts released by ADS-TEC.

6.1 Power supply via the power adapter



Technical data of the power adapter

- Power consumption: 70 watts
- Input voltage: 100...240 VAC
- Output voltage: 20 VDC
- Grid frequency: 47...63 Hz
- Current consumption: 3.5A (230 VAC)

6.2 Power supply via stick-type batteries

The device is equipped with two battery slots that can be used as an alternative for supplying the device with power. In addition, the device is equipped with the hot-swap function, which allows batteries to be changed without restarting.



The batteries are automatically charged during mains operation (20 VDC).



Recommendation for use:

If both batteries are to be changed while in operation, power is to be supplied via the included power adapter.

If changing just one battery, it can be changed without an external power supply.

Querying the battery state / changing the battery

The device batteries can be removed using a mechanical ejector located on the rear side of the device. To do this, press the respective key.



The charge state can be queried via the "Test Power" button on the battery. The charge state indicator illuminates for a few seconds and displays the current charge state on a scale from 0 to 100.



LED	State of charge
Red LED blinks	0 ... 10%
Red LED on	11 ... 32%
Red and orange LEDs on	33 ... 65%
Red, yellow and orange LEDs on	66 ... 94%
All the LEDs on	95 ... 100%



Recommendation for use:

If the device is in operation, the battery state can be queried via the operating system.

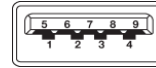
6.3 USB interfaces

The USB interfaces are used for connecting peripherals with USB connection. These interfaces comply with the USB 3.0 standard requirements.



USB 3.0

PIN number	Signal name
1	VBUS
2	D -
3	D +
4	GND
5	StdA_SSRX-
6	StdA_SSRX+
7	GND_DRAIN
8	StdA_SSTX-
9	StdA_SSTX+



Recommendation for use:

The recessed USB interface enables the use of a USB dongle. This can be operated in the device.



Recommendation for use:

The two side USB interfaces are designed for 1A. Exception: the recessed USB interface, which is designed for 1.8A.

6.4 Network connection (RJ45)

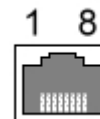
If the drivers required for functioning are installed on the device, the device may be integrated in an Ethernet network supporting the 10/100/1000Mbit standard by using the Ethernet 10/100/1000 BaseT network connector.

The specifications of this network topology must be observed. If the drivers necessary for the function are not installed, they can be downloaded from the website www.ads-tec.de.



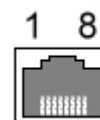
10/100Mbit

PIN number	Signal name
1	TX +
2	TX -
3	RX +
4	NC
5	NC
6	RX -
7	NC
8	NC



1000 BaseT

PIN number	Signal name
1	D1+
2	D1-
3	D2+
4	D3+
5	D3-
6	D2-
7	D4+
8	D4-



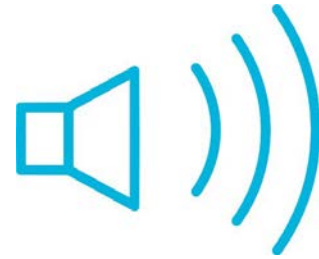
6.5 Microphone

The device is also equipped with an internal microphone on the front side. The microphone can be configured via the integrated volume control in the operating system.



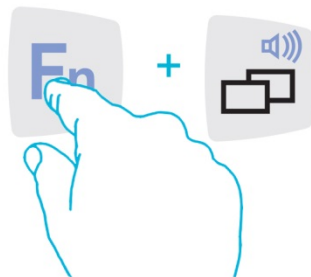
6.6 Speakers

The device is equipped with two internal speakers.

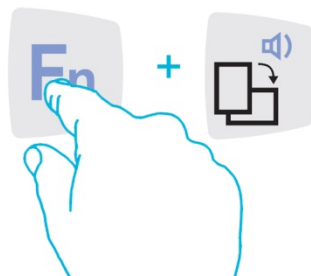


Speaker positions

The volume can be set up by using the device front keys. When activating the described key combinations, the volume level is modified accordingly. If the soft keyboard has been installed, the system volume is additionally displayed by a bar graph.



Button combination - increase volume



Button combination - reduce volume

7 Wireless

The device features various wireless options for establishing a connection to networks or compatible terminals.

**Recommendation for use:**

The appropriate drivers can be downloaded from the website <http://www.ads-tec.de> for the respective device series.

7.1 WLAN

The device is equipped with a wireless LAN card and can be integrated wirelessly in any IT infrastructure.

**Recommendation for use:**

The wireless card supports the following standards:

Wireless LAN 802.11 a / g / n



7.2 Bluetooth

The device is equipped with a Bluetooth module.



Recommendation for use:

The wireless module supports the Bluetooth 4.0 standard.
The built-in wireless module meets the CLASS 1 / CLASS 2 standard.



7.3 UMTS / LTE (optional)

The device is equipped with a mobile communications module and is able to communicate with the Internet even without a wireless infrastructure.



Recommendation for use:

- An activated SIM card is required for use.
- There are costs/fees associated with mobile data use.
- Further information is available from your mobile provider.
- ➔ The SIM card is to be inserted while the device is in the off state.

The mobile communications module supports the following standards:
UMTS (3G) / LTE (4G)



8 Drives

8.1 Hard disk / Flash SSD

The storage medium is selected according to the customer requirements. The following options are available for storage:

- Solid-state drive (SSD)
- An HDD is optionally available.
- The capacity is dependent on the desired operating system and the used programs.

8.2 External drives

External storage media can be connected via USB interfaces.
Note here the connecting lines in chapter Interfaces.

ATTENTION

Connecting or disconnecting external drives in operation is not admissible, since it cannot be excluded that the drive might be in use while connecting or disconnecting it.
Data loss might result in the event of non-compliance!

9 Software

The device will be delivered with a pre-installed operating system depending on what the customer wants. The drivers required for this, are already installed and the operating system will be enabled by entering the licence information. Should an initial installation be required, please follow the following steps.

**Recommendation for use:**

If the hard drive was formatted, the operating system can be reinstalled by using one of the existing interfaces.

An external keyboard is required for installation.

Installing the operating system

The device does not have any integrated CD drive. The installation of the operating system can therefore only be carried out by using the USB interface.

Procedure for installation via USB:

- The boot drive in the system Bios must be switched to USB in order to boot the device from the USB interface.
- Restart the device and insert a Windows CD.
- Install Windows and set up the basic data.
- With devices including touch screens, the touch screen driver as well as the soft keyboard should be installed in order to ensure their full functionality.

**Recommendation for use:**

Alternatively, an operating system can be installed using the PxE-boot option.

**Recommendation for use:**

Additional information as well as detailed instructions on the Configuration Center can be found on our website in the Download area:

<http://www.ads-tec.de/>

9.1 Configuration Center

If there is a preinstalled operating system on your device ex works, ADS-TEC provides software modules. These software modules are specially matched to the respective device and can be called up in the Configuration Center.

10 Technical details

10.1 Technical details of the ITC8113

ITC8113

Housing	Glass-fibre reinforced monocoque frame
Display	13.3" TFT, resolution, Full HD, LED backlight
Resolution	1920 x 1080 pixels
Touch	PCAP multifunction industrial touch screen (10-finger)
Processor	Intel®
	Intel® Celeron™ 1.6 GHz (2980U)
	Intel® Core™ i5 1.9 Ghz (4300U)
RAM	4 GB DDR3 RAM (optional 8 GB DDR3 RAM)
Mass storage	Hard drive 2.5" SATA, SSD (min. 100 GB)
Network	1 x Ethernet (10/100/1000 Mbit/s) RJ 45
Interfaces	2 x USB 3.0 (each port has a load capacity of max. 1 A)
	1 x USB 3.0, recessed installation (max. 1.8 A)
	Docking connector
Power adapter	External power adapter (input 100-240 VAC; output 20 VDC)
Operating system	Windows Embedded Standard 7 (64 bit)
	Windows Embedded 8.1 Industry Pro (64 bit)
Protection class	IP 53 (IP 65 at front)
Operating temperature	0 to +40 °C
Dimensions (W x H x D)	356 x 262 x 42 mm (73 mm at corner support points)
Weight	Approx. 1.8 kg without batteries
Vibration	DIN EN 60068-2-6
Shock resistance	DIN EN 60068-2-27
Humidity	10 to 85% non-condensing

10.2 Technical details of the stick-type batteries

Stick-type battery type DZ-PCKO-06097-8/x

Nominal voltage	14.6 V
Minimum capacity	2750 mAh
Nominal energy	40 Wh
Cell	Samsung INR18650-29E
Number of cells	4
ADS-TEC article no.	DZ-PCKO-06097-8/x
Admissible operating temperature range (temperature of the cells)	<ul style="list-style-type: none"> • Charging: +2...+43 °C • Discharging: -17...+58 °C
Charging procedure	<ul style="list-style-type: none"> • Charging voltage: 16.4 V • Charging current: 0.5 C (C rate = Capacity of the battery in Ampere, here 1 C = 2.75 A)
Charging time (with charging station or ITC)	<ul style="list-style-type: none"> • One battery inserted: 2,5 h • Two batteries inserted: 4 h
Operating time of the ITC with two fully charged batteries	<ul style="list-style-type: none"> • Mobile Mark 2012: 7 h 50 min • Full-load operation: 3 h 30 min
Full cycles under laboratory conditions	<ul style="list-style-type: none"> • 1 test cycle = CCCV* charging with 0.5 C and 0.05 C cut-off current and discharging with 1 C and 10 V cut-off voltage. • The cycles are in a stretch. Afterwards, the following applies: after 500 cycles, 70% of the nominal capacity is still available. <p>*CCCV = Constant Current Constant Voltage</p>
Storage: temperature range (cell temperature) for long-term storage	<ul style="list-style-type: none"> • Up to 1 month: -18 °C ... 60 °C • Up to 3 months: -18 °C ... 45 °C • Up to 1 year: -18 °C ... 25 °C (recommended)
Ageing of the cells	<p>If the temperature range for storage is respected, with an initial state of charge of 50% and after the time has elapsed, at least 80% of the nominal capacity are still available. Lower storage temperatures will slow down the ageing process.</p> <p>Recommendation for long-term storage: For storing the battery in an optimum way, at the beginning of storage, the battery should have a state of charge of 30 ... 50%.</p>
Self-discharge of the cells	<p>The following applies for the temperature range -18 ... 25 °C:</p> <ul style="list-style-type: none"> • Storage in a shut-down ITC (Zero Power Mode active) with 2 inserted batteries with each approx. 30% SOC (state of charge): After approx. 40 days 0% SOC will be reached (version DZ-PCKO-06097-8/F and higher). • Storage of the battery removed from the ITC with 30% SOC: At the earliest after 300 days of storage, 0% SOC will be reached.



Recommendations in the case of prolonged non-use of the device

The internal self-discharge of the battery continues due to the laws of chemistry, even if the nominal charge state is already at 0%. This results in a damaging deep discharge after a prolonged period of time (version DZ-PCKO-06097-8/F: typically after 90 days). Due to safety reasons the battery's integrated electronics prevent the reuse of such batteries.

- If the device is not used for a longer period of time, remove the stick-style batteries from the ITC.
- Regularly check the charge state. The battery must be charged at the latest if the red LED of the charge state display blinks.

11 Accessories

11.1 Transport case (optional)

The optionally available transport case allows the device to be transported safely. In addition, the transport case offers the possibility to store accessory parts such as batteries, power adapters and software.



Exterior view of sample case

11.2 Battery charging station (optional)

A battery charging station is optionally available for charging the device batteries (Article no.: DV-ITCOPT-002 001-AA).

The battery charging station has two battery slots. Two batteries can thereby be charged simultaneously.



CONNECTING THE 20 VDC POWER ADAPTER

Before starting up the battery charging station, a 20 VDC power adapter must be connected. Connect the power adapter on the rear side of the battery charging station.



Recommendation for use:

The power adapter for the device can be used to supply power to the battery charging station (20 VDC).



**Recommendation for use:**

Make certain that the system LED illuminates green.

INSERTING THE BATTERIES

Insert the batteries into the battery slots so that there is a connection between the charging contacts of the battery charging station and the batteries.











Recommendation for use:

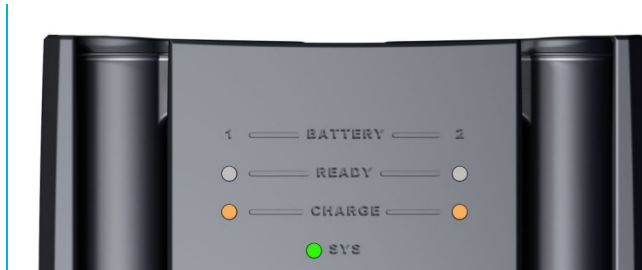
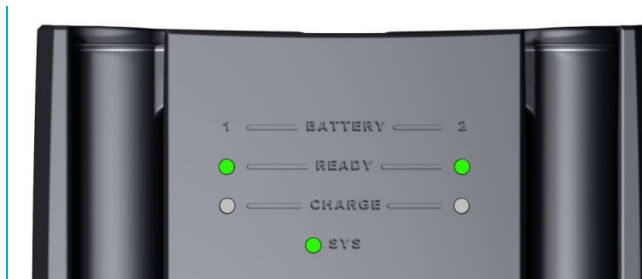
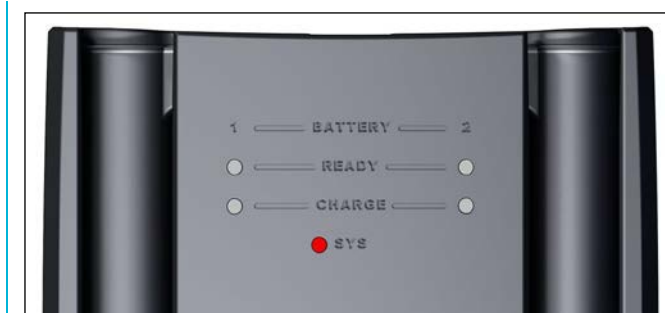
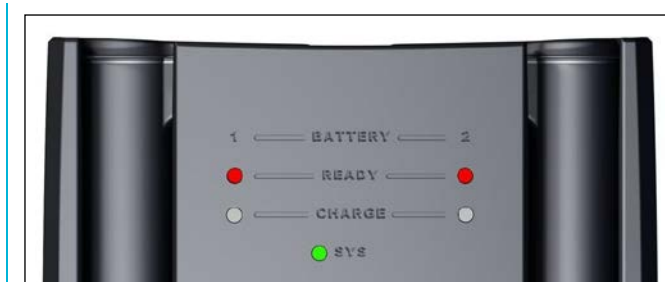
If the battery was correctly inserted in the battery charging station, an audible signal sounds and the charging process begins. An audible signal also sounds when a battery is removed.



LED STATUS INDICATORS

Various system activities are indicated during operation.

<u>READY LED INDICATOR</u>	<u>BEHAVIOUR</u>	<u>DESCRIPTION</u>
	-	No battery inserted
	Static	Battery fully charged
	Static	Battery is faulty
<u>CHARGE LED INDICATOR</u>		
	-	Battery is not charging
	Flashin g	Battery is charging
<u>SYS LED INDICATOR</u>		
 -		Device is not connected to any voltage source (power supply/battery)
	Static	Device is connected to a power source (power supply/battery) and switched on.
	Static	Device not ready for operation / defective power supply

PICTOGRAPHIC REPRESENTATION**Battery is charging****Battery fully charged****Device is not ready for operation / defective power source****Battery is faulty**

11.3 Replacement power adapter (optional)

A replacement power adapter is optionally available for operating the device (Article no.: DV-ITCOPT-004 001-AA).



11.4 Vehicle power adapter (optional)

A vehicle power adapter is optionally available for operating the device (Article no.: DV-ITCOPT-005 001-AA).

This can be used to conveniently supply the device with power in vehicles.



Technical data of the power adapter

- Power consumption: 90 watts
- Input voltage: 11-15 VDC
- Output voltage: 20 VDC

11.5 Replacement battery (optional)

A replacement battery is optionally available for operating the device
(Article no.: DV-ITCOPT-003 001-AA).



11.6 Rotatable and tiltable wall table adapter (optional)

In combination with the table stand / wall bracket, the available docking station offers a stable mounting solution for every installation site. The device can be connected to a docking station using the docking connector on the rear side of the device.



The docking station is available in two versions. The first version is used strictly to hold the device. The second version (pictured) has a docking connector that transfers data to the interfaces of the docking station.



MOUNTING THE DEVICE TO THE DOCKING STATION

- 1) Place device on red marking behind the turquoise marking
- 2) Push device to the back onto the docking station. You should feel the device click into place

**REMOVING THE DEVICE FROM THE DOCKING STATION**

- 1) Push the turquoise release downward and hold down
- 2) Tilt the device forward slightly
- 3) Lift the device upward to disconnect and remove it from the docking station



The docking solution shown here illustrates the mechanical release. A lockable docking solution is also available.

11.7 Set-up mechanism

The set-up mechanism enables comfortable operation anywhere.



11.8 3-point strap (optional)

A 3-point strap is optionally available for mobile use. The 3-point strap can be mounted directly to the device and makes the device a mobile workplace.

1 x DZ-MECH-33255-1 (A)

M5x16 flat-head screw, galvanised DIN 921



2 x DZ-MECH-33255-2 flat head screw. M5x20, galvanised DIN 921 (B)



3 x DZ-MECH-31033-0

Strap eyelets



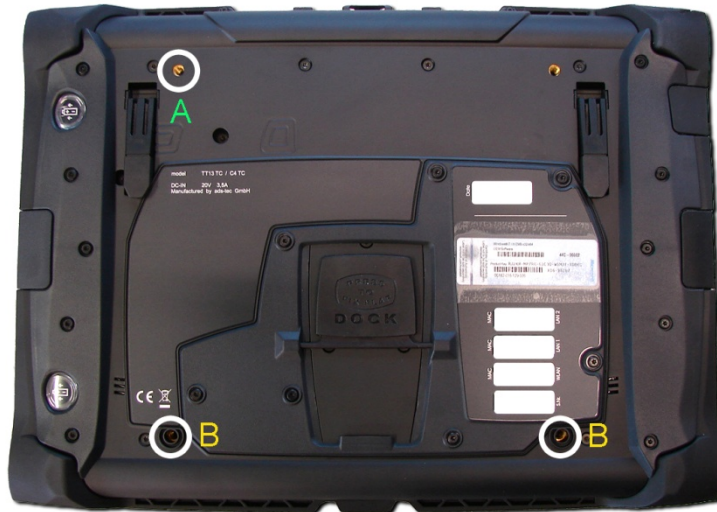
1 x DZ-MECH-31039-0

3-point strap

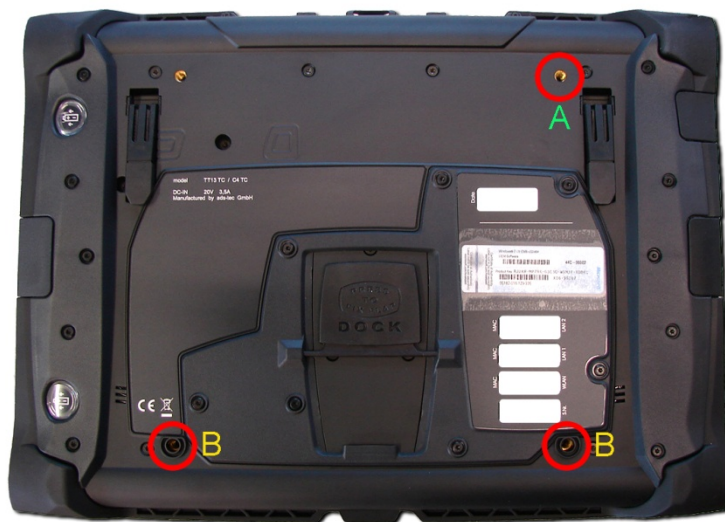


MOUNTING THE 3-POINT STRAP TO THE DEVICE

- 1) First attach the strap eyelets to the device. In doing so, the appropriate mounting option must be selected for left- or right-handed users.

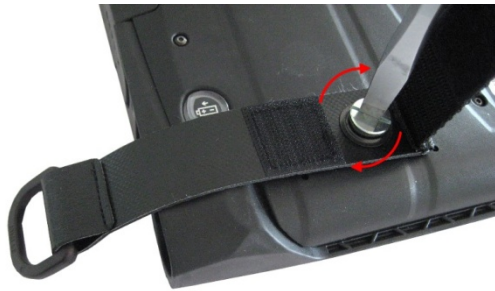


Left-handed users: white marking



Right-handed users: red marking

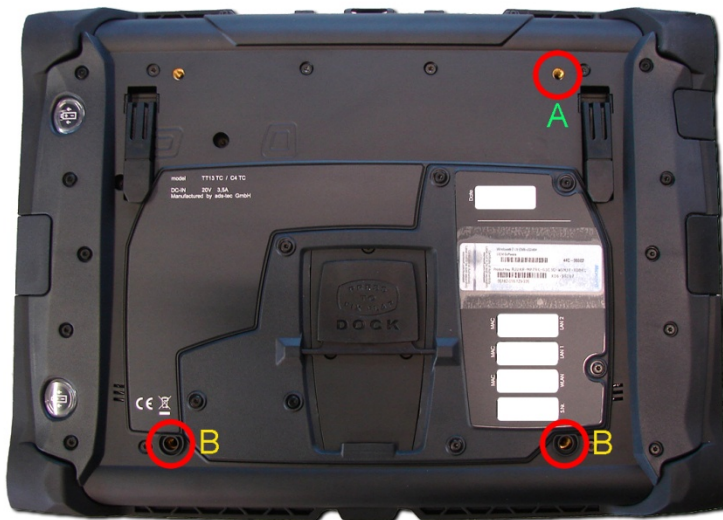
- 2) Screw down the strap eyelets at the marked positions as shown in the figure.



Recommendation for use:

Tighten the screws to max. 120 Ncm. The strap eyelets should still move without loosening the screw.

Mounted state for right-handed users





3) The shoulder strap can be attached to the strap eyelets via the carabiners. The device is ready for mobile use.



Recommendation for use:

The tilt adjustment of the shoulder strap (upper right) should always be attached to the upper side of the device.



11.9 Hand strap (optional)

As an alternative to the shoulder strap, a hand strap is available for mobile use. The hand strap can be mounted directly on the device and turns the device into a mobile workplace.

2 x supplied screws



1 x hand strap



MOUNTING THE HAND STRAP ON THE DEVICE

- 1) The hand strap is to be mounted at the marked bore holes.



2) Screw down the hand strap at the marked positions as shown in the figure.



Recommendation for use:

Tighten the screws to max. 120 Ncm.

2) Mounted hand strap





11.10 Protection cover (optional)

The optionally available protection cover offers protection against transport damages.



12 Component replacement

ATTENTION

Make certain that all cables are disconnected and that no voltage is connected to the device!

12.1 Opening the service slot

Remove the six screws for the service slot on the rear of the device. The screws can be removed with a size Tx 8 screwdriver. The rear cover can be removed via the groove in the service slot on the bottom side.





By removing the service slot cover, it is possible to replace the following components.

- 1 HDD / SSD
- 2 Lithium battery

12.2 Changing the mass storage device



Removal

The extraction aid on the mass storage device should be used for removing. Pull out the storage medium.

Installation

The mass storage device must be carefully inserted into the slot and should noticeably engage.

12.3 Replacing the lithium battery



Installing / replacing the battery

- 1) The lithium battery can now be removed. It may only be replaced with a battery of the same type. The battery type to be used is:
Lithium battery CR2032 230mAh
(e.g. ADS-TEC part number: DZ-SONS-04075-1)
Ensure the correct polarity when inserting the battery.

ATTENTION

There is a risk of explosion if the battery is replaced with the wrong type or with the wrong polarity. Observe the regulations for environmentally sound disposal of used batteries.

13 Service & support

ADS-TEC and its partner companies offer you comprehensive maintenance and support services, ensuring quick and competent support should you have any questions or concerns with regard to ADS-TEC products and equipment.

Because ADS-TEC products are also used by partner companies, these devices may have customised configurations. Should any questions arise with regard to such specific configurations and software installations, please contact the system supplier in question as ADS-TEC will not be able to answer such questions.

ADS-TEC does not provide support services for any device that was not purchased directly from ADS-TEC. In this case, maintenance and support is provided by the partner company.

13.1 ADS-TEC support

The ADS-TEC support team is available for inquiries from direct customers between 8:30am and 5:00pm, Monday to Friday.

The support team can be reached via phone, fax or e-mail:

Phone: +49 7022 2522-202
Fax: +49 7022 2522-400
Email: support@ads-tec.de

Alternatively, you can contact us by completing a support form on our website www.ads-tec.de.

Our Support team will then get in touch with you as soon as possible.

13.2 Company address

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72622 Nürtingen
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