SIEMENS

SIMATIC

Industrial PC MD-34A

Operating Instructions

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11/2025

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Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified persons are those who, because of their training and experience, are familiar with the installation, assembly, commissioning, operation, decommissioning and disassembly of the product and can recognize risks and avoid possible hazards.

Proper use of Siemens products

Note the following:

⚠ WARNING

Siemens products may only be used for the application described in the catalog and the associated usage information. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Preface

Preface

These operating instructions contain all the information you need for commissioning and operation of a device MD-34A.

It is intended both for programming and testing personnel who commission the device and connect it with other units (automation systems, programming devices), as well as for service and maintenance personnel who install add-ons or carry out fault/error analyses.

Basic knowledge requirements

Knowledge of personal computers, operating systems and programming is required to understand this manual. General knowledge in the field automation control engineering is recommended.

Validity of this document

This operating instructions apply to the following MD-34A devices.

- 6AV7880-4AA01-0AA1
- 6AV7880-4BA01-0AA1
- 6AV7880-4CB01-1AA1
- 6AV7880-4DB01-1AA1
- 6AV7880-4EB01-1AA1
- 6AV7880-4AA01-0AA2 (with USB Type C charging)
- 6AV7880-4BA01-0AA2 (with USB Type C charging)
- 6AV7880-4CB01-1AA2 (with USB Type C charging)
- 6AV7880-4DB01-1AA2 (with USB Type C charging)
- 6AV7880-4EB01-1AA2 (with USB Type C charging)
- 6AV7880-4AA01-0AA3 (with USB Type C charging/Windows 11 IoT Enterprise LTSC 2024)
- 6AV7880-4CB01-1AA3 (with USB Type C charging/Windows 11 IoT Enterprise LTSC 2024)

Scope of this documentation

The device documentation comprises:

- SIMATIC Tablet MD-34A operating instructions in English
- Desk Docking product information
- Vehicle Docking product information
- Battery Charger product information

- Hand Strap product information
- Shoulder strap product information

Conventions

The following generic terms are used in this documentation:

Generic term	Specific name
Device	MD-34A device

Figures

This manual contains figures of the described devices. The supplied device might differ in some details from the figures. Within some of the figures, one device is used to represent all devices.

History

The following editions of these operating instructions have been published:

Edition	Comment
06/2023	First edition
08/2024	• Add new configurations for MD-34A : USB Type C PD (Power Delivery) • Add new certificates after first release (09/2023) • Add operating temperature range after type test
11/2025	• Add two new MLFBs for MD-34A with Windows® 11 IoT Enterprise LTSC 2024 • Add new certificates for Type C charging function • Add CE RED 3.3 Cybersecurity certificate

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Product description

1

1.1 Product highlights

The device is a powerful tablet PC specially designed for industrial applications. The Integrated high-tech solutions contribute to the performance in the following area.

- Increased productivity
- Increased security
- Lower operating costs



Features

- 11th Generation Intel® Tiger Lake processor
- Anti-glare film suitable for outdoor use
- Ethernet over Gigabit LAN (RJ45)
- Integrated barcode reader
- Optional integrated HF RFID reader
- Optional 4G/LTE
- Touch screen with multi-touch function
- MicroSD card reader
- Configurable function keys, user-configurable
- Externally accessible interfaces including USB 3.0 Type A and Type C
- USB Type C charging

Area of application

SIMATIC Tablets offer system integrators, plant constructors, and manufacturing plant integrators for the following IT applications:

- Process and visualization applications
- Mobile service
- Measuring and test tasks
- Operator control and monitoring
- Quality assurance tasks and monitoring tasks
- Data acquisition and management

1.2 Configuration

The device is available in the following variants:

Product variant/ Feature	**Entry**	**Entry Plus**	**High End**	**Automation**	**Outdoor**
Article No. MLFB	6AV7880-4AA01-0AA1 6AV7880-4AA01-0AA2 [1] 6AV7880-4AA01-0AA3 [2]	6AV7880-4BA01-0AA1 6AV7880-4BA01-0AA2 [1]	6AV7880-4CB01-1AA1 6AV7880-4CB01-1AA2 [1] 6AV7880-4CB01-1AA3 [2]	6AV7880-4DB01-1AA1 6AV7880-4DB01-1AA2 [1]	6AV7880-4EB01-1AA1 6AV7880-4EB01-1AA2 [1]
Main memory	8 GB	8 GB	32 GB	16 GB	16 GB
Mass storage	256 GB	256 GB	512 GB	256 GB	512 GB
Display resolution	1280 × 800, 350 nits	1280 × 800, 350 nits	1920 × 1200, 800 nits	1280 × 800, 350 nits	1920 × 1200, 800 nits
Barcode Reader	-	✓	✓	-	-
GPS	-	-	✓	-	✓
4G / LTE	-	✓	✓	-	✓
HF RFID Reader	-	-	✓	✓	-

[1] : The device variants that support USB Type-C PD are compatible with the PD 3.0 standard and can deliver up to 100W of power, subject to the specifications of the connected PD adapter.

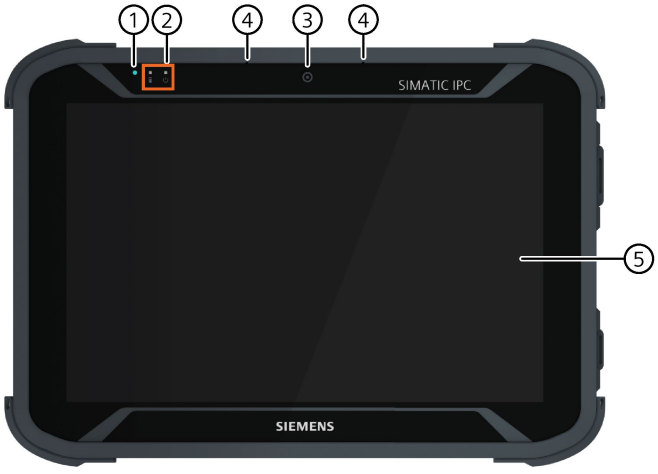
[2] : The device variants support USB Type-C charging and are equipped with Windows 11 IoT Enterprise LTSC 2024.

1.3 External design of the device

1.3.1 Interfaces and operator controls

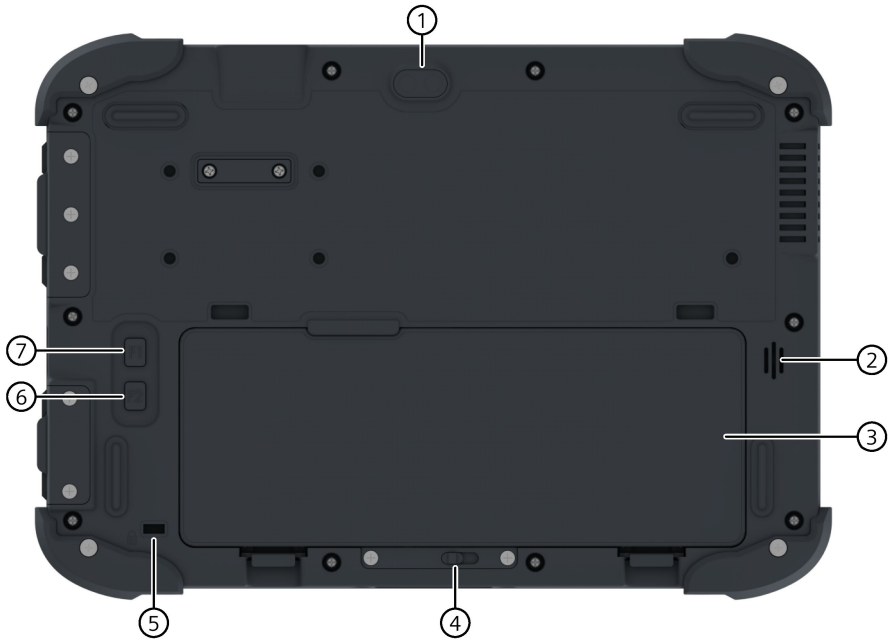
1.3.1.1 Exterior design

Front view



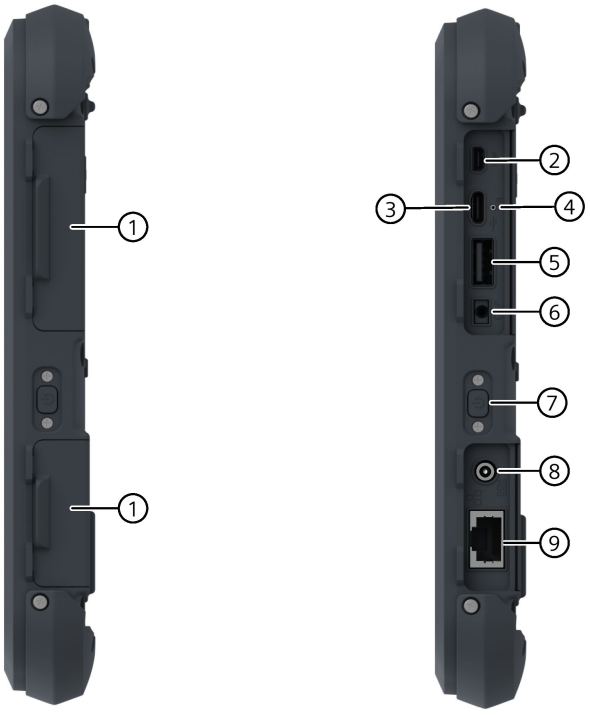
① Light sensor
② LED status displays (Page 13)
③ Front camera, 2 megapixels
④ Microphone
⑤ Touch screen, 10.1 inch

Back view



① Rear camera, autofocus, 8 megapixels
② Loudspeaker
③ Rechargeable battery, 11.4 V, 3500 mAh
④ Battery lock
⑤ Opening for Kensington lock
⑥ Function key F2
⑦ Function key F1

Right view



① Cover for interface
② Micro HDMI
③ USB 3.0 Type C *
④ Reset button
⑤ USB 3.0 Type A
⑥ Audio jack socket, compatible with 3.5 mm 4-pole plug
⑦ Power button
⑧ Power Jack from Power Adapter: DC-In 19 V
⑨ RJ45 Ethernet

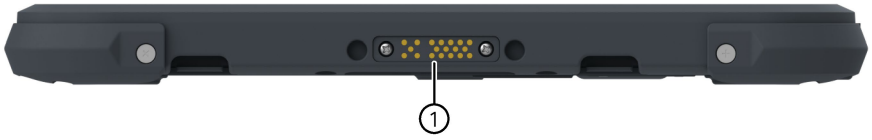
* : Only device variants with MLFB 6AV7880-4AA01-0AA2 support USB Type-C Power Delivery (PD). For more information, refer to Configuration (Page 9).

Top view



① Barcode reader

Bottom view



① Interface for docking station

1.3.2 Operator controls

1.3.2.1 Power button

The Power button is on the right of the device, see section Exterior design (Page 10).

Then Power button (power) has the following functions:

- Switch on the table**t,** press power button until the power indicator is on.
- Set the tablet to sleep, press power button once shortly [1].
- Resume tablet working from sleep, press power button once shortly [1].
- Switch off the tablet without shutting down the Microsoft Windows in event of a fault, press power bottom for 10 seconds until the power indicator is off.

[1] Hold the On/off button for approximately 1 second. The response depends on the setting of Windows power option.

1.3.2.2 Configurable function keys

<F1> and <F2> function keys have the following functions:

- They simulate commonly used keyboard inputs
- You can configure frequently used tablet functions to them, for example, function for calling the camera.
- The same key or key combination has different functions depending on what phase the device is in

The following table describes the different functions of the keys:

Key	**Function in "POST" phase (before Windows boots up)**	**Default Function in "WIN" phase (after Windows boots up)**	
		Short press	Long Press
F1	Opening the Recovery menu	Start the Web browser[1]	Touch Mode
F2	Calling the BIOS setup screen	None (For devices without barcode reader)	Make volume mute [2]
		Start the Barcode reader[1, 2] (For devices with barcode reader)	

[1] You can change the key assignment using the Programming function keys (Page 52), "Settings > F1" menu.

[2] To use this function, you must first disable the Barcode function in TotTab (Page 52).

1.3.2.3 Status displays

The status displays are located on the front of the device, see Exterior design (Page 10) section.

System status displays

The system status displays indicate various operating states.

Icon	Meaning	Colors	Meaning of colors
	Rechargeable battery	Orange	Power supply unit is connected. Battery is being charged.
		Green	Power supply unit is connected. Battery is charged.
		Red illuminat-ed	Less than 10% battery remaining
		Red flashing	Battery being swapped during the tablet in operation
		Off	No battery available
	ON/OFF	Blue	Tablet is ON.
		Off	Tablet is OFF.
	Light Sensor	Always white	Sensing the ambient brightness; the default setting is Auto; it will adjust the LCD brightness automatically.

1.4 Accessories

This chapter lists accessories which are available for your device but not included in the scope of delivery are available for your device.

NOTICE

Risk of malfunction or damage to the device

Non-compatible accessories or incorrect spare part can damage the device and lead to malfunctions.

Use only the supplied accessories and original spare parts that you ordered through SIEMENS Industry Mall.

You can find information at the following websites:

- SiePortal (https://sieportal.siemens.com/en-ww/home)
- SIMATIC Tablet MD-34A (https://sieportal.siemens.com/en-ww/products-services/10514145?tree=CatalogTree)

Name	Siemens Model Name	Specification
Desk docking	SIMATIC IPC MD-34A-DD	6AV7676-1AC00-0AA0
Desk docking with DP	SIMATIC IPC MD-34A-DD（with DP)	6AV7676-1AC10-0AA1
Vehicle docking	SIMATIC IPC MD-34A-VD	6AV7676-1AC10-0AA0
Battery charger	SIMATIC IPC MD-34A-BC	6AV7676-3AC00-0AA0
Battery pack	SIMATIC IPC MD-34A-BP	6AV7676-3AC10-0AA0
Shoulder Strap	SIMATIC IPC MD-34A-SS	6AV7676-4AC00-0AA0
Hand Strap	SIMATIC IPC MD-34A-HS	6AV7676-4AC10-0AA0

Order accessories and original spare parts via SIEMENS SiePortal

1. Navigate to the Internet URL of SiePortal (https://sieportal.siemens.com/en-ww/home).
2. Log in with your customer data (login on the top right).
3. Select the user language.
4. Navigate to your device in the product catalog (tree structure on the left): "Products & Services > Automation technology > Industrial Computing > Mobile devices > SIMATIC IPC MD-34A"
5. In the tree structure on the left, click on your device.
6. Select the "Accessories" tab in the display area.

Safety notes

2

2.1 Cybersecurity information

Siemens provides products and solutions with industrial cybersecurity functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial cybersecurity concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial cybersecurity measures that may be implemented, please visit
https://www.siemens.com/cybersecurity-industry.

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under
https://new.siemens.com/cert.

2.2 Note on administrator accounts

Disclaimer for third-party software updates

This product includes third-party software. Siemens AG only provides a warranty for updates/patches of the third-party software, if these have been distributed as part of a Siemens software update service contract or officially released by Siemens AG. Otherwise, updates/patches are undertaken at your own risk. You can find more information about our Software Update Service offer on the Internet at Software Update Service (https://support.industry.siemens.com/cs/ww/en/view/109759444).

Notes on protecting administrator accounts

A user with administrator privileges has extensive access and manipulation options in the system.

Therefore, ensure there are adequate safeguards for protecting the administrator accounts to prevent unauthorized changes. To do this, use secure passwords and a standard user account for normal operation. Other measures, such as the use of security policies, should be applied as needed.

2.3 General safety instructions

This device is compliant with the relevant safety measures to IEC, EN, VDE, UL, and CSA. You can get information on reliability of use of the device in the intended environment from our Service contact partners.

⚠ CAUTION

Observe safety instructions

Please note the legal information at the start of this document

You should not expand your device before you have read the relevant safety instructions.

⚠ WARNING

Risk of the device falling

If the device falls, because it is accidentally let go, this can lead to personal injury or damage to property.

Take appropriate safety precautions to prevent this danger.

⚠ CAUTION

Hazardous emission of light

For devices that are equipped with a camera, a camera LED for lighting and the camera's flash are located on the back view of the device.

The camera LED has been assigned the Risk Group 2 (Groupe de Risque 2) according to IEC/EN 62471 and can damage the eyes in case of improper use. The risk for the user depends on the use of the camera.

Do not look directly in the light beam of the camera LED when using the camera.

Keep a distance of at least 20 cm between your eyes and the camera LED.

CE RED 3.3 (EN 18031-1/EN18031-2 Cyber Security Standard)

Note

ATTENTION: Device Security / Operating System User Password The operating system user password plays a central role in the security of your device. It is used for authentication and thus protects access to the device. This protects your personal data and your device from unauthorized access. We therefore strongly recommend that you assign a user password to each user. If a user does not have a user password, the requirements for compliance with the EU RED Directive are no longer met.

Warning label Risk Group 2

Camera LED has been assigned the Risk Group 2 (Groupe de Risque 2) according to IEC/EN 62471.



Repairs

⚠ WARNING

Damage to property and personal injury

Only qualified personnel are permitted to repair the device.

Unauthorized opening and improper repairs can cause considerable damage to property or danger for the user.

System expansions

⚠ CAUTION

Risk of damage to the system or the plant

The installation of expansions that are not intended for this device can damage the system and violate the radio-interference suppression regulations.

Only install system expansion devices designed for this device.

Contact your technical support team or where you purchased your PC to find out which system expansion devices may safely be installed.

NOTICE
Warranty If you install or exchange system expansions and damage your device, the warranty becomes void.

Battery

This device is equipped with a lithium battery for supplying power to the internal real-time clock. Batteries may only be replaced by qualified personnel.

⚠ CAUTION
Risk of explosion when replacing and disposing of the battery There is the risk of an explosion if the battery is not replaced as directed. Replace only with the same type or with an equivalent type recommended by the manufacturer. When disposing of batteries, observe the locally applicable legal regulations.

⚠ WARNING
Risk of explosion and release of harmful substances! Do not throw lithium batteries into an open fire, do not solder, or open the cell body, do not short-circuit, or reverse polarity, do not heat up above 100 °C, follow the disposal instructions, and protect against direct exposure to sunlight, humidity, and condensation.

ESD guidelines

Modules containing electrostatic sensitive devices (ESDs) can be identified by the following label:

Strictly follow the guidelines mentioned below when handling modules which are sensitive to ESD:



- Before working with modules containing ESDs, you must discharge all your personal static e.g. by touching a grounded object.
- All devices and tools must be free of static charge.
- Always pull the mains connector and disconnect the battery before you install or remove modules which are sensitive to ESD.
- Handle modules fitted with ESDs by their edges only.
- Do not touch any wiring posts or conductors on modules containing ESDs.

2.4 Notes on ambient and environmental conditions

Application planning

Observe the following for device application:

- Do not place the device near heat sources such as heaters, hot air inlets, stoves, or other heat-generating equipment (including amplifiers or other heat-generating devices).
- Do not place heavy objects on the device, as that could damage the display.
- Do not place any objects and avoid exerting excessive force on the display, as this could break the glass.
- Never touch the screen surface with a ballpoint pen, pencil, or any other sharp or metallic object, as this could scratch the display.

  Use your finger or a stylus to make inputs on the display.
- To maximize the service life of the backlight, set automatic turn off in the energy management options. Do not use screen savers or any other software that impede energy management.

Radiofrequency radiation

CAUTION

Immunity to radiofrequency radiation

The device has an increased immunity to radio frequency (RF) radiation in accordance with the specifications for electromagnetic compatibility in the technical specifications.

RF radiation, e g. from a cell phone, may result in malfunctioning of the device. Persons may be injured and the plant damaged.

- Avoid RF radiation.
- Remove radiation sources from the environment of the device.
- Switch off radiating devices.
- Reduce the radio output of radiating devices.
- Observe the information regarding electromagnetic compatibility.
- Observe the information in the technical specifications.

2.5 Safety guidelines for transport

Before you set off

Observe the following information when you are traveling with the device:

- Save important data from the SSD drive.
- For safety reasons, switch off the radio component (WLAN) if you cannot be sure that the transmitted radio waves will not interfere with any electrical or electronic equipment in your vicinity.
- Disconnect the peripheral devices from the device.
- If you want to use your device during a flight, first of all ask the airline company if you are permitted to do so.
- When traveling abroad, ensure the power adapter can be used with the local mains voltage. If this is not the case, you must acquire the appropriate adapter for your device. Do not use any other voltage transformers!

Note

Using the device in different countries

Verify the compatibility of local mains and power cable specifications are compatible when using the PG abroad. If this is not the case, purchase a power cable that complies with the local conditions. Do not use connection adapters for electrical appliances in order to connect the device to them.

Damage from transport and storage

DANGER

Device damage during transport and storage

If a device is transported or stored without packaging, shocks, vibrations, pressure and moisture may impact the unprotected unit. If the packaging is damaged, this is an indication that the device has already been severely impacted by ambient conditions and may be damaged.

- See the note "Electric shock and fire hazard due to device damage".
- Keep the original packaging.
- Pack the device in the original packaging for transport and storage.

DANGER

Electric shock and fire hazard due to device damage

A damaged device may be under hazardous voltage and start a fire in the machine or plant. A damaged device has unpredictable properties and states. Death or serious injury may occur and the device, machine, or plant may malfunction.

- Prevent installation and commissioning of a damaged device.
- Label the damaged device and keep it locked away.
- Have the device repaired without delay.

Damage from condensation

NOTICE

Damage from condensation

If the device has been exposed to low temperatures or extreme temperature fluctuations during transport, it is possible that moisture has condensed on or inside the device (condensation).

Moisture can cause short-circuits in electrical circuits and damage the device.

- See the note "Electric shock and fire hazard due to device damage".
- Store the device in a dry place.
- Bring the device to room temperature before commissioning.
- Do not expose the device to direct thermal radiation from a heater.
- If condensation develops, wait approximately 12 hours or until the device is completely dry before switching it on.

2.6 Note on use

NOTICE

Possible restricted functions in case of non-validated function of the plant.

The device is tested and certified based on the technical standards. In some cases function restrictions can occur during the operation of your plant.

To avoid restrictions, validate the correct function of the plant.

Note

Ventilation of the device

The device is cooled through several ventilation slots: If the cooling air flow is impeded, the device may overheat and be damaged.

- Ensure that these ventilation slots are not covered or closed during operation.
- Do not place the device directly next to a wall or in an enclosed space.

Note

Requirements for base on which device is operated

Avoid any damage to the device from scratching or overheating.

Only place the device on a flat, even, clean and hard base.

2.7 Notes on battery operation

WARNING

Risk of personal injury or damage to property due to improper handling of the battery

A battery can cause burns, it can explode or release toxic substances.

Do not open or damage the battery. Do not expose battery to heat or fire. Keep the battery away from children.

WARNING

Danger of damage to the device or destruction of the battery

Only use the supplied battery or an original spare part.

WARNING

Risk of damage to the device by foreign objects

Always transport the device with the battery plugged-in. This prevents any foreign objects (e.g. paper clips) from entering the device through openings.

WARNING

Risk of damage to the device caused by unprotected transport

Do not transport the battery unprotected in your bag, briefcase or any other container because any metal objects in these carriers (e.g. car keys) may short-circuit the battery terminals. This may damage the battery or cause a fire.

WARNING

Risk of damage to the device caused by water or splashing water

The battery is not waterproof! Never submerge the battery in water and protect it from splashing water (rain, seawater).

WARNING

Risk in case device is not fully sealed

If the battery is leaky, avoid contact of the liquid with your skin, mucous membranes (eyes, mouth) or food and do not inhale any fumes. Use plenty of water and soap to clean any body parts that may have come into contact with the liquid.

WARNING

Risk of damage to the device caused by pressure

Do not apply any pressure on the battery, do not drop it, do not damage it, and do not introduce any foreign objects.

WARNING

Risk of damage to the device caused by metal objects

Keep unused batteries away from paper clips, coins, keys, nails, screws, or other small metal objects that could cause the contacts to be bridged. A short circuit between the battery contacts can cause burns or a fire.

WARNING

Damage due to damaged or altered devices

Do not use a damaged or modified battery. Damaged or modified batteries can behave unpredictably and lead to fire, explosion, or risk of injury.

WARNING

Risk of damage to the device caused by charging outside the permissible temperature range

Observe all instructions for charging, and never charge the battery outside of the temperature range specified in the operating instructions. Incorrect charging or charging outside of the permissible temperature range can destroy the battery and increase the risk of fire.

WARNING

Risk of damage to the device caused by unauthorized customer service centers

Never service damaged batteries. All battery maintenance should only be performed by the manufacturer or authorized customer service centers.

⚠ WARNING

Risk of damage to the device caused by pointed objects or external forces

Pointed objects, such as nails or screwdrivers, and external force can damage the battery. An internal short circuit may occur and the battery may burn, smoke, explode, or overheat.

⚠ WARNING

Risk of damage to the device caused by frost

Do not expose the battery to freezing temperatures. The longer the cells are exposed to low temperatures, the greater the risk of capacity losses and dangerous cell damage. For example, do not store batteries in an unheated garage in the winter.

Disposal

Lithium ion batteries can be recycled. Their components can be used as raw materials for new batteries or other products. A requirement for effective recycling is the collection of used batteries.

NOTICE

Risk of fire - Hazardous to people and the environment

The improper disposal of batteries may cause fire.

Observe the local regulations for the disposal of recyclable materials.

Dispose of batteries properly.

Battery operation

The battery (lithium ion) enables mobile use of the device, independently of an external power supply. It also protects against data loss in the even of a power failure.

The battery will start charging as soon as the device is connected to the power supply. In doing so, the following conditions are important:

- When the device is switched off the charging process takes around 2 hours and 30 minutes.
- When the device is switched on, the duration of the charging process depends strongly dependent on the system load and can be extended accordingly.
- The charging process is terminated as soon as the battery is fully charged.
- A charged battery will discharge itself during storage (depending on the temperature, and whether or not it is installed) over a few months. It will then have to be recharged.
- The battery charging is terminated when the battery is fully charged or if, for example, the upper temperature limit for charging is exceeded. You can check the battery charge level in Windows.

- At high ambient temperatures the battery is protected against overheating by reducing the charging current. The charging process can hereby extend accordingly.
- The battery protects itself at higher ambient temperatures by decreasing the charging capacity. If the device is operated at lower ambient temperatures again, the charging capacity of the battery increases again.

If, with a connected power supply unit, the battery LED lights up green, the battery is full and will not be charged any further.

Current consumption in battery operation

You can reduce the off-state battery power consumption of your device to the minimum by disabling the Intel® AMT in the BIOS. As a precaution, you should remove the battery from the device if you are planning on not operating the device for several months. Ideal storage conditions for the battery pack: Ambient temperature of approximately 20 °C and battery charging state of approximately 50%.

Note

The battery pack may by completely or partially discharged (e.g. due to self-discharge) during commissioning. Prior to completion of the discharge, when merely a residual charge is existent, the LED battery in the battery operation lights up red as a warning. End your work and save your data. There are now only a few minutes battery running time left.

Please note that for a complete disconnection from the electricity supply network the power plug must be pulled out.

Service life of the battery

Due to the technology used, the capacity of the lithium-ion battery used in the device reduces with each charge/discharge process. A gradual reduction in capacity also takes place if stored at too high or too low temperatures. The operating times of one battery charge in a network-independent operation can therefore gradually reduce over time.

The battery has a typical life span of c. 300 charges and is therefore designed in such a way that with standard handling within six months after purchase of your device it can still be charged and discharged. A loss of capacity over time is technology-dependent and, as with all manufacturers of comparable devices, it is excluded from the warranty. In the case of a significant drop of efficiency we recommend that you replace the battery. Use only Siemens original spare parts.

You should note the following with regard to the life span of the battery:

- If possible, the battery should always be completely discharged/charged.
- Frequency of use: The more often the battery is used, the faster it reaches the end of its effective life span. A lithium-ion battery has a typical life of around 300 charge cycles.

2.8 Notes on barcode reader and RFID reader

The barcode reader and RFID reader used are open systems that are freely configurable. Various options are available to increase industrial security.

2.9 Safety notices for WLAN and Bluetooth operation

- The radio waves necessary for WLAN and Bluetooth can cause interference in hearing aids (unpleasant buzzing) and in the onboard electronics of vehicles. To prevent interference, switch off the device in aircraft, or when driving a vehicle.
- Radio waves caused by WLAN and Bluetooth may lead to malfunctioning of life-support systems. Switch off the WLAN and Bluetooth function if you are in the proximity of such systems, e.g. hospitals, medical electronic systems.
- The range of the wireless connection and the achievable data transmission rate depend on the ambient and environmental conditions.
- A WLAN and Bluetooth connection is not tap-proof. Unauthorized third parties can then receive data.

  To protect the transmitted data, WLAN and Bluetooth have different encryption methods. We recommend that you activate an encryption in accordance with your WLAN and Bluetooth environment.
- If possible, do not bring the WLAN and Bluetooth connection in the vicinity of the following devices as the operation of these devices may result in faults or the complete failure of the WLAN and Bluetooth connection:
  - Microwaves
  - Wireless video-audio transmission systems
  - Wireless telephones (DECT)

⚠ CAUTION

Risk of interference with pacemakers

The radio waves of WLAN and Bluetooth may interfere with pacemakers.

If you wear a pacemaker, keep a minimum distance of 20 cm from the device when WLAN or Bluetooth is activated.

⚠ CAUTION

Danger of explosion

The radio waves transmitted by WLAN and Bluetooth may trigger an explosion or fire.

Switch off WLAN and Bluetooth of the device if you go in the vicinity of flammable gases or in an explosive environment (e.g. paint shop).

Siemens is not responsible for radio or television interference that has been caused by unauthorized changes to this device. Furthermore, Siemens shall not be held responsible for

the use or replacement of connecting cables and devices that have not been recommended by Siemens. The user alone is responsible for remedying faults that have been caused by such an unauthorized change, or for the use or the replacement of the device.

2.10 Notes on device and system extensions

Device and system extensions

⚠ CAUTION

Fire hazard due to overheating of the device

Expansion cards generate additional heat. The device can overheat or cause a fire.

- Observe the safety and installation instructions for the expansion cards.
- Observe the max. permissible power consumption values.

NOTICE

Damage caused by device and system extensions

Device and system expansions may contain faults and affect the entire device, machine or plant. They may also violate safety rules and regulations regarding radio interference suppression.

If you install or replace device or system expansions and damage your device, the warranty is voided.

- Always disconnect the power plug before you open the device.
- Only install device or system expansions designed for this device.
- Observe the information on "Electromagnetic compatibility" provided in the technical specifications.

Contact your technical support team or the point of sale to find out which device and system expansions are suitable for installation.

Limitation of liability

- All technical specifications and approvals of the device only apply if you use expansion components that have a valid CE approval (CE mark).
- Observe the installation instructions for expansion components in the associated documentation.
- UL approval of the device only applies when the UL-approved components are used according to their "Conditions of Acceptability".
- We are not liable for functional limitations caused by the use of third-party devices or components.

2.11 FCC Warning

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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

---

2.12 IC Warning

This device complies with Industry Canada’s license-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.

Cet appareil est conforme aux CNR exemptes de licence d'Idutrie Canada. Son fonctionnement est soumis aux deux conditions suivantes :
(1) Ce dispositif ne peut causer d'interférences; et (2) Ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

The device for operation in the band 5150–5250MHz is only for indoor use.

2.13 RF Exposure Information and Statement

The SAR limit of USA/Canada (FCC/IC) is 1.6 W/kg averaged over one gram of tissue.

Device types: SIMATIC IPC MD-34A (FCC ID: U9A-MD-34A, IC: 267BA-MD-34A) has also been tested against this SAR limit. The highest SAR value reported under this standard during product certification for use the body is 0.522W/kg. This device was tested for typical body-worn operations with the back of the handset kept 0mm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 0mm separation distance between the user's body and the back of the handset. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements and should be avoided.

Le SAR limite pour les USA/Canada (FCC/IC) est de 1.6 W/kg moyen sur un seul gramme de tissu.La valeur maximale déclarée sous ce critère lors de la certification du produit pour l'utilisation du corps est de 0.522 W/kgOpérations typiques avec la partie arrière de la manoeuvre gardée à 0mm du corps, afin de maintenir la conformité avec les exigences du FCC relatives à l'exposition RF,L'utilisation des accessoires qui maintiennent une distance de séparation de 0mm entre le corps de l'utilisateur et le dos de la main.L'utilisation des accessoires qui ne satisfont pas à ces exigences peut ne pas être conforme aux exigences du FCC relatives à l'exposition à la RF.Et devrait être évité.

2.14 Body-worn Operation

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of 0mm must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

Cet appareil a été testé pour un fonctionnement typique du corps sous pression, pour satisfaire aux exigences relatives à l'exposition RF, une distance minimale de séparation de 0mm doit être maintenue entre le corps de l'utilisateur et la poignée.Y compris les antennes, les bandes de fréquences et les satellites,Des accesssoires similaires utilisés par cet appareil ne doivent pas contenir de composants
métalliquesSeule la fourniture ou une antenne agrée.

Setting up and connecting the device

3

3.1 Preparation

3.1.1 Scope of delivery

Tablet



Standard rechargeable battery



Power supply unit



Power supply cord



3.1.2 Checking delivery

WARNING
Electric shock and fire hazard due to damaged device Damaged devices due to improper storage or transport might lead to personal injury and substantial damage to equipment.

Procedure

1. Check the delivery unit for any signs of visible transport damage.

   If any transport damage is present at the time of delivery, lodge a complaint at the shipping company in charge. Have the shipper confirm the transport damage immediately.

2. Unpack the device at its installation location.

3. Keep the original packaging in case you have to transport the unit again.
4. Check the scope of delivery (Page 31) for completeness and damage.

   Please inform the delivery service immediately if the package contents are incomplete or damaged or do not correspond with your order.
5. Please keep the documentation in a safe place. It is required for initial commissioning and is part of the device.
6. Record the Device identification data (Page 32).

3.1.3 Device identification data

The device can be clearly identified with the help of the identification data in case of repairs or loss.

The figures below are examples. The data of your device can differ from the data in these examples.

Rating plate

The rating plate is located on the rear of the device.

Example:



COA label (Certificate of Authenticity)

The COA label (Certificate of Authenticity) is located on the rear of the device.

Write down identification data

1. Transfer the identification data in the table shown below into the "Value" column.

   In the "Source" column you can find information on where you can find the required value.

Identification date	Source	Value
Order number	Rating plate	6AV...
Serial number	Rating plate	S VP...
Product Key (Microsoft Windows Product Key)	COA-label	
Ethernet address 1	See BIOS Menu "Advanced" > "Peripheral Configuration"	

3.2 Setting up the device

3.2.1 Replacing the battery

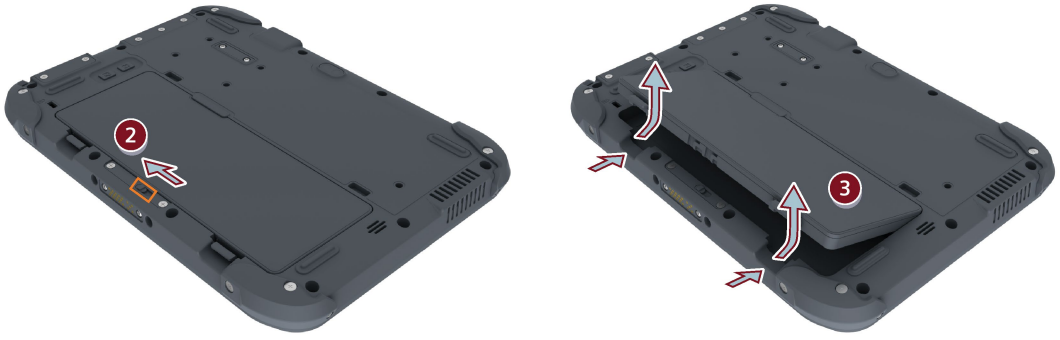
WARNING
Observe danger notices Observe the notes and information on proper use and disposal of the battery in the "Notes on battery operation (Page 23)" section.

Requirement

1. Switch off the tablet. Wait until the tablet has shut down completely.
2. Remove all cables connected to the tablet.
3. Flip the tablet over and set it down on a soft surface with the rear side facing up.

Removing the rechargeable battery

For insertion of cards, an extended period of non-use, or replacement, remove the battery as follows:



1. Turn the device over so that it is lying on a flat surface.
2. Push the battery lock to the "Unlocked" position.
3. Press and hold down the battery lock while lifting the battery out of the battery compartment.

Inserting the rechargeable battery



1. Push the battery lock to the "Unlocked" position.
2. Insert the battery, contact pins first, into the battery slot and press it down.

   When the battery is inserted, it should sit flush with the battery compartment.
3. Push the battery lock to the "Locked" position.

3.2.2 Inserting the SIM card

Requirement

1. The battery of the tablet is removed.
2. Flip the tablet over and set it down on a soft surface with the rear side facing up.

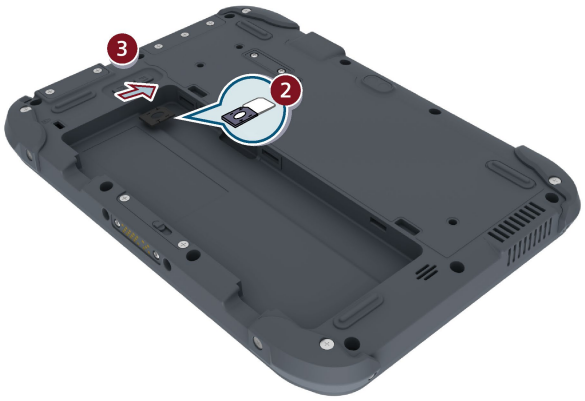
Procedure

The device supports data connections conforming to the 4G/LTE wireless standard and accommodates a nano-SIM card.

1. Briefly press against the SIM card tray to release it, and then pull it out all the way.
2. Insert the SIM card from above into the SIM card tray.
   - Do not touch the chip contacts of the SIM card.
   - Make sure that the chip contacts are facing downward.
   - The notch on the SIM card must be at the top left next to the notch in the card tray.
3. Slide the SIM card tray back in.

4. Insert the SD card or reinsert the battery.





3.2.3 Inserting the SD card

Requirement

1. The battery of the tablet is removed.
2. Flip the tablet over and set it down on a soft surface with the rear side facing up.

Inserting the SD card

An optional microSD card increases the memory capacity of your tablet by up to 2 TB.



1. Open the protective cover on the microSD slot by pulling out the retainer.
2. Slide the microSD card into the slot with the contacts facing down (see figure).
3. Gently press the card again so that it is fully seated in the slot.
4. Close the protective cover.
5. Reinsert the rechargeable battery.

Removing a microSD card

For memory expansion, an extended period of non-use, or replacement, remove the microSD card as follows:

1. Open the protective cover on the microSD slot by pulling out the retainer.
2. Briefly press against the microSD card to release it, and then pull it out all the way.
3. Reinsert the rechargeable battery.

3.3 Connecting the device

3.3.1 Notes on power supply

The battery charges when the device is connected to the power supply.

Note

Always operate the device with the battery inserted.

For the proper operation of the device with external power supply, a battery must be also be inserted.

WARNING

Power supply only with the original power supply unit

Only use the supplied original power supply unit for the power supply of the device. This applies to both the connection to the device and to the connection to the docking station.

It is used to supply power to the device in mains operation with 120 V and 230 V power supply networks.

The setting of the voltage range takes place automatically.

Note before connecting to mains operation

WARNING

Personal injury or damage to when device is operated on the wrong power supply system

If you connect the device to an unsuitable power supply system, the device receives voltages and currents that are too high or too low. Bodily injury, malfunctions, or device damage may result.

- The permissible supply voltage of the device must match the local supply voltage.
- Operate the device only on grounded power supply systems (TN systems in accordance with VDE 0100 Part 100 or IEC 60364-3).
- Operation on ungrounded or impedance-grounded networks (IT networks) is not permitted.

⚠ WARNING

Danger of damage to the device or destruction of the battery

Only use the supplied battery or an original spare part. You can find more information on the original replacement parts of the device in section: "Notes on battery operation (Page 23)".

What to keep in mind during mains operation

⚠ WARNING

Risk of fire and electric shock

The On/Off button does not completely isolate the device from the power supply. If the device is switched off with the On/Off button, there is still a risk of electric shock and fire, for example, if the device or the connection cables are damaged, or in the event of improper use.

When working on the device or if the device is not used for a long period of time, always disconnect it fully from the power supply. Shut down the operating system and if you are using the device in mains operation, pull out the power plug.

Localized information

For the United States and Canada

For the United States and Canada, a CSA or UL-listed power cord must be used.

The connector must be compliant with NEMA 1-15P (NEMA; National Electrical Manufacturers Association).

- **120 V/240 V supply voltage**

  A flexible cable with UL approval and CSA marking must be used. In addition, the cable must exhibit the following properties:

  - SPT-2 or SVT with three wires
  - At least 18 AWG conductor cross-section (AWG: American Wire Gauge, US standard for cable diameter)
  - Max. length of 4.5 m
  - Connector 15 A, min. 125 V

For countries other than the USA and Canada

- **230 V supply voltage**

  This device is equipped with a safety-tested power cord. If you choose not to use this cable, you must use a flexible cable of the following type: At least 18 AWG (0.82 mm^2) conductor cross-section and 15 A/250 V connector. The cable set must conform to the safety regulations of the country in which the devices are installed, and bear the prescribed markings in each case.

3.3.2 Connecting the power supply

Procedure

The tablet is supplied with power either externally from the electricity supply network (grid power) or from the internal rechargeable battery. Recommendation: During first commissioning, operate the tablet with mains power.

1. Open the protective cover on the power supply connection by pulling out the retainer on the outside of the tablet.
2. Plug the DC cable of the external power supply unit into the connection socket on the device or docking station.
3. Plug the three-wire connector of the power supply cord into the power supply unit.
4. Depending on your device, use the appropriate port for charging.
   - Plug the power plug of the power supply cord into a power outlet with grounded protective conductor.
   - For USB Type C PD, plug the Type C cable into the USB Type C connector and connect the cable to the Type C PD adapter.

The device is operated with grid power. The rechargeable battery is charged during operation.

The "Battery" status display indicates the various operating states, see "Status displays (Page 13)" section.



Commissioning the device

4

4.1 General information on commissioning

NOTICE
Risk of damage to the device! Make sufficient allowances for the device to warm up to room temperature before you put it into use. If condensation develops, wait at least 12 hours before switching on the device.

Requirements for commissioning

- The power supply is connected or the battery is fully charged.

4.2 Switching the device on and off

The operating system and system software of your device are preinstalled on the hard disk.

Following the initial switch on, the operating system is set up automatically on the device.

⚠ CAUTION
Device damage when switching on the device If the Windows setup or startup is interrupted, or a default value in the BIOS setup is changed, Windows will not be installed correctly or will not start completely. This damages the device and jeopardizes the operational safety of the machine and plant. • Do not press the power button several times in a row. • Do not switch off the device while Windows is being set up or started. Secure the device to prevent accidental switch off. • Do not pull out or insert the power plug. Secure the power plug during operation. • Do not change the default values in the BIOS setup. • Do not touch the screen, buttons, or external keyboard or mouse while Windows is starting.

Switching on the device

1. Press power button (see "Power button (Page 13)"). The blue "Operation" status display illuminates.
2. Follow the instructions on the screen.

   The following steps should only be performed the first time the device is switched on in its factory state: see next section "Setting up Windows 10 IoT Enterprise (Page 40)".
3. Follow the steps of Windows OOBE processes.

Switching off the device

NOTICE
Forced shutdown If you press and hold down the power button for **ten seconds or longer**, the tablet is forcibly switched off. In doing so, any programs still open may be damaged and data may be lost. Only press the power button during operation in an emergency.

1. Ensure that you have closed all programs open on the desktop.

   Apps on the start screen do not have to be closed.
2. Select **Start** --> **Power**, and then select **Shut down**.
3. Wait until the tablet has shut down and all status displays are off.

4.3 Setting up Windows 10 IoT Enterprise

Requirement

The tablet has been switched on for the first time.

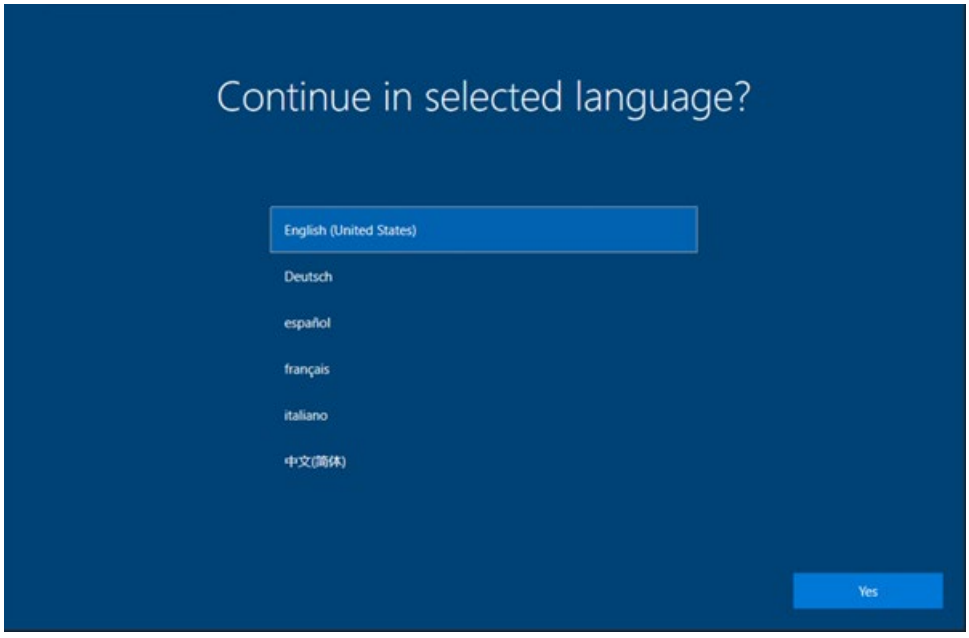
Procedure

Follow the following steps to complete the Windows 10 IoT Enterprise set-up process.

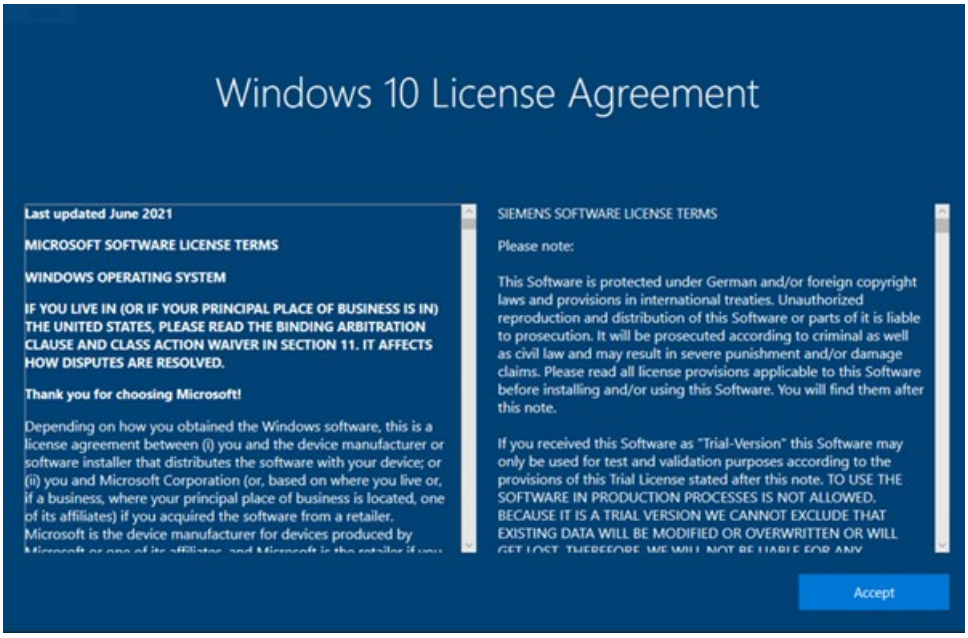
1. Select your preferred app language, preferred keyboard layout, and time zone and press "Next".

   Note

   If you selected "English", there is only one auto-restart during set-up process. If you selected other language, there are two auto-restarts.



2. On the "Here's the EULA" of Microsoft & Siemens, read the license agreement on the screen and then press "Accept".


Windows 10 License Agreement
Last updated June 2021
MICROSOFT SOFTWARE LICENSE TERMS
WINDOWS OPERATING SYSTEM
IF YOU LIVE IN (OR IF YOUR PRINCIPAL PLACE OF BUSINESS IS IN) THE UNITED STATES, PLEASE READ THE BINDING ARBITRATION CLAUSE AND CLASS ACTION WAIVER IN SECTION 11. IT AFFECTS HOW DISPUTES ARE RESOLVED.
Thank you for choosing Microsoft!
Depending on how you obtained the Windows software, this is a license agreement between (i) you and the device manufacturer or software installer that distributes the software with your device; or (ii) you and Microsoft Corporation (or, based on where you live or, if a business, where your principal place of business is located, one of its affiliates) if you acquired the software from a retailer. Microsoft is the device manufacturer for devices produced by
SIEMENS SOFTWARE LICENSE TERMS
Please note:
This Software is protected under German and/or foreign copyright laws and provisions in international treaties. Unauthorized reproduction and distribution of this Software or parts of it is liable to prosecution. It will be prosecuted according to criminal as well as civil law and may result in severe punishment and/or damage claims. Please read all license provisions applicable to this Software before installing and/or using this Software. You will find them after this note.
If you received this Software as "Trial-Version" this Software may only be used for test and validation purposes according to the provisions of this Trial License stated after this note. TO USE THE SOFTWARE IN PRODUCTION PROCESSES IS NOT ALLOWED. BECAUSE IT IS A TRIAL VERSION WE CANNOT EXCLUDE THAT EXISTING DATA WILL BE MODIFIED OR OVERWRITTEN OR WILL
Accept

3. Windows attempts to establish a connection to network. If you do not want a network connection, press "Skip this step". You can also set up network later.

Note

If you did not select English in the first step, the device will automatically restart no matter which Internet connection is established.

NOTICE

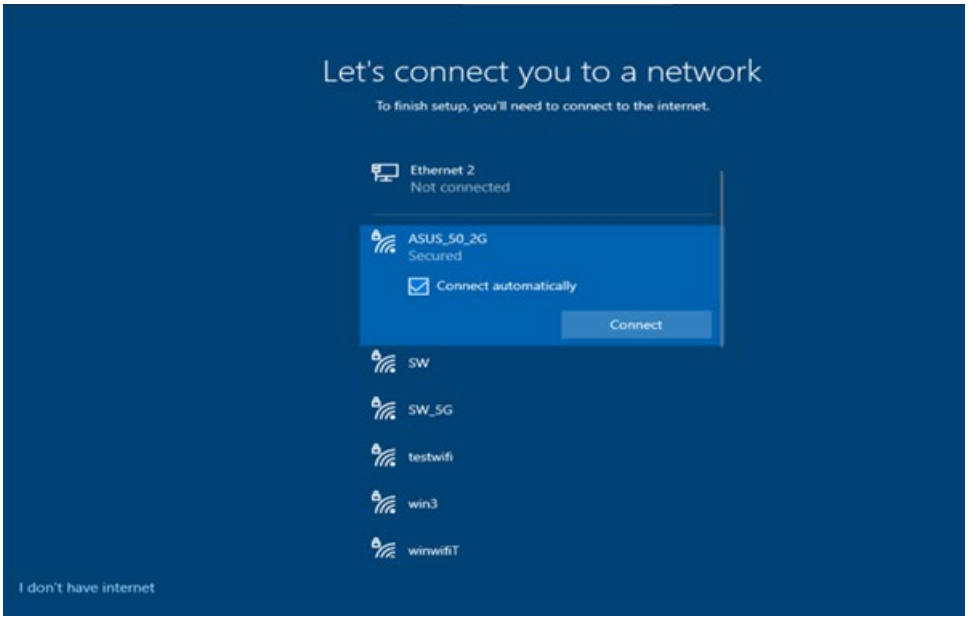
Public networks are not secure

Select "Public network" is not secure if you do not know all the computers on the network. For example, you are in a cafe, at the airport, or using mobile broadband in an untrusted public network. In such networks, other participants can steal and manipulate your data and introduce viruses and trojans, thereby damaging the tablet.

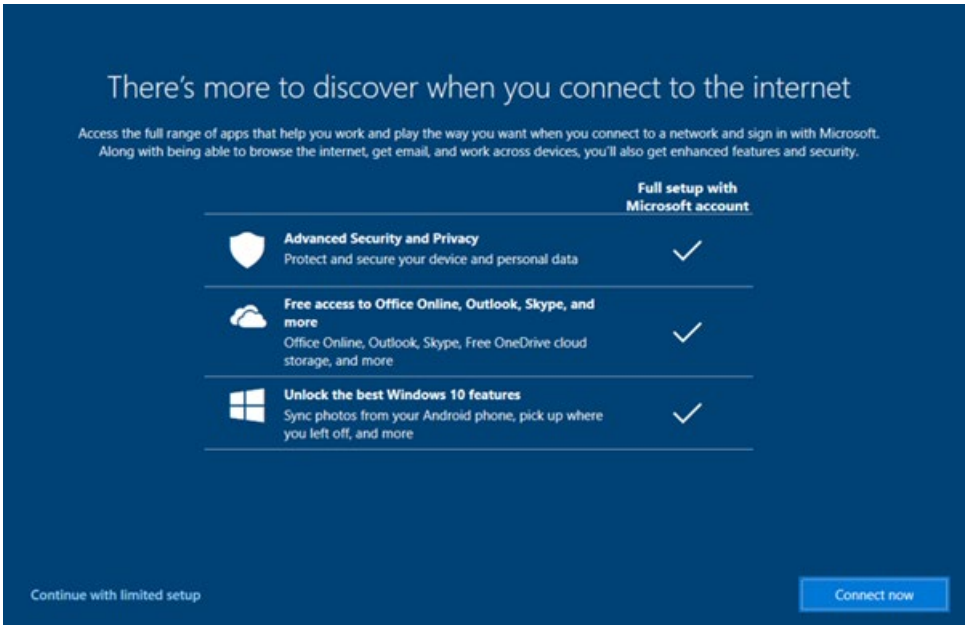
On public WLAN, ensure password protection and set up a suitable firewall on the tablet.

Select the network on which you use the tablet the most.

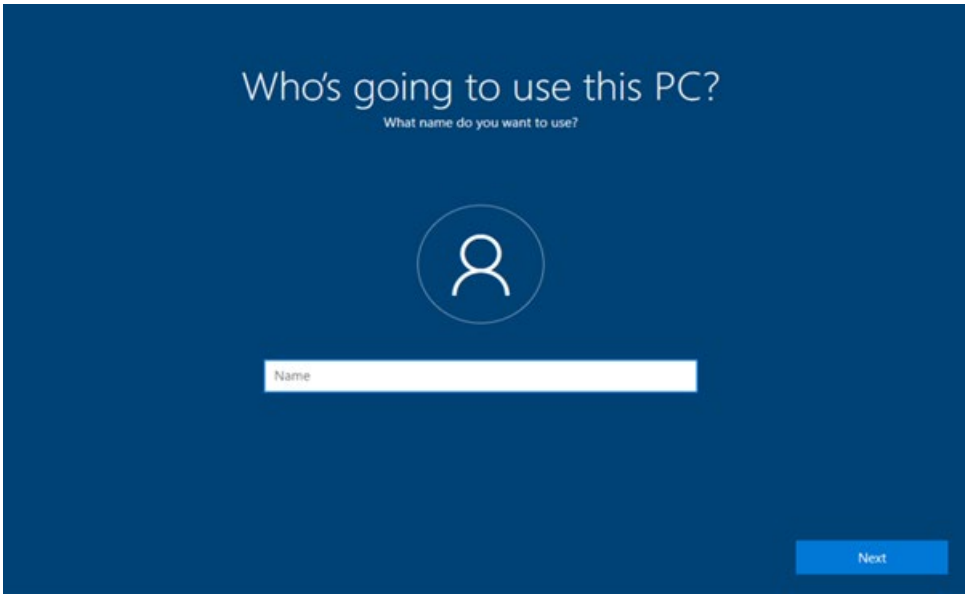
- Public: Your device is not visible to other devices in the network.
- Private: For trusted networks, e.g. home or company network. Your device is visible to other devices, e.g. printers.



4. For the quickest set-up, select "Continue with limited setup" in the lower-left corner. If you want to keep the previous internet connection, click **Connect now**.

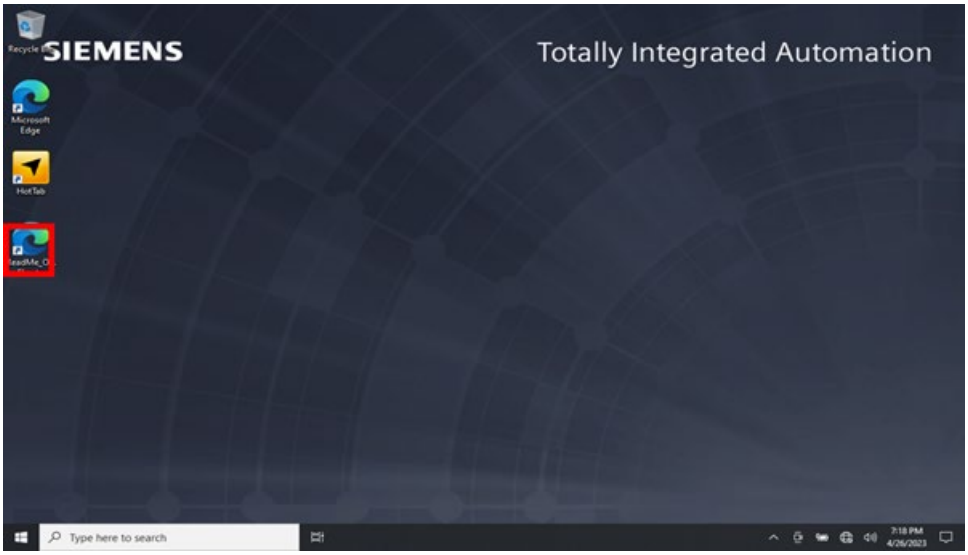


5. To create a local Microsoft account, enter your user name, password, and password hint in the fields provided. Then press "Next".



Setting up Windows for the first time is now complete. After an auto-restart and login the desktop is displayed. You are now finished with the initial setup.

Click or tap "①" to view the OSS Readme of the device.



4.4 Setting up Windows 11 IoT Enterprise

For information on setting up Windows® 11 IoT Enterprise LTSC 2024, refer to Microsoft® Windows® 11 operating instructions (https://support.industry.siemens.com/cs/ww/en/view/109817190).

After completing the OOBE flow, double-click the "*ReadMe_OSS.html*" file on the desktop to view the OSS ReadMe.

Operating the device

5

5.1 Note on the operation

5.1.1 Charging the device

The battery charges as soon as the device is connected to the power supply.

Adhere to the Notes on power supply (Page 36).

When charging with Type C PD adapter and cable, please understand that the charging efficiency depends on the output of the adapter and the quality of the cable, in addition to the PD standard. MD-34A supports PD 3.0 (Max.100W) with direct charging (DO NOT charge MD-34A with Type C hub).

Siemens does not guarantee the charging time when using your own Type C PD devices.

Connect the device to the power supply as soon as the "Battery" LED displays a battery capacity that is too low. You can find additional information in section: "Status displays (Page 13)".

WARNING
Power supply only with the original power supply unit
Only use the supplied original power supply unit for the power supply of the device. This applies to both the connection to the device and to the connection to the docking station.
It is used to supply power to the device in mains operation with 120 V and 230 V power supply networks.
The setting of the voltage range takes place automatically.

The following methods are available for charging the device:

Charging the device in the docking station

- Connect the external power supply to the docking station.
- Place the device correctly in the docking station.

Charging the device with external power supply unit

- Connect the external power supply unit to the device.
- Operate the device during the charging operation only on a table and not in mobile mode.

5.1.2 Using SD card

You can use the following cards:

- microSD cards

For information on the location of the microSD card reader, see the "Inserting the SD card (Page 35)" section.

The contact areas of the card face downward and point toward the display. When inserting the card, pay attention to the correct positioning of the card.

To remove the card press it lightly towards the device.

The card is operated by a push-push function.

NOTICE
Do not insert or remove cards while in use.
Inserting or removing a card while it is in use could damage it.
The card may not be removed as long the LED is lit, see section "Status displays (Page 13)".
Observe the ESD guidelines (Page 91).

5.1.3 General information about WLAN and Bluetooth

The device supports Bluetooth to standard 5.3.

The device is built-in a Wireless LAN (WLAN), i.e. you are **not** assigned to a cable network.

Depending on the infrastructure and the access rights set by the network administrator, you have exactly the same access to files, the printer and to the Internet with WLAN as with cable network.

Support is provided for the WLAN frequency ranges 2.4 GHz and 5 GHz.

Depending on the surrounding conditions, you can create connections through walls or at distances in the open air of up to 100 m. But it depends on the environment you are in, If you are in a room with walls and floors, the range or distance of Wi-Fi connection will be decreased.

The on-board network adapter operates based on the following standards:

- IEEE 802.11 a
- IEEE 802.11 b
- IEEE 802.11 g
- IEEE 802.11 n
- IEEE 802.11 ac
- IEEE 802.11 ax

The IEEE standard offers two modes of operation, the ad hoc mode (Peer to Peer) and the infrastructure mode.

Ad hoc mode

The ad hoc network refers to a wireless network that is established directly between several computers, whereby all computers must have a WLAN facility. No additional devices are necessary.

Infrastructure mode

The infrastructure network uses access points to connect computers to wired networks with the aid of WLAN. These can be a local network (e.g. company networks) or a global network (e.g. Internet).

More detailed information on configuring and operating the WLAN can be found in the online help of the WLAN network adapter.

Note

If you're using a WLAN connection, when the LAN cable is plugged in, the default connection will be LAN, and it will take 5-10 seconds for the connection to become active. If the LAN cable is removed from the LAN port, it will take 5-10 seconds for the WLAN connection to take over.

5.2 HotTab

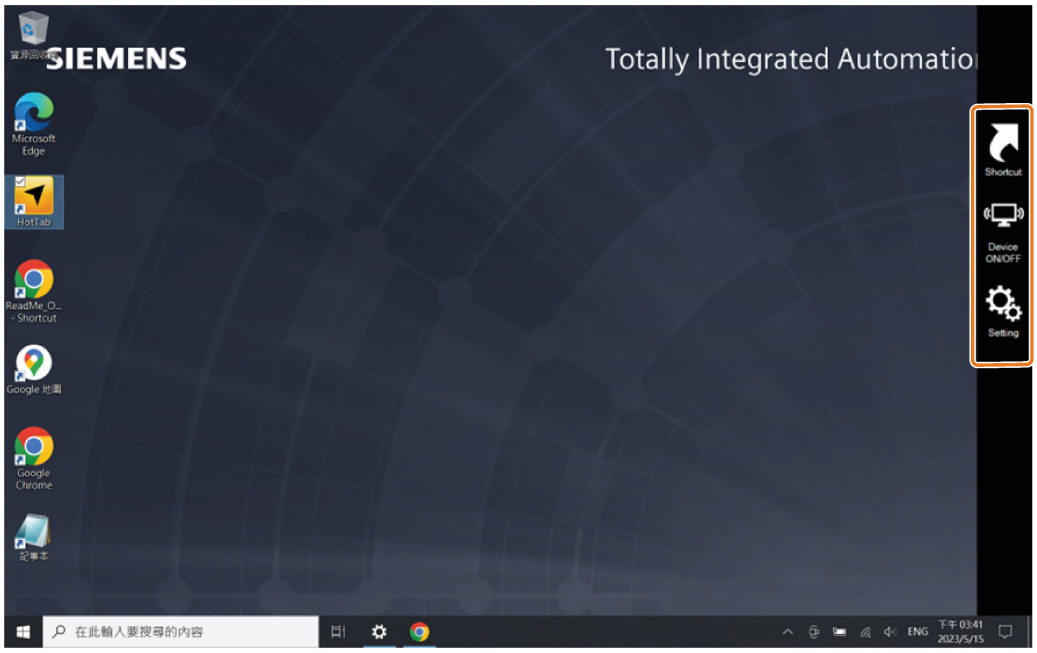
HotTab manages the built-in functions of the MD-34A, it controls the hardware functions directly.

- Shortcuts for quick access to Windows programs
- Turning hardware functions on and off
- Energy management and function keys

When Windows is started, HotTab is started in the background and runs as a service.



To display the HotTab functions, press the "HotTab" icon: The HotTab toolbar appears at the right edge of the screen.



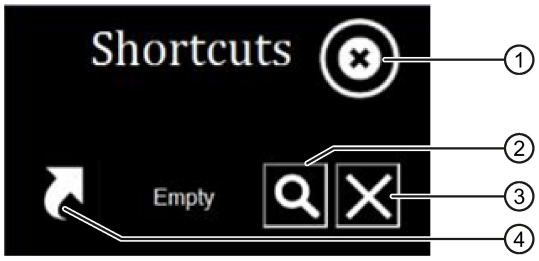
The icons have the following meanings and functions:

Icon	Meaning	Function
	Shortcut (Page 50)	Enables you to create shortcuts that access Windows programs and apps directly.
	Device ON/OFF (Page 52)	Enables you to directly switch the hardware functions of the tablet on and off using icons: • Connections (WLAN, WWAN (4G/LTE), GPS, Bluetooth) • Camera • Status displays and light sensor • Barcode reader • External GPS antenna
	Settings	Allows you check the following information: • Check the information for PC, battery, updates • Programming function keys (Page 52) • Adjusting brightness and volume • Device settings such as energy management and function key assignment.

5.2.1 Shortcut

The "Shortcuts" HotTab menu allows you to create software shortcuts and quickly access software programs in just a few steps.

- Eight empty program places for quick access.
- Quick access to every executable ".exe" file installed on the tablet.



① Close menu
② Create quick access
③ Delete quick access
④ Call quick access

Creating a new quick access

1. Press the "Quick access" icon in the HotTab toolbar. The "Shortcuts" HotTab menu opens.
2. Press the ② button next to an empty program slot "Empty". A file browser appears.
3. Browse the file system for the desired "<Program>.exe" and close the file browser with "Open".

The quick access is saved.

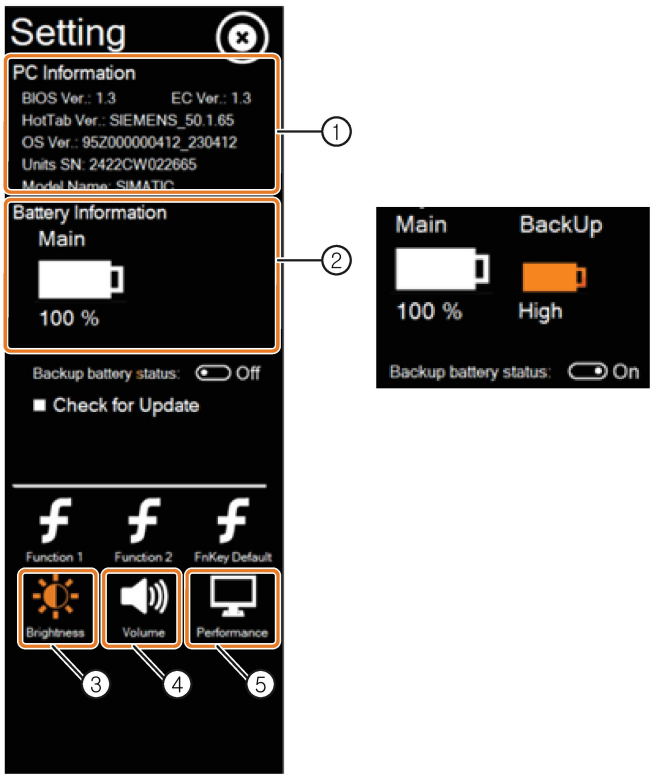
Delete quick access

Press the ③ icon next to the program name. The program slot becomes free again "Empty".

Call quick access

1. Press the "Quick access" icon in the HotTab toolbar. The "Shortcuts" HotTab menu opens.
2. Press the ④ icon next to the program name. The program is started.

5.2.2 Settings



① PC Information	Displays key information about this device. The information displayed varies depending on when the device was received and the version being updated. • BIOS version and EC version • HotTab version • OS Image version • Serial number of the device • Model name of the device
② Battery information	Displays main and backup battery status. • Main: indicates remaining power available in the device. • Scroll to "Backup Battery Status", the backup battery status displays. • "Check for Updates" checks for software updates in PC Information.
③ Brightness	Adjust Display brightness
④ Volume	Adjust volume brightness
⑤ Performance	Set the device to High Performance (Default) or Power Saving

5.2.3 Programming function keys

Introduction

The specially designated physical buttons are preassigned with frequently used tablet functions.

Procedure

1. Press the "Settings" icon in the HotTab toolbar.
2. Press ① to set the Function 1.
   - ①: set the F1 icon
   - ②: set the F2 icon
   - ③: set F1 and F2 to the default function
3. Press ④ to set "Short press" application (short press means press for less than 2 seconds).
4. Select one of the five alternatives for Function 1 key short press.
5. Press ⑤ to set "Long press" application (short press means press for more than 2 seconds).
6. Select one of the five alternatives for Function 1 key long press.
7. Follow the same steps to set the Function 2.



Customize application for "short press" and "Long press"

If you want to program a function key as an application other than the application in the function list for short or long press, press , browse to the folder where the application is installed, and select the application.

5.2.4 Operating the built-in device

Depending on the configuration, your device is equipped with various hardware features, such as a camera and GPS. Not every device has all features.

You can check which hardware features are available along with their status. You can turn individual radio modules, e.g. WLAN, on or off selectively, depending on the situation.

Hardware feature	Entry	Entry Plus	High End	Automation	Outdoor
Camera	✓	✓	✓	✓	✓
Wi-Fi	✓	✓	✓	✓	✓
LAN	✓	✓	✓	✓	✓

Hardware feature	Entry	Entry Plus	High End	Automation	Outdoor
WWAN 4G/LTE		✓	✓		✓
Bluetooth	✓	✓	✓	✓	✓
LED	✓	✓	✓	✓	✓
Battery hot swap	✓	✓	✓	✓	✓
Barcode reader [1]		✓	✓		
Light sensor	✓	✓	✓	✓	✓
Touch mode	✓	✓	✓	✓	✓

[1] There will be a beep sounds in the following situations.

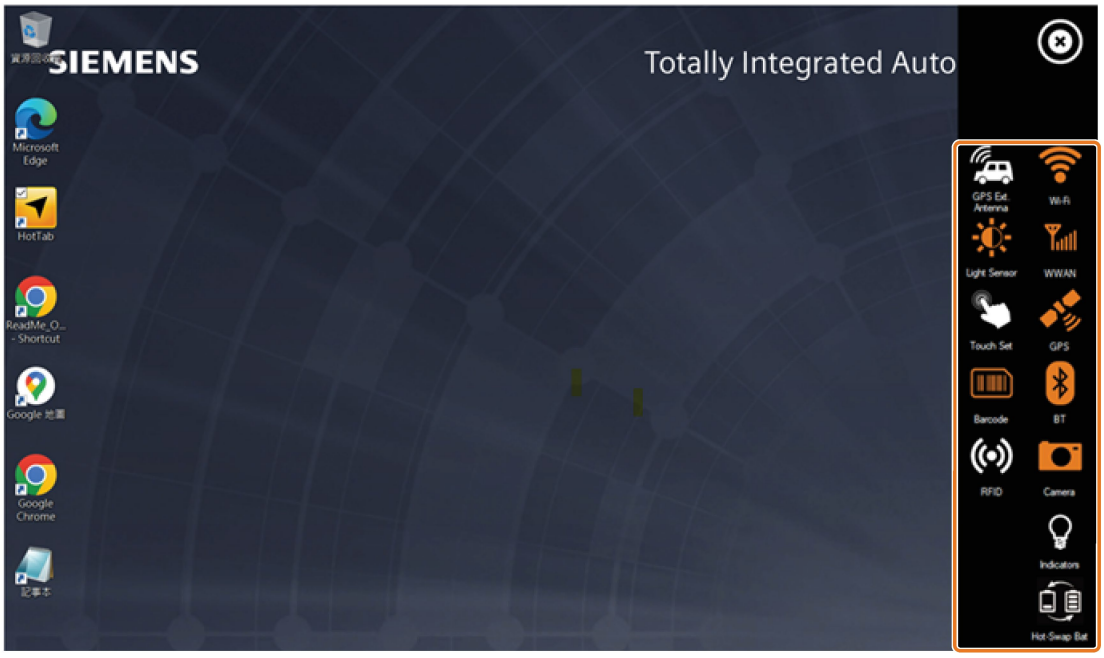
- You activate the barcode
- You turn on the device or wake the tablet with the power button when the barcode function is enabled

Device ON/OFF

To turn on a built-in device on or off, follow the steps below:

1. Press the "Device ON/OFF" icon in the HotTab toolbar. A list of icons (see table below) is displayed on the right edge of the screen.
2. Check whether the function has been turned on (status = activated).

   If the function has been deactivated (white), tap on the icon to switch on the function (orange).



3. Observe the notes and additional steps to be taken in the following table.

Hardware function

NOTICE

Risk of data loss and device damage from battery hot swapping

The rechargeable battery can be swapped during operation without switching off the tablet. If the integrated back-up battery has insufficient power for this or is not activated, the tablet de-energizes. Irrevocable data loss and damage to the tablet may result.

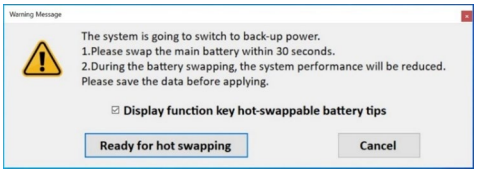
- Back up your data from the ongoing operation.
- Press the "Settings" icon in the HotTab toolbar. If the charge level of the back-up battery is "Low", first charge the battery from the power supply unit.

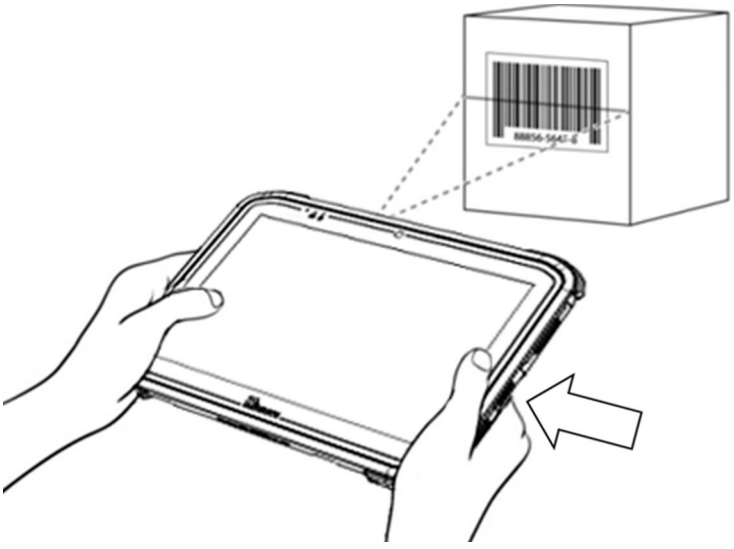
  Do **not** press the "Battery hot swap" icon and do **not** remove the battery as long as the charge level of the back-up battery is "Low".

  Charge the integrated back-up battery every 2 months to avoid deep discharge.
- Press the "Battery hot swap" icon **just before** you swap the battery during operation. This activates the back-up battery.

Observe the notes and additional steps to be taken in the following table.

Icon	Hardware function	Notes and additional steps
	WLAN	1. Turn on the WLAN in the "Device ON/OFF". 2. Open the network connection via the icon in the Windows Notification Center. A list of available wireless networks is displayed. 3. Double-click on a network to establish a connection to it. When prompted, enter the network ID and password. The "Network connection" icon in the Windows Notification Center shows the connection status: The more bars, the better the connection.
WWAN	WWAN 4G/LTE	**Requirement**: The SIM card has been inserted (4G/LTE devices), see "Inserting the SD card (Page 35)" section. The "Network connection" icon in the Windows Notification Center shows the connection status: The more bars, the better the connection.
	GPS	Only required if a running program uses the GPS function for determining the location or for positioning.
	Bluetooth	To start the Bluetooth, you need to do the following tasks. 1. Select **Start** > **Settings** > **Bluetooth & devices**, then turn Bluetooth on. 2. Turn on the Bluetooth in the "Device ON/OFF". 3. Open the Bluetooth shortcut menu via the icon in the Windows Notification Center. 4. To add a device, select "Add Bluetooth device". Windows automatically searches for any Bluetooth devices. 5. Select the Bluetooth device to be connected and follow the instructions on the screen. When the coupling is complete, you can use the Bluetooth device.

Icon	Hardware function	Notes and additional steps
	Camera	**Caution:** This function may emit harmful optical radiation. Do not look at the switched-on lamp. There is risk of eye damage. To start the camera, you need to do the following tasks. 1. Turn on the camera in the "Device ON/OFF" 2. open "HotTabCam UWP (Page 57)" You can use HotTab UWP to switch on the front camera, the one at the top center of the screen. **Note**: If the UWP screen turns white after waking up, restart the UWP application.
	LED	LED displays, see "Status displays (Page 13)" section.
	Battery hot swap	1. A dialog box with a warning is displayed. Before swapping the battery during operation, select "Ready for hot swapping".  To support battery replacement, the system performance and display brightness are reduced to a minimum. 2. Within the next 30 seconds, remove the old battery and insert a new, fully charged battery into the battery compartment. 3. Press the "Settings" icon in the HotTab toolbar. If the charge level of the battery is not displayed correctly, check that the battery was inserted properly.
	GPS antenna, external	Use this icon to switch between an internal and external GPS antenna. The vehicle docking station for the tablet supports an external GPS antenna via a standard SMA connector. **Requirements**: • The tablet is correctly situated in the vehicle docking station. • The vehicle docking station has been connected to an external GPS antenna.
	Light sensor	The light sensor controls the brightness of the screen. If the light sensor is turned on and the environment changes, you will need to turn the light sensor off and on again, and it will check the surrounding laminate to change the brightness of the LCD accordingly.
	Touch mode	Switches the operating mode of the touch screen. Select the desired option. • "Hand/Rain Mode" for rain/liquid • "Stylus Mode" for stylus • "Glove Mode" for glove You can find more information in the "Touch mode (Page 57)" section.

Icon	Hardware function	Notes and additional steps
	Barcode reader	**Requirement**: The barcode reader has been configured and set up, see "Barcode reader (Page 58)". 1. Open the program that is to display the barcode. 2. Orient the tablet to the barcode as shown:  3. To start the scan operation, press function key <Fn2> on the tablet. 4. Press the "Disconnect" button to disconnect from the barcode reader. To reconnect, press the button again.
	RFID	Switches the RFID Reader function on and off.

5.2.5 Touch mode

The tablet has three touch screen operating modes (touch modes) for different applications:

Icon image	Meaning	Application	Input option
	Hand/Rain (default setting)	In "Hand/Rain" touch mode, the touch screen does not respond to false inputs triggered by liquid drops. Once the liquid is removed, the touch screen accepts inputs you make with your bare fingers.	• Passive stylus with rubber tip • Bare fingertips
	Stylus	In "Stylus" touch mode, the touch screen accepts your inputs with the passive input stylus (included in the scope of delivery of the tablet).	• Passive stylus with palm rejection • Passive stylus with rubber tip • Bare fingertips
	Glove	In "Glove" touch mode, the touch screen accepts inputs made when wearing a glove.	• Fingers in glove • Passive stylus with rubber tip • Bare fingertips

5.2.6 Operating the camera with HotTabCam UWP

To start the camera, press the Windows Start key and click the "HotTabCam UWP" program.





Icon	Meaning	Function
	Switch camera	Switches between the front camera and rear camera. **Note**: the rear camera is active by default.
	Settings	Sets the image quality.

Icon	Meaning	Function
	Storage location	The captured images and videos are saved in the `C:\Users\User's name\Pictures` directory. **Note**: User's Name is the local name created or assigned by your system administrator.
	Take photo	Press this icon to take a photograph.
	Start video recording	Press this icon to start a video recording. Press again to stop the recording.
	Activate/deactivate LED	Turns on the LED for taking a photograph. Use the flash when there is too little ambient light. **Caution** This function may emit harmful optical radiation. Do not use the flash too close to people. There is risk of eye damage.

5.2.7 Barcode reader

5.2.7.1 Configuring and setting up the barcode reader

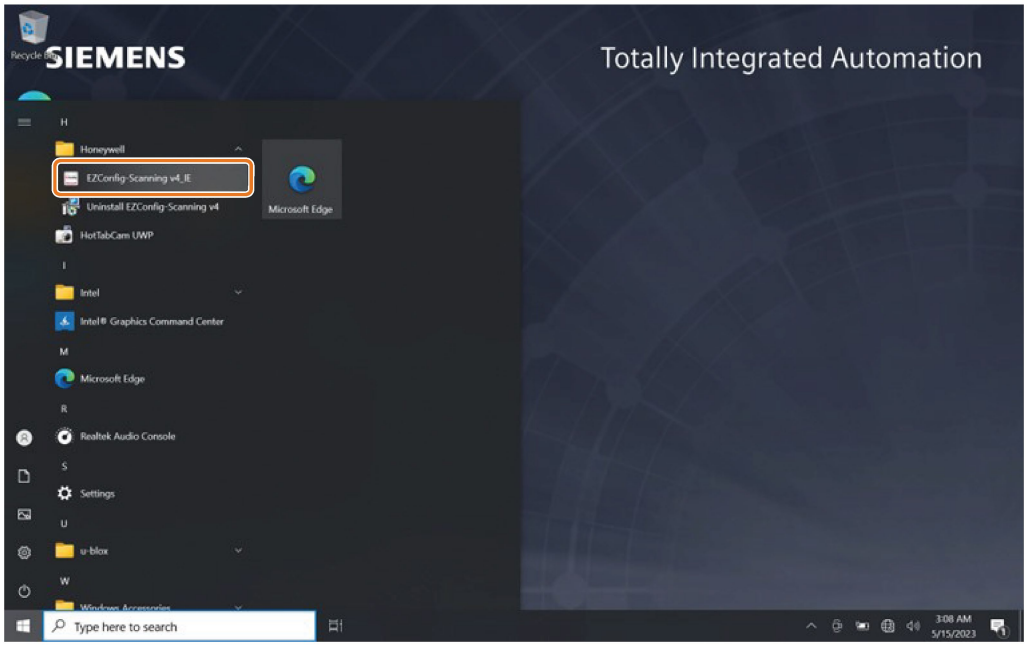
All MD-34A equipped with Barcode Readers are pre-initialized before shipping. You do not need to initiate it the first time you use it, just as the OS recovery is done. If the barcode reader does not work for some reason, follow the instructions below.

Note

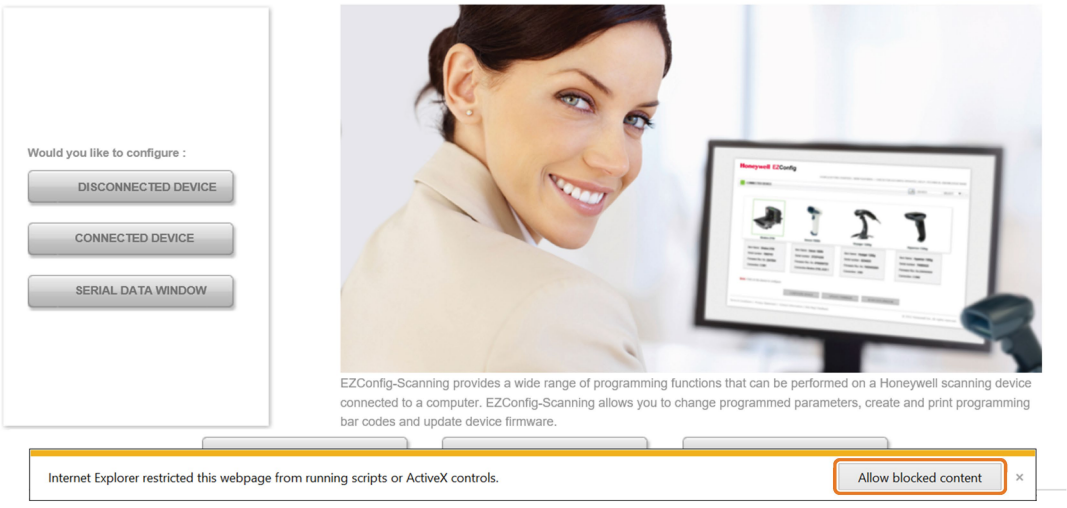
The optional 2D/1D barcode reader is integrated in the tablet and cannot be retrofitted. In order to use the reading function, ensure that your device has an integrated barcode reader prior to use.

Connecting and setting up the barcode reader

1. Press the Windows Start key and start the "EZConfig-Scanning v4_IE" program in the "Honeywell" folder.



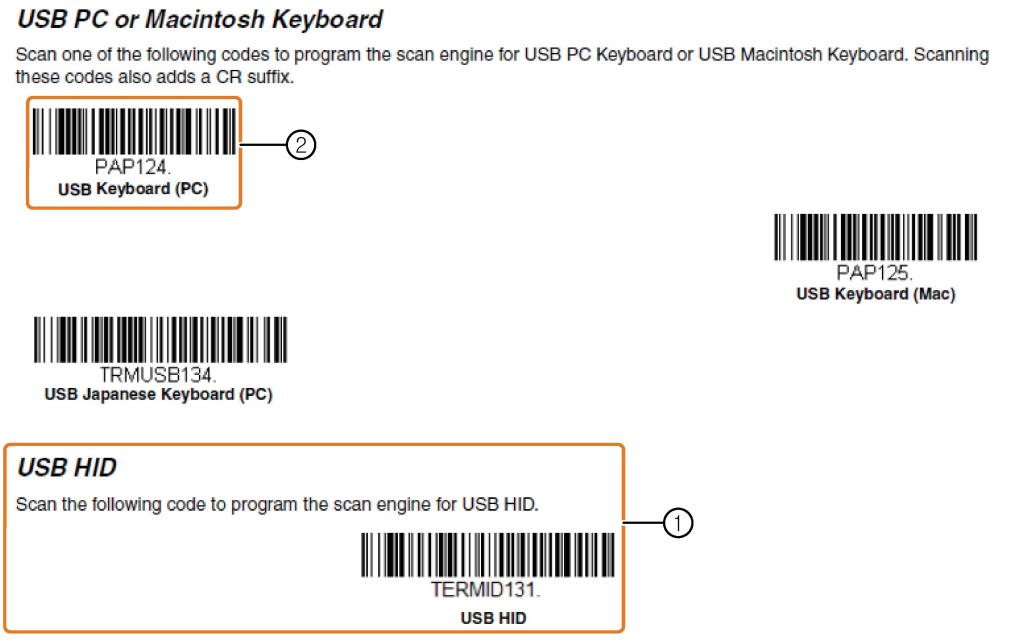
2. If the web browser blocks the content, allow the blocked content through the button at the bottom.



3. Use the device to scan the marked barcode shown as below on another MD-34A equipped with barcode reader or a preprinted barcode.



4. Scroll down the page and scan the barcode shown below in the following order: ①, ②.



5.2.7.2 Connecting the Bluetooth barcode reader

A barcode label with a MAC address is attached to the tablet. You can use this barcode to quickly establish a Bluetooth connection.

Requirement

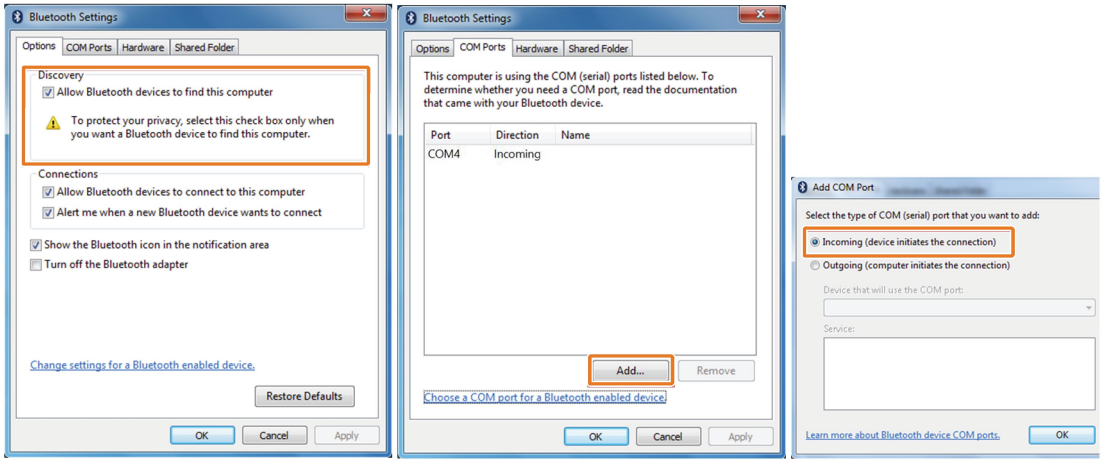
- The Bluetooth barcode reader has been set up as described in the operating instructions.

NOTICE
Bluetooth barcode reader as master device The wireless Bluetooth barcode reader must be configured as a master device for the **Bluetooth Serial Port Profile** (see below) in order to establish a connection with the MAC address using a Bluetooth barcode label.

Setting up the tablet for Bluetooth pairing

To start the coupling process, first perform the following steps to ensure that the tablet has been properly set up for connection:

1. Open the shortcut menu of the "Bluetooth" icon in the Notification Center, and select the entry "Open Settings".
2. The "Bluetooth & other devices" overview appears.
3. Under "Related settings", press the "More Bluetooth options" link. A dialog box with multiple tabs is displayed:



4. On the "Options" tab in the "Discovery" area, select "Allow Bluetooth devices to find this computer", as marked on the left.
5. On the "COM Ports" tab, press the "Add" button. The "Add COM Port" dialog opens.
6. Select "Incoming (device initiates the connection)" as marked on the right, and close the dialog with "OK".

   The table automatically assigns a COM port to the incoming Bluetooth connection, e.g. COM4, as shown in the screenshot in the middle. The COM port is set up such that the wireless Bluetooth barcode reader communicates using the **Bluetooth Serial Port Profile**.
7. Close the "Bluetooth Settings" dialog with "OK".

8. Open the processing program that receives the data scanned by the wireless Bluetooth barcode reader.
9. Configure the program in such a way that it accepts the same COM port that was assigned for the **Bluetooth Serial Port Profile** in step 6.

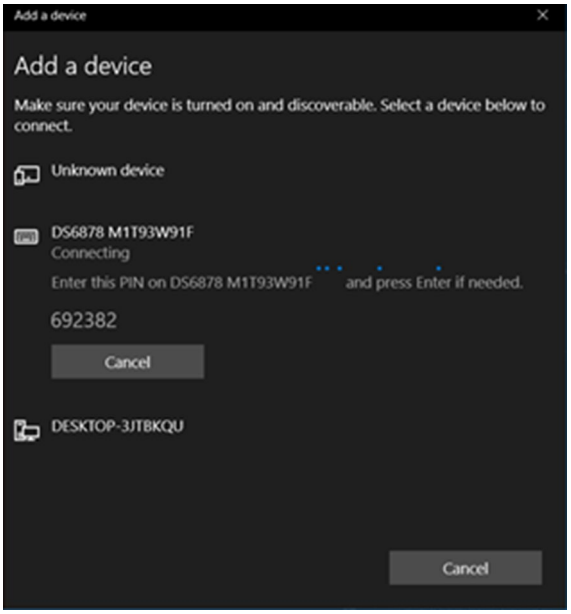
NOTICE
Do not close the processing program Make sure that the program remains open during the coupling operation.

The tablet is now ready to start the coupling operation.

Connecting the tablet and barcode reader

Once you have set up the barcode reader and the tablet, start the coupling as follows:

1. Execute scans. A Bluetooth notification window is displayed on the right side of the desktop. Open the "Add a Bluetooth Device" menu.
2. Open the shortcut menu of the "Bluetooth" icon in the Notification Center, and select the entry "Add a Bluetooth Device". The "Add a device" dialog opens.
3. Press "Next" to connect the barcode reader to the tablet.



To verify that the Bluetooth device was successfully connected to the tablet, perform the following steps:

4. Open the shortcut menu of the "Bluetooth" icon in the Notification Center, and select the entry "Show Bluetooth Devices".

5. Alternatively, you can also access this via the Windows start button in "Control panel > Devices and printers > Bluetooth devices".
6. Make sure that your Bluetooth device is listed and connected to the tablet.

5.3 RFID reader

The RFID reader is freely configurable.

Recording RFID tag

1. Press the key to activate the RFID reader Refer to Configuration of the function keys (Page 52).

   The RFID reader is active within 30 seconds after activation.
2. Guide the RFID tag at the RFID reader.
3. The RFID tag is output at the current cursor position of an opened program.

Device maintenance and repair

6

6.1 Recycling and disposal

The devices described in these operating instructions can be recycled thanks to their low level of pollutants. Contact a certified disposal service company for electronic scrap for environmentally sound recycling and disposal of your old device, and dispose of it according to the relevant regulations in your country.

6.2 Repair information

⚠ WARNING

Risk due to unauthorized opening and improper repairs or expansions

Improper procedure when carrying out expansions may result in substantial damage to equipment or endanger the user.

If you install or exchange system expansions and damage your device, the warranty becomes void.

Maintenance interval

To maintain high system availability, we recommend the preventative replacement of those PC components that are subject to wear in accordance with the intervals for replacement indicated in the table below:

Component	Replacement interval
SSD	3 years

6.3 Maintaining and caring for the touch screen

The device is designed for low-maintenance operation. Nevertheless, you should clean the touch screen periodically.

Requirement

- Soft cleaning cloth
- Rinsing liquid or foaming detergent for the outside of the device

Quintessence

⚠ CAUTION

Unintentional response when cleaning the device

You risk unintentional actuation of operator controls if you clean the device while it is switched on. The device or controller may respond in unintentional ways. Personal injury or machine damage may result.

- Always switch off the device before you clean it.
- Alternatively, clean the touch screen during operation in locked state only.

Damage caused by unauthorized detergents

Using compressed air or steam cleaners, or aggressive solutions or scouring agents will damage the device.

Do not clean the device with compressed air or steam jets. Do not use aggressive solvents or scouring powder.

NOTICE

Damage to the protective coating

The user interface of the touch screen has a special protective coating that prevents dirt from adhering to it. Wiping the surface of the display may damage the special protective coating.

- Only remove dirt on the display with a soft cloth. Do not use a paper towel.
- To remove stubborn dirt, you can gently blow on the affected area and then carefully wipe it with a soft cloth.

Proceed as follows:

1. Switch off the device or disable the touch screen by pressing the locking key.
2. Wipe the outside of the device with a soft cloth moistened with water or non-alkaline detergent.

   Spray the detergent onto the cleaning cloth.

   Do not spray directly onto the device.
3. Carefully wipe the display with a soft, lint-free cloth.

   Do not use alcohol or detergents.

   When cleaning the display, wipe from the edge of the screen inwards.
4. Unlock the touch screen by pressing the Locking key again.

6.4 Installing operating system, software, and driver

6.4.1 Recovering the tablet with the wizard (Recovery)

The tablet has a separate recovery partition on its hard disk, which enables fast recovery with a single mouse click. This partition utilizes approximately 20 GB of memory capacity.

NOTICE
Risk of data loss During recovery of the system partition, all data on the hard disk is deleted and the hard disk is rewritten. **All** files, user settings, and existing authorizations or license keys are lost! Before starting the wizard: • Back up **all** your user data on an external storage medium. • Make a note of important settings in the operating system and in programs. • Start a safety backup in the operating system and in programs.

Procedure

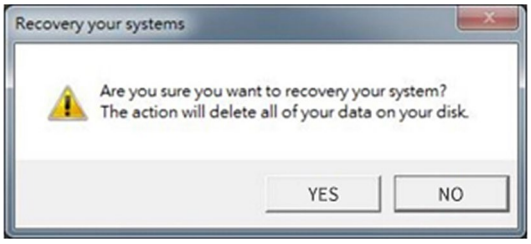
1. Connect the power supply unit to the tablet. Make sure that the tablet remains connected to the power source during the recovery operation.
2. Switch on the tablet. When the start screen appears, press the <Fn1> or <F6> key if you have connected an external USB keyboard.

   The wizard recovery menu appears:



3. To continue, press the "Recovery" button.

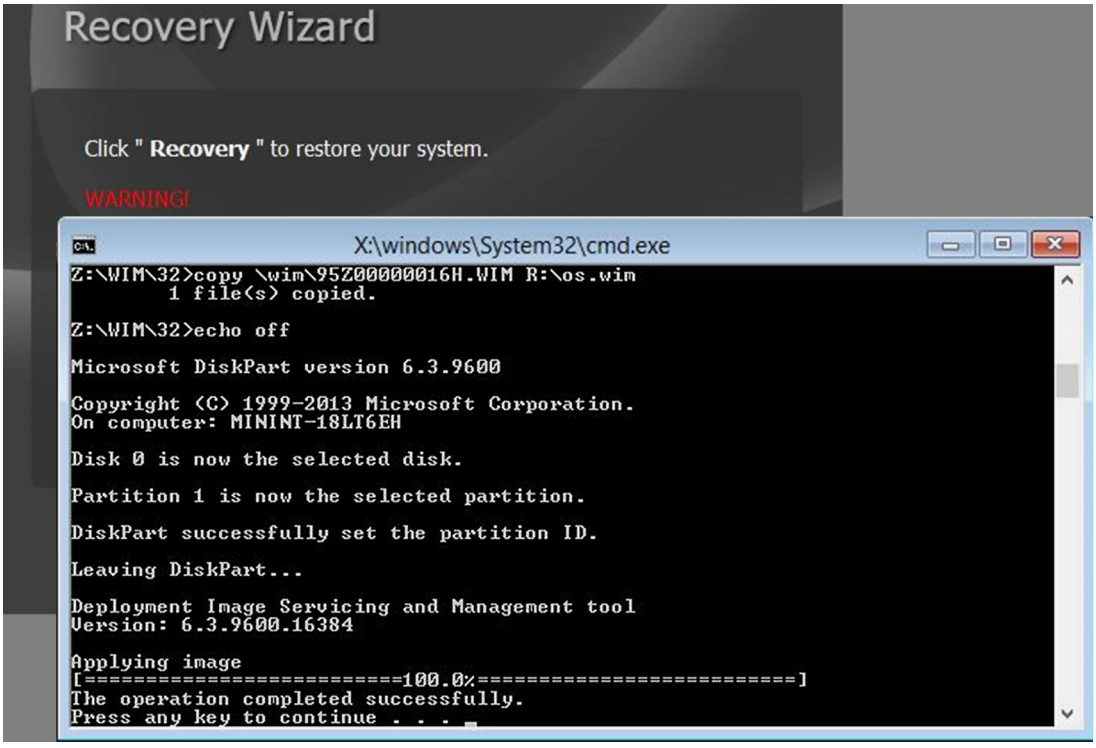
4. A "Warning of data loss" message is displayed. Make sure that all your data has been backed up.



   To continue, confirm with "Yes".

5. The recovery starts in a new window. At the bottom of the window, the progress is displayed as a percentage:

   Wait and do not press any buttons or keys.



6. When 100% and completion of the operation is displayed as shown at the bottom of the window, press any button on the tablet.

   The tablet is then automatically shut down.

The next time the device is switched on, the recovered operating system is set up on the device automatically.

6.4.2 Updating the operating system

Windows

The latest updates for the Windows operating system are available on the Internet at Microsoft (http://www.microsoft.com/en-us) and on the device in the Start menu "Start > All Programs > Windows Update > Check for updates".

Other operating systems

Contact the corresponding manufacturer.

6.4.3 Setting up the language selection in Windows 10/ Windows 11

You can set the display of menus, dialogs or other information, such as date and time, to a different language. For this purpose, you can either select one of the preinstalled languages or install a new language package.

The following command sequences are described in English. Depending on the default setting, they can be displayed in another language.

Changing the settings for language, region and formats of a registered user account

1. Choose:

   "Start > Control Panel > Clock, Language, and Region > Region"

2. You can make the desired changes in the "Formats" and "Location" tabs.

Changing the settings for language, region and formats of the system account and the standard user account

You can change the settings for language, region and formats of the system account (for example, the language in the user login dialog) and the settings of the standard user account (standard setting for new users). The settings of the registered user are copied to the system account and the standard user account for this purpose.

1. Choose:

   "Start > Control Panel > Clock, Language, and Region > Region"

2. You can make the required changes in the "Administrative" tab. You copy the settings by clicking the respective button.

Firmware/BIOS description

7

7.1 Open firmware selection menu

Procedure

1. Switch on the device or restart the device.
2. Immediately after switching on the device, press the **<Esc>** key on the connected keyboard and hold it down. Or you can press "F2" button on the back of the device immediately after switching on the device.

The "Main Page" with the options of the firmware selection menu is open.

Firmware selection menu

The number of available options in the firmware selection menu depends on your device version.

The following options are available:

Option		Function
Continue		Exit firmware selection menu and continue the boot procedure.
Boot Manager		Specify the boot media from which to start, for example: • Windows Boot Manager • EFI HTTP [IPv6] • EFI HTTP [IPv4] • EFI PXE 0 for IPv6 • EFI PXE 0 for IPv4
Device Manager	TLS Certificate Manager	Import or delete certificates for TLS processing.
	RAM Disk Configuration	Add or remove RAM disks.
	Driver Health Manager	List all driver health instances.
	Network Device List	Select the network device according to the MAC address.
Boot From File		Boot from a file or device.
Administer Secure Boot		Configure device startup in "Secure Boot Modus". Software modules will be loaded only when they are recognized by the BIOS or the operating system as safe.
Setup Utility		Start firmware configuration menu.

7.2 Configure firmware

You configure important firmware settings of your device using the firmware configuration menu "Setup Utility".

Procedure

1. Open the firmware selection menu (Page 69).
2. Touch the "Setup Utility" option on the "Main Page" or press "DEL" key on the connected keyboard.

Setup Utility menu

The individual setup parameters are distributed in different menus and submenus. Not all menus are included in each supplied device configuration. The following menu structure is an example:

Menu	Meaning
Main (Page 71)	Display system information, for example, BIOS version, processor and memory information.
Advance (Page 72)	Configure hardware.
Security (Page 74)	Security settings, for example, setting an user password.
Boot (Page 75)	Determine boot options, for example, boot order.
Exit (Page 77)	Save configuration and exit.

Keyboard inputs in Setup Utility

Key	Function
<F1>	Call help function.
<F5> or <F6>	Change firmware settings. The <F5> key is used to take the previous setting possibility or value. The <F6> key is used to take the next setting possibility or value.
<F9>	Load Optimal Defaults: The firmware settings are reset to the safe default values. The delivery state is restored. **NOTICE**: All current firmware settings are overwritten.
<F10>	Exit Saving Changes: All changes are saved. The device is restarted with the changed firmware settings.
<Enter>	A submenu previously selected with the arrow keys opens. The value of a firmware setting previously selected with the arrow keys can be changed.
[←] [→]	Navigate to a tab.
[↑] [↓]	Navigate to a submenu or a firmware setting. Confirm your selection with the <Enter> key.
<Esc>	A submenu or tab or the Setup Utility is exited. If the Setup Utility is closed after the confirmation prompt, changes to the firmware settings are discarded.

7.2.1 "Main" tab

Calling "Main" tab

Select: "Setup Utility (Page 70)" > "Main".

Device information

You can find important device information in the "Main" windows.

Device information	Explanation
BIOS Version	Current firmware version
Processor Type	CPU type
System Bus Speed	
System Memory Speed	
Cache RAM	Total L2 cache size
Total Memory	Total memory size
Controller0 Channel0 SODIMMO	
Platform Configuration	
CPUID	
CPU Speed	
CPU Stepping	
Number of processors	
Microcode Rev	Microcode Revision
GT info	
SMX/TXT	
PCH Rev/SKU	
GOP Ver	Version of Graphic Output Protocol (GOP) driver
Intel ME Version/SKU	
LAN PHY Revision	

Calling "Language"

You can select the supported display language for BIOS.

Select: "Setup Utility (Page 70)" > "Main" > "Language".

Firmware setting	Value	Setting in delivery state	Meaning
Language	English	x	BIOS display language.
	French		
	Chinese		
	Japanese		

Calling "System Time" or "System Date"

Date or time settings.

Select: "Setup Utility (Page 70)" > "Main" > "System Time" or "System Date".

Firmware setting	Explanation
System Time	Set current device time in the format [Hour:Minute:Second]
System Date	Set current device date in the format [Month/Day/Year]

Key functions for setting the numeric time and date values

Button	Function
<Enter>	Switch between the setting options within a firmware setting, for example, from hour to minute.
[+] [-]	Increase or decrease desired value.
[0] - [9]	Enter desired value.

7.2.2 "Advance" tab

7.2.2.1 Power & Performance

You can have power management control options here.

Calling "CPU - Power Management Control"

Select: "Setup Utility (Page 70)" > "Advanced" > "Power & Performance" > "CPU - Power Management Control".

Firmware setting	Value	Setting in delivery state	Meaning
Boot performance mode	Max Battery		Select the performance state that the BIOS will set starting from reset vector.
	Max Non-Turbo Performance		
	Turbo Performance	x	
Intel(R) Speed-Step(tm)	Disabled		Allow more than two frequency ranges to be supported.
	Enabled	x	
Intel(R) Speed Shift Technology	Disabled		Enabling Intel(R) Speed Shift Technology will expose the CPPC v2 interface to allow hardware-controlled P-state.
	Enabled	x	
Turbo Mode	Disabled	x	This configuration is unavailable if Intel(R) SpeedStep(tm) is disabled.
	Enabled		
C state	Disabled		Enabling it to allow CPU to go to C state when it's not fully utilized.
	Enabled	x	

7.2.2.2 System Agent (SA) Configuration

You can configure System Agent parameters here.

Calling "System Agent (SA) Configuration"

Select: "Setup Utility (Page 70)" > "Advanced" > "System Agent (SA) Configuration".

Firmware setting	Value	Setting in delivery state	Meaning
VT-d	Supported		Intel® VT-d (Virtualization Technology for Directed I/O) can help you improve security and reliability of the system and improve performance of I/O devices in virtualized environment.
VT-d	Disabled		
	Enabled	x	

7.2.2.3 PCH-IO Configuration

You can configure USB settings here.

Calling "PCH-IO Configuration"

Select: "Setup Utility (Page 70)" > "Advanced" > "PCH-IO Configuration".

Firmware setting	Value	Setting in delivery state	Meaning
USB Port Disable Override	Disable	x	Enable or disable the corresponding USB port to report a Device Connection to the controller.
	Select Per-Pin		
The following options show only when "**USB Port Disbale Override**" = "Select Per-Pin".			
TYPE A USB 3.0	Disabled		Enable or disable USB port. Once the port is disabled, any USB devices plugging into the port will not be detected by BIOS or OS.
	Enabled		
TYPE USB 3.0 AND SD CARD	Disabled		
	Enabled		
TYPE C USB 2.0	Disabled		
	Enabled		
TYPE A USB 2.0	Disabled		
	Enabled		

7.2.2.4 PCH-FW Configuration

You can configure Management Engine Technology parameters here.

Calling "PCH-FW Configuration"

Select: "Setup Utility (Page 70)" > "Advanced" > "PCH-FW Configuration".

Firmware setting	Value	Setting in delivery state	Meaning
ME Firmware Version			Current ME (Management Engine) firmware version.
ME Firmware Mode	Normal Mode		
ME Firmware SKU	Consumer SKU		
ME Firmware State 1			
ME Firmware State 2			
ME State	Disabled		If ME is disabled, it will be put into ME Temporarily Disabled Mode.
	Enabled	x	

7.2.3 "Security" tab

Calling "Security" tab

Select: "Setup Utility (Page 70)" > "Security".

Firmware setting	Value	Setting in delivery state	Meaning
Current TPM Device [1]			Show the version of current TPM (Trusted Platform Module) device.
TPM State			
TPM Active PCR Hash Algorithm			
TPM Hardware Supported Hash Algorithm			
BIOS Supported Hash Algorithm			
TrEE Protocol Version	1.0		TrEE Protocol version 1.0 or 1.1.
	1.1	x	
TPM Availability [1]	Available	x	The TPM (Trusted Platform Module) is Available or Hidden in the operating system. Note: When it is set to Hidden mode, do not expose TPM to 0.
	Hidden		
Clear TPM			Choose to remove all TPM context associated with a specific owner.
Supervisor Password	Installed		It displays "Installed" here if Supervisor Password is set.
	Not Installed	x	
User Password	Installed		You can set User Password after the Supervisor Password is set. It displays "Installed" here if User Password is set.
	Not Installed	x	

Firmware setting	Value	Setting in delivery state	Meaning
Set Supervisor Password			Install or change the password. The length of the password must be greater than 1 character.
Set User Password			Install or change the password. It's available for configuration only after Supervisor Password is configured. The length of the Password must be greater than 1 character.
TLS Certificate Manager			Maintain certificate files for TLS processing. You can choose to import or delete Certificate.

[1]: Only visible with device configuration with Trusted Platform Module (TPM).

7.2.4 "Boot" tab

Boot behavior of the device, bootable device components (boot media) and boot order.

Calling "Boot" tab

Select: "Setup Utility (Page 70)" > "Boot".

Firmware setting	Value	Setting in delivery state	Meaning
Quick Boot	Enabled	x	Feature in BIOS that reduces computer boot time.
	Disabled		
Quiet Boot	Enabled	x	Feature in BIOS that makes computer start up faster and without usual error messages on BIOS display.
	Disabled		
Network Stack	Enabled	x	Enable or disable the Network as a boot device.
	Disabled		
PXE Boot capability [1]	Disabled		Enable Pre-Boot Execution Environment.
	UEFI: IPv4		
	HTTP: IPv4		
	HTTP and PXE: IPv4		
	UEFI: IPv6		
	HTTP: IPv6		
	HTTP and PXE: IPv6		
	UEFI: IPv4/IPv6		
	HTTP: IPv4/IPv6		
	HTTP and PXE: IPv4/IPv6	x	
Timeout	0 - 10	2	Delay time in seconds during booting so that the user has time to press the hotkey to open the firmware selection menu.

Firmware setting	Value	Setting in delivery state	Meaning
Automatic Failover	Enabled	x	If it fails to boot the default device, it will try to boot next device.
	Disabled		If it fails to boot the default device, a warning messages will appear and then it will go into firmware UI.
Boot Type Order			Use F5 or F6 key on the connected keyboard to change boot type order.
HTTP Boot Configuration			Configure boot parameter by MAC Address via IPv4 or IPv6 protocol.

[1]: This option shows only when "Network Stack" = Enabled.

Calling "Boot Type Order"

Select: "Setup Utility (Page 70)" > "Boot" > "Boot Type Order".

Firmware setting	Value	Setting in delivery state	Meaning
Hard Disk Drive	Windows Boot Manager	x	Change Hard Disk Driver boot order.
USB			
BEV	EFI HTTP[IPv6]	x	Change BEV boot order.
	EFI HTTP[IPv4]	x	
	EFI PXE 0 for IPv6	x	
	EFI PXE 0 for IPv4	x	
Others			

Calling "HTTP Boot Configuration"

Select: "Setup Utility (Page 70)" > "Boot" > "HTTP Boot Configuration" > "XXX (Mac address of the device)".

Firmware setting	Value	Setting in delivery state	Meaning
Internet Protocol	IPv4	x	Select the version of Internet Protocol.
	IPv6		
Boot URI			A new boot option will be created according to this Boot URI.
Create boot option			

7.2.5 "Exit" tab

Exit the Setup utility. You have the following options for saving or discarding the changes you made:

Calling "Exit"

Choose: "Setup Utility (Page 70)" > "Exit".

Firmware setting	Meaning
Exit Saving Changes	All changes are saved. The device is restarted with the changed firmware settings.
Save Change Without Exit	All changes are saved. Setup utility remains open.
Exit Discarding Changes	Setup Utility is closed. All changes are discarded.
Load Optimal Defaults	The firmware settings are reset to the safe default values. The delivery state is restored. **NOTICE**: All current firmware settings are overwritten.
Load Custom Defaults	The user-specific profile with the user-specific firmware settings is loaded. **Requirement:** The firmware settings were previously saved as user-specific profile with "Save Custom Defaults". **NOTICE**: All current firmware settings are overwritten when loading the user-specific profile with "Load Custom Defaults".
Save Custom Defaults	The current firmware settings are saved as a user-specific profile (see also "Load Custom Defaults").
Discard Changes	All changes to the firmware settings are discarded.

7.3 Update firmware

7.3.1 Update firmware overview

Firmware/BIOS updates are regularly available for your device. You can download these from the Internet.

NOTICE
Risk of irretrievable loss of data After a firmware/BIOS update all firmware settings are deleted. This can put the system in an undefined state. The consequence might be damage to the device or system. Before updating your firmware, back up the current firmware settings by writing them to a file. You can find information on this under ""Exit" tab (Page 77)".

Requirements

- The device to be updated
- Prepared USB drive.
- USB keyboard
- USB hub powered with an external AC adapter

Note

If the USB hub is not powered with an external AC adapter, the BIOS and EC firmware update run the risk of update corruption.

Preparing USB drive

Take the following steps to prepare the USB drive which will be used for BIOS and EC firmware update:

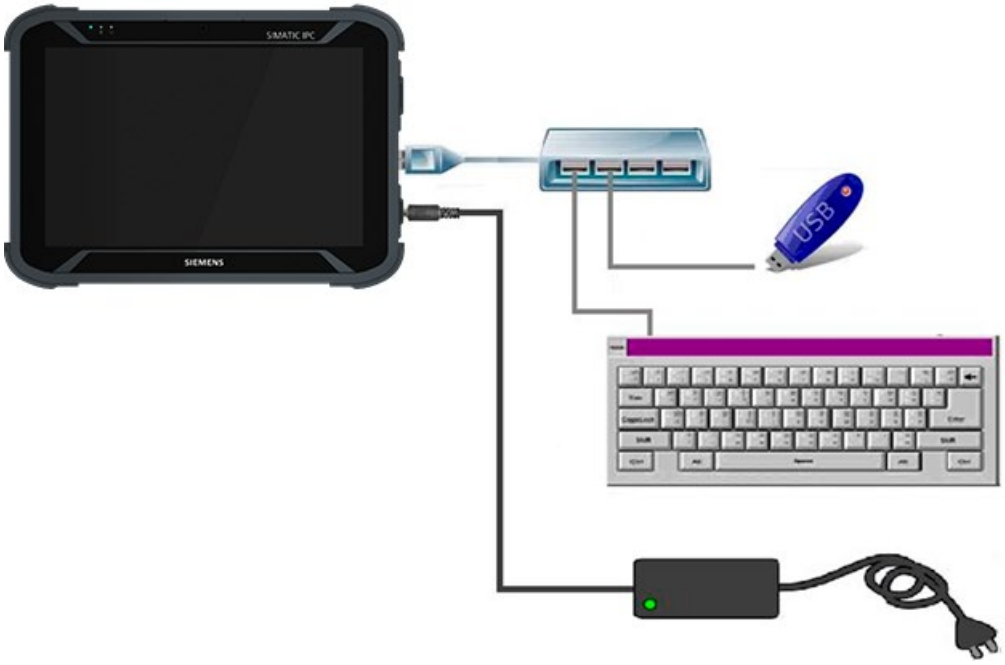
1. Format the USB drive into FAT32.
2. Download the latest version of BIOS update zipped file from Siemens Industry Online Support (https://support.industry.siemens.com/cs/ww/en/view/75852684) website, and store it in the USB drive at root directory. Registration is required in this step.
3. Unzip the file into a folder named as "BIOS_Update".
4. Store the unzipped files in the root directory of the USB drive.

7.3.2 BIOS and EC firmware update (Windows mode)

Procedure

Take the following steps to perform BIOS and EC firmware update under Windows mode:

1. Connect the device with AC adapter, USB hub, the prepared update USB drive and USB keyboard.



2. Copy the unzipped BIOS update files from the USB drive to the target SSD of the device.
3. Long press the "Update.exe" file and select "Run as administrator".
4. Press the power button to power on the device manually after it finishes BIOS first phase update and gets shut down automatically. You will be reminded by the displaying system message.

Note

Make sure the AC adapter is well connected during BIOS flash period, and do not shut down the device. Otherwise, the device might suffer from permanent damage and it might require substantial hardware repair.

After the device is powered on manually, BIOS update starts automatically.

5. After BIOS update finishes, you can check BIOS version information either in System Information or by pressing HotTab.

Technical data

8

8.1 General technical specifications

Device function	Data	Value
Display	Size	10.1 inch
	Resolution	1920 × 1200 (1280 × 800)
	Brightness	800 nits (350 nits)
	Contrast ratio	800:1 (typ.)
	Viewing angle	85/85/85/85
	Touch	Projected capacitive multi-touch
	Bonding structure	Multi-layer bonding structure for readability in sunlight
	Readability	Anti-glare coating
System specification	Processor	Intel Core i5-1135G7 / 2.4 GHz (Turbo Boost up to 4.2 GHz)
	Main memory	8 GB DDR4 SDRAM (optional up to 32 GB)
	Mass storage	512 GB (256 GB) SSD, additional memory capacity on microSD card
	Operating system	Windows 10 IoT Enterprise (64-bit)
	WLAN	802.11 a/b/g/n/ac/ax
	Bluetooth	Supported V 5.3
	GNSS	GPS, GLONASS
	WWAN	4G / LTE
Readers	Barcode	
	RFID	HF RFID
Camera	Front camera	Front camera (2 MP)
	Rear camera	Rear camera (8 MP) with autofocus and LED light
Mechanical system	Dimensions	266 × 187 × 20.4 mm
	Weight	1.1 kg
	Cooling system	Fan
I/O connections	USB connection	1 × USB 3.0 (Type A), 1 × USB 3.0 (Type C)
	Video	1 × Micro HDMI
	Audio	1 × Audio combo jack 3.5 mm (Mic in or Line out) Integrated dual-mic microphone Single speaker
	SD card tray	1 × microSD tray
	SIM card tray	1 × SIM card tray
	Status display	2 × LED display for electricity supply and battery

Device function	Data	Value
	Docking connector	1 × 19-pin docking connector
	LAN	1 x connection RJ45-10/100/1000 Giga-LAN
	Expansion port	1 × expansion port for USB 3.0 / UART
Environment	Relative air humidity during operation	10% to 90%, no condensation
	Operating temperature	-20 °C to 60 °C
	Storage temperature	-30 °C to 70 °C
	Shock	MIL-STD-810H Method 516.8 Procedure I
	Vibration	MIL-STD-810H Method 514.8 Procedure I
	Drop test	MIL-STD-810H Method 516.8, 4 ft.
	Degree of protection	IP65 – protected against ingress of dust, contact, and water jets from any angle
Safety function	Trusted Platform Module (TPM) 2.0	Supported
	Kensington lock	Supported
Operator controls	Buttons	1 × On/Off button 2 × programmable function key
Power supply	Battery	11.4 V (typ. 3500 mAh), designed as a lithium-ion battery (3S1P), can be replaced during operation
	Battery life	Standard battery: 6 hours
	Nominal voltage	19 V DC
	Power supply unit	100–240 V, 50–60 Hz / 19 V DC
Certification	Certification	CE, FCC

8.2 Technical specifications for accessories

Device function	Data	Value
Barcode reader	Barcode reader	For 1D code and 2D code
Accessories	Standard	Power supply unit and power supply cord
	Optional	Battery pack Battery charger Hand strap Shoulder strap Desk docking Vehicle docking

8.3 Ambient conditions

Climatic ambient conditions	
Temperature	Tested according to IEC 60068-2-2; IEC 60068-2-1; IEC 60068-2-14
Operation	-20 °C to +60 °C Gradient: ≤ 10 K/h; no condensation **Note**: In high-temperature environments of 60 ℃, this device requires wind cooling, with a wind speed of at least 0.7 m/sec.
Storage/transport	–30 °C up to +70 °C Gradient: ≤ 20 K/h; no condensation
Relative humidity	Tested according to IEC 60068-2-78;
Operation	Up to 85% at 30 °C; no condensation Gradient: ≤ 10 K/h; no condensation
Storage/transport	Up to 95% at 25 °C to 55 °C; no condensation Gradient: ≤ 20 K/h; no condensation
Mechanical ambient conditions	
Vibration	Tested according to IEC 60068-2-6; 10 cycles
Operation	10 to 58 Hz: 0.0375 mm, 58 Hz to 200 Hz: 4.9 m/s2
Storage/transport	1 / Octaves/min, 5 – 8,4 Hz / 3,5 mm 8,4 - 500Hz / 9,8 m/s2
Resistance to shock	Tested in accordance with IEC 60068-2-27
Operation	15G, 11ms half sine; The interval time is set to 2 or 3 seconds generally, 3 Shock times per direction
Storage/transport	25G, 6ms half sine; The interval time is set to 2 or 3 seconds generally, 1000 Shock times per direction

8.4 Electromagnetic compatibility

Emission

Radiated emission according to IEC 61000-6-3, measuring distance 3 m	
Frequency range	Interference emission
30 to 230 MHz	< 40 dB (µV/m) quasi-peak
230 to 1000 MHz	< 47 dB (µV/m) quasi-peak
1 to 3 GHz	< 70 dB (µV/m) peak and < 50 dB (µV/m) average
3 to 6 GHz	< 74 dB (µV/m) peak and < 54 dB (µV/m) average

Emission of radio interference voltages according to IEC 61000-6-3	
Emission port	Interference emission
Power port	0.15 to 0.5 MHz
	< 66 dB (µV) to 56 dB (µV) quasi peak and < 56 dB (µV) to 46 dB (µV) average
	0.5 to 5 MHz
	< 56 dB (µV) quasi peak and < 46 dB (µV) average
	5 to 30 MHz

	< 60 dB (µV) quasi peak and < 50 dB (µV) average
Telecommunication / Network port	0.15 to 0.5 MHz
	< 84 dB (µV) to 74 dB (µV) quasi peak and < 74 dB (µV) to 64 dB (µV) average
	0.5 to 30 MHz
	< 74 dB (µV) quasi peak and < 64 dB (µV) average
Harmonic currents interference according to IEC 61000-3-2	
Voltage fluctuation and flicker according to IEC 61000-3-3	

Immunity

Pulse-shaped interference	
Electrostatic discharge according to IEC 61000-4-2	Air discharge: ± 8 kV
	Contact discharge: ± 6 kV
Bursts (high-speed transient disturbance variable) according to IEC 61000-4-4	± 2 kV supply line
	± 1 kV signal line, < 30 m ± 2 kV signal line, > 30 m
Powerful single pulse (surge) according to IEC 61000-4-5	Asymmetric coupling (line to ground)
	± 2 kV supply line ± 2 kV signal line, > 30 m
	Symmetrical coupling (line to line)
	± 1 kV supply line ± 1 kV signal line, > 30 m

Sinusoidal interference	
Radiation disturbances according to IEC 61000-4-3	80% amplitude modulation at 1 kHz • on 10 V/m in the range of 80 MHz to 2.7 GHz • on 3 V/m in the range of 2.7 GHz to 6 GHz
Conducted disturbances according to IEC 61000-4-6	Test voltage 10 V at 80% amplitude modulation of 1 kHz in the range from 10 kHz to 80 MHz
Magnetic field strength according to IEC 61000-4-8	50/60 Hz, 100 A/m RMS

8.5 Dimension drawing

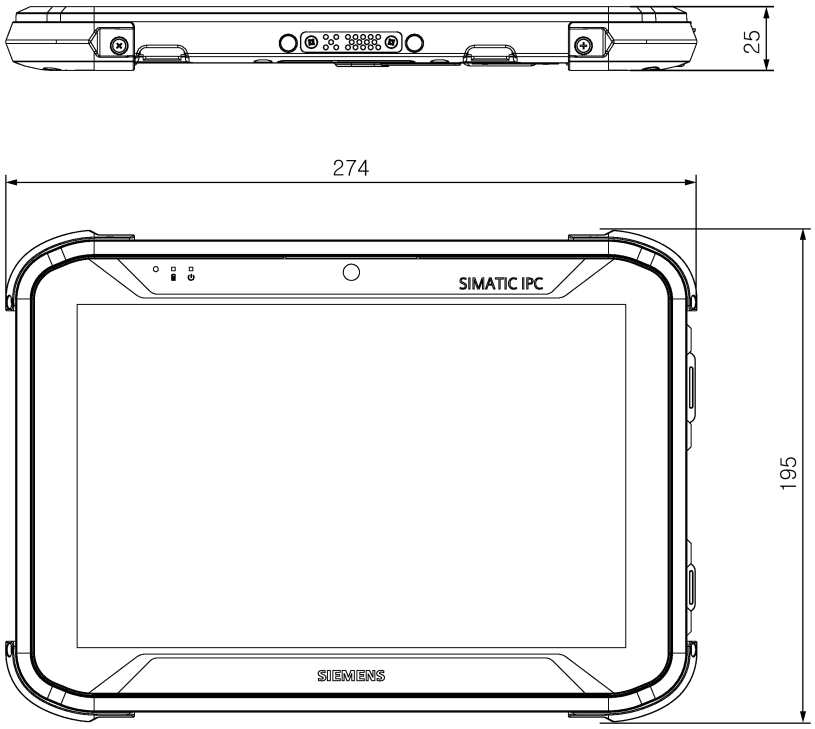


Figure 8-1 All dimensions in mm

Standards and approvals

9

9.1 Overview

Note

Applicability

The following shows the approvals that may be available. For the device itself, it is certificated as shown on the product label and package label.

9.2 Certificates and approvals

Note

Applicability

The following shows the approvals that may be available. For the device itself, it is certificated as shown on the product label and package label.

Software license agreements

If the device is supplied with preinstalled software, you must observe the corresponding license agreements.

CE marking

CE

The product meets the requirements and safety objectives of the following EC directives and it complies with the harmonized European standards (EN) for Tablet PC which are published in the official documentation of the European Union.

- **2014/53/EU (Radio equipment directive)**

  Directive of the European Parliament and of the Council of April 16, 2014 on the harmonization of the laws of the member states relating to placing radio equipment on the market and to cancel the directive 1999/5/EU.

- **2011/65/EU (RoHS directive)**

  Directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

- **(EU) No 617/2013(ERP Directive)**

  COMMISSION REGULATION implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for computers and computer servers.

- This product is based on a single evaluation of one sample and confirmed to comply with **Art.3.1(a)(b) and Art.3.2/3.3 of the Radio Equipment Directive 2014/53/EU** according to following standards:

  – EN18031-1:2024

  – EN18031-2:2024

Standard	MD-34A
EN 301 908-13 V13.2.1	Y
EN 300328 V2.2.2	Y
EN 301893 V2.1.1	Y
EN 300440 V2.2.1	Y
EN 303 413 V1.2.1	Y
EN 301 489-1 V2.2.3	Y
EN 301 489-3 V2.3.2	Y
EN 301 489-17 V3.2.4	Y
EN 301 489-19 V2.2.1	Y
EN 301 489-52 V1.2.1	Y
EN 55032:2015/A11:2020	Y
EN 55035:2017/A11:2020	Y
EN IEC 61000-3-2 :2019/A1:2021	Y
EN 61000-3-3 :2013/A2:2021	Y
EN IEC 61000-6-1 :2019	Y
EN IEC 61000-6-3 :2021	Y
EN IEC 61000-6-2 :2019	Y
EN IEC 61000-6-4 :2019	Y
EN 50566:2017	Y
EN 50663:2017	Y
EN IEC/IEEE 62209-1528:2021	Y
EN 62479:2010	Y
EN IEC 62368-1:2020+A11:2020	Y
IEC 62368-1:2018	Y
EN 62623:2013	Y
EN 18031-1:2024	Y
EN18031-2 :2024	Y

- **Max. radio power of Wi-Fi and WWAN** are listed the below:

WI-FI Module: AX210NGW	
Maximum Power Output	
IEEE 802.11 b/g/n/ax: 2412-2472MHz	18.04dBm
IEEE 802.11 a/n/ax: 5180-5210MHz	15.98dBm
IEEE 802.11 a/n/ax: 5250-5320MHz	16.51dBm
IEEE 802.11 a/n/ax: 5550-5700MHz	16.29dBm
IEEE 802.11 a/n/ac/ax: 5745-5825MHz	10.06dBm
Bluetooth/BLE: 2402-2480Hz	8.47dBm/7.96dBm
WWAN Module: EM7565	
Maximum Power Output	
LTE Band 1: 1920~1980MHz	22.74dBm
LTE Band 3: 1710~1785MHz	22.49dBm
LTE Band 7: 500~2570MHz	22.32dBm
LTE Band 8: 880~915MHz	22.48dBm
LTE Band 20: 832~862MHz	22.14dBm
LTE Band 28: 703~748MHz	22.58dBm
LTE Band 42: 3400~3600MHz	22.55dBm

FCC and Canada

USA	
Federal Communications Commission Radio Frequency Interference Statement	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 when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
Shielded cables	Shielded cables must be used with this equipment to maintain compliance with FCC regulations.
Modifications	Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
Conditions of operations	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.

CANADA	
Canadian notice	This Class B digital apparatus complies with Canadian ICES-003.
Avis Canadian	Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Responsible party for Supplier's Declaration of Conformity

Siemens Industry, Inc.

Digital Factory - Factory Automation

5300 Triangle Parkway, Suite 100

Norcross, GA 30092

USA

Mail to: (amps.automation@siemens.com)

CCC 认证

符合下列标准的以下认证适用于带有"CCC"标记的设备。

- 标准：
  - GB 4943.1- 2022 音视频、信息技术和通信技术设备 第1部分：安全要求
  - GB/T 9254.1-2021信息技术设备,多媒体设备和接收机 电磁兼容 第1部分:发射要求
  - GB/T 9254.2-2021信息技术设备,多媒体设备和接收机 电磁兼容 第2部分:抗扰度要求

SRRC

此产品满足无线电发射设备型号核准认证要求CMIIT ID: 2023CJ21646

UKCA

The device complies with the designated British standards (BS) for IPC published in the official consolidated list of the British Government. The device meets the requirements and protection targets of the following regulations and related amendments:

- Electromagnetic Compatibility Regulations 2016 (EMC)
- Regulations on the restriction of the use of certain hazardous substances in electrical and electronic equipment 2012 (RoHS).

UK Declarations of Conformity for the respective authorities are available from:

Siemens plc
Princess Road
Manchester
M20 2UR
United Kingdom

The UK Declaration of Conformity is also available for download from the Siemens Industry Online Support website under the keyword "Declaration of Conformity".

RCM (Australia / New Zealand)

This product meets the requirements of AUSTRALIA / NEW ZEALAND certification.

CSA approval



The following approvals of Canadian Standards Association(CSA) are available for the device:

- CAN/CSA C22.2 No. 62368-1:14 - Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements
- ANSI/UL 62368-1, 2nd Ed. - Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements

BIS



This product meets the requirements of India certification.

China ROHS



This product meets the requirements of China ROHS.

Chile



This product meets the requirements of Chile certification.

Japan



This product meets the requirements of Japan certification, including Safety, EMC and RF.

Taiwan



This product meets the requirements of Taiwan certification, including Safety, EMC and RF.

設備名稱：西門子工業電腦，型號（型式）：SIMATIC IPC MD-34A Equipment name Type designation (Type)						
單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘Cadmium (Cd)	六價鉻Hexavalent chromium(Cr^{+6})	多溴聯苯Polybrominated biphenyls(PBB)	多溴二苯醚Polybrominated diphenyl ethers (PBDE)
外殼	o	o	o	o	o	o
電路板	o	o	o	o	o	o
固態硬碟	–	o	o	o	o	o
線材	o	o	o	o	o	o
備考1. "超出0.1 wt %"及"超出0.01 wt %" 係指限用物質之百分比含量超出百分比含量基準值。 Note 1: "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition. 備考2. "o" 係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2: "o" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence. 備考3. "–" 係指該項限用物質為排除項目。 Note 3: The "–" indicates that the restricted substance corresponds to the exemption.						

Korea

MD-34A meets the requirements of Korea certification, including Safety, EMC and RF.

Vietnam

MD-34A meets the requirements of Vietnam certification, including Safety, EMC and RF.

Thailand

MD-34A meets the requirements of Thailand NBTC certification.

Power Adapter and Battery meets the requirements of Safety of TISI certification.
เครื่องโทรคมนาคมและอุปกรณ์นี้มีความสอดคล้ องตามมาตรฐานหรือข้ อก.

าหนดทางเทคนิคของ กสทช.

เครื่องวิทยุคมนาคมนมี้อี ตราการดู ดกลืนพลั งงานจ าเพาะ (Specific Absorption Rate - SAR) อั นเนื่องมาจาก เครื่องวิทยุคมนาคมเท่ากบั0.197 W/kg ซึ่งสอดคล้ องตามมาตรฐานความปลอดภั ยต่อสุ ขภาพของมนุ ษย์ จากการใช้ เครื่ อง ทยุคมนาคมที่คณะกรรมการกิจการโทรคมนาคมแห่งชาติ ประกาศก าหนด”

(This radio communication equipment has the specific absorption rate (SAR) of 0.197 W/kg as related to the equipment, which is in compliance with the Safety Standard for the Use of Radio communication Equipment on Human Health announced by the National Telecommunications Commission.)

Mexico

Ifetel notice:

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

"ESTE EQUIPO NO CUENTA CON LA TECNOLOGIA VoLTE incorporada"

Turkey importer information

Country code according to ISO 3166	Country name according to ISO 3166	Importer address
TUR	Türkiye	Siemens San. ve Tic. A.Ş Yakacık Cad. No:111 34870 Kartal/İstanbul

WEEE label (European Union)

Disposal instructions, observe the local regulations and the section "Recycling and disposal (Page 64) ".



9.3 ESD guideline

What does ESD mean?

An electronic module is equipped with highly integrated components. Due to their design, electronic components are highly sensitive to overvoltage and thus to the discharge of static electricity. Such electronic components or modules are labeled as electrostatic sensitive devices.

The following abbreviations are commonly used for electrostatic sensitive devices:

- ESD – Electrostatic sensitive device
- ESD – Electrostatic Sensitive Device as a common international designation

Electrostatic sensitive devices can be labeled with an appropriate symbol.



NOTICE

Damage to ESD from touch

Electrostatic sensitive devices, ESD, can be destroyed by voltages which are far below the human perception limit. If you touch a component or electrical connections of a module without discharging any electrostatic energy, these voltages may arise.

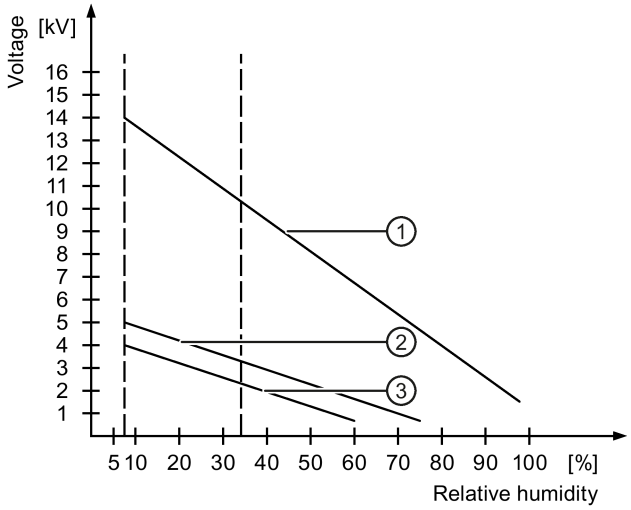
The damage to a module by an overvoltage can often not be immediately detected and only becomes evident after an extended period of operation. The consequences are incalculable and range from unforeseeable malfunctions to a total failure of the machine or system.

Avoid touching components directly. Make sure that persons, the workstation and the packaging are properly grounded.

Charge

Every person without a conductive connection to the electrical potential of his/her surroundings can be electrostatically charged.

The material with which an electrostatically-charged person comes into contact is of particular significance. The figure shows the maximum electrostatic voltages with which a person is charged, depending on humidity and material. These values conform to the specifications of IEC 61000-4-2.



① Synthetic materials

② Wool

③ Antistatic materials such as wood or concrete

NOTICE
Grounding measures There is no equipotential bonding without grounding. An electrostatic charge is not discharged and may damage the ESD. Protect yourself against discharge of static electricity. When working with electrostatic sensitive devices, make sure that the person and the workplace are properly grounded.

Protective measures against discharge of static electricity

- Disconnect the power supply before you install or remove modules which are sensitive to ESD.
- Pay attention to good grounding:

  When handling electrostatical sensitive devices, make sure that persons, the workstation and devices, tools and packaging used are properly grounded. This way you avoid static discharge.
- Avoid direct contact:
  - As a general rule, do not touch electrostatic sensitive devices, except in the case of unavoidable maintenance work.
  - Hold the modules at their edge so that you do not touch the connector pins or conductor paths. This way, the discharge energy does not reach and damage the sensitive components.
  - Discharge your body electrostatically by touching grounded metallic parts before you take a measurement at a module. Always use grounded measuring instruments.

Hardware description

A

A.1 System resources

Currently allocated system resources

All system resources (hardware addresses, memory configuration, allocation of interrupts, DMA channels) are assigned dynamically by the Windows OS, depending on the hardware configuration, drivers and connected external devices.

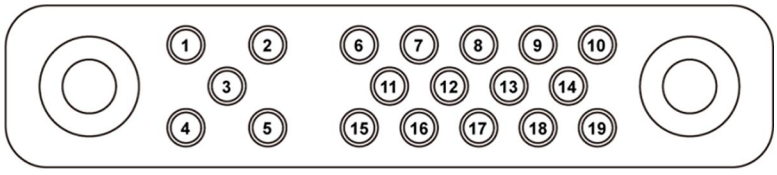
You can in each case view information on the current configuration of system resources or any existing conflicts with the installed operating system as follows:

- Windows icon in the status bar: Start **>** Enter "msinfo32" in the search box.

A.2 Interface

A.2.1 Terminal assignment of the docking connector

The bottom of the tablet has a 19-pin docking connector with the following terminal assignments:



Pin No.	Description	Pin No.	Description
1	RF_GND	**11**	NC
2	DOCK_DET#	**12**	NC
3	GPS ANT	**13**	GND
4	RF_GND	**14**	Voltage
5	RF_GND	**15**	USB+
6	NC	**16**	USB-
7	NC	**17**	GND
8	DETECT+	**18**	GND
9	Voltage	**19**	DETECT-
10	Voltage		

A.2.2 Defining COM ports

The tablet uses the "HotTab" management app to control the integrated functions. The numbers of all COM ports have been predefined in the delivered operating system image:

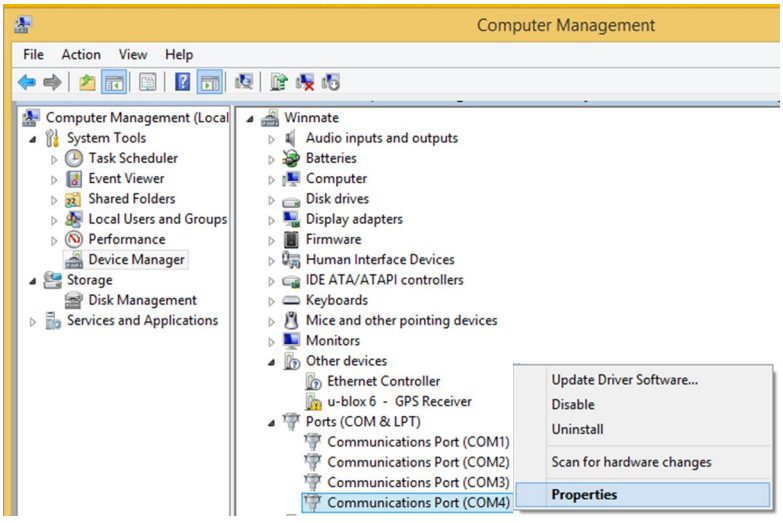
COM port	COM port number	Device
COM 1		Reserved
COM 2		Reserved
COM 4	COM 15	Bluetooth Auto Pairing
COM 9		GPS
COM 11		RS-232 for docking (optional)

For some special applications, you may have to reinstall the operating system. This causes the settings of the COM ports to be lost. To ensure that the functions work correctly with the HotTab service program, set up the COM port numbers again.

Procedure

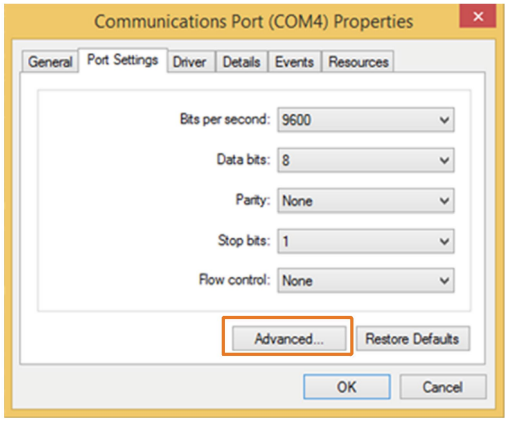
To redefine the COM port numbers, proceed as follows:

1. Open the Device Manager in the control panel.
2. Find the COM port to be changed and select "Properties" in the shortcut menu.

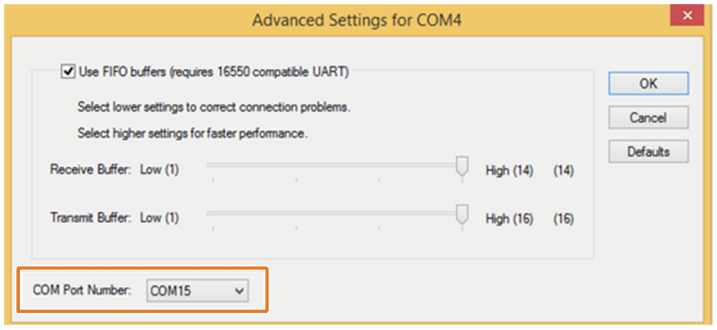


The "Communication Port" settings page opens.

3. On the "Port Settings" tab, press the "Advanced" button.



4. In the "COM Port Number" list, select the correct number for the COM port from the above table and close each of the dialogs with "OK".



5. Repeat steps 2–4 for all COM ports in the table.
6. In the Device Manager from step 1, check whether the port number has been successfully redefined.
7. Restart the tablet.

Technical Support

B

B.1 Basic troubleshooting

Problem	Solution
The replacement battery is not charging.	• Ensure that the replacement battery has been inserted correctly and the power supply unit has been connected correctly.
No display appears on the screen.	• The tablet may be in hibernation. Press the On/Off button to wake the display. • The brightness may be set too low. Increase the brightness.
The screen suddenly turns black and the status display goes out.	• Make sure that the LED display has not been turned off in HotTab. • Ensure that the power supply unit has been connected correctly. • If the device is running on battery power, the battery may be empty. Charge the battery.
The quality of the WLAN signal is poor.	• The tablet may be outside the WLAN range. Bring the tablet closer to the access point or near another WLAN device that is connected to the tablet. • Check whether microwave ovens, cordless phones, or similar devices are causing interference in your vicinity. Move the tablet away from interference-causing devices.
I cannot establish a connection to another WLAN device.	• Make sure that the WLAN function is switched on. • Make sure that the SSID setting is the same for every WLAN device in the network. • Restart the tablet. • Make sure that the IP address and subnet mask have been set correctly.
I cannot establish a connection to another device via Bluetooth.	• Ensure that Bluetooth is turned on for both devices (on the tablet, check with HotTab to see if Bluetooth is switched on). • Ensure that the distance between the two devices is no more than 10 meters and there are no walls or larger barriers between the devices. • Make sure that both devices have been switched on and configured to allow them to detect each another. • Make sure that both devices are compatible.

Problem	Solution
The GPS application cannot find my location.	• Make sure that GPS is switched on in HotTab. • Make sure that the GPS receiver and location sensor have been enabled in the control panel. • The tablet may be outside the reception range. Move the tablet into the open or closer to a window. • Check whether microwave ovens, cordless phones, or similar devices are causing interference in your vicinity. Move the tablet away from interference-causing devices.
No sound is generated.	• Adjust the volume on the tablet by pressing the volume rocker. • When using an external audio device, make sure that the cable has been connected correctly.
I cannot project the tablet display onto another screen.	• Make sure that the VGA driver is installed. • Make sure that the selected output setting is correct.
The barcode reader is not emitting a laser beam and doesn't appear to be working.	• Make sure that the barcode reader has been switched on in the HotTab service program.
The barcode reader is emitting a laser beam but does not read the barcode presented to it.	• Change the distance between the barcode reader of the device and the barcode to be scanned. • Make sure that the barcode type has been enabled on the tablet. To learn how to enable or disable a specific barcode type, read the "Configuration of the barcode reader" section.
I have a problem with the GPS accuracy.	• When the GPS function is used, we recommend disabling the barcode reader in HotTab to reduce interference.
Battery is leaking or swollen	• The lithium battery used in this tablet can swell after many charges/discharges, but this does not pose a safety problem. • Continued use in this state may lead to the battery becoming jammed. For this reason, you should no longer use the battery and purchase a new one.
No display in BIOS with Micro-HDMI when using external monitor	Hook up display cable before power on the machine, and then press F2 right after power on MD-34A.
No display when Linux booting	Hook up display cable after OS loaded
The system is unexceptional hang issue	1. Click reset button to reset CPU registers. The system shuts down, power up the system, a message shows “CMOS Battery is missed! ” 2. Perform either of the following steps – Press F1 to enter the recovery mode. – Press F2 to go to the BIOS Front Page. After pressing “Continue” in BIOS Front Page, you can go to current operating system. – If an external keyboard is connected, press any key to enter OS.

B.2 General problems

This chapter provides you with tips on how to locate and troubleshoot common problems.

Problem	Possible cause	To correct or avoid error
The device is not operational.	There is no power supply to the device.	Check the power supply, the power cord or the power plug.
	Device is switched off	Press the power button
	The battery is empty or not installed	Charge or install battery.
Wrong time and/or date on the device.		1. Press <ESC> during the boot sequence to open BIOS-Setup. 2. Set the time and date in the setup menu.
Although the BIOS setting is OK, the time and data are still wrong.	The backup battery is dead.	In this case, please contact your technical support team.
USB device not responding.	The operating system does not support the USB ports.	Enable USB Legacy Support for the mouse and keyboard. For all other devices you will need USB drivers for the specific operating system.
A beep sounds when a key is pressed but no character is displayed	Keyboard buffer is full	<CTRL> <PAUSE>
An ISO image mounted with Intel® AMT does not boot	Booting from USB is disabled in the BIOS	Enable booting from USB in the BIOS Setup, see section "AUTOHOTSPOT", "Boot" section.

B.3 Alarm, error, and system messages

During startup (the boot process), the BIOS first performs a **P**ower **O**n **S**elf **T**est (POST) and checks whether certain functional units of the PC are operating error-free. The boot sequence is immediately interrupted if critical errors occur.

BIOS initializes and tests further functional units if the POST does not return any errors. In this startup phase, the graphics controller is initialized and any error messages are output to the screen.

The error messages output by system BIOS are listed below. For information on error messages output by the operating system or application programs, refer to the corresponding manuals.

On-screen error messages

On-screen error message	Meaning / tip
Operating system not found	Possible causes: • No operating system installed • Incorrect active boot partition • Wrong boot drive settings in SETUP
Keyboard controller error	Controller error. Contact your technical support team.
SMART failure detected on HDD	Hard disk reports pending failure through S.M.A.R.T.

On-screen error message	Meaning / tip
CMOS battery failed	CMOS battery is not connected.
CMOS battery weak	CMOS battery is weak
Real-time clock has lost power	The CMOS clock was operated without battery or with a battery that was too weak, during battery change, for example. Check the CMOS clock.
Keyboard error	Function keys are defective
PLD configuration failed	Programming of the PLC on the motherboard has failed.

B.4 Problems with WLAN

The following lists the possible causes for problems with Wireless LAN.

Problem	
Cannot connect with WLAN	• Check that you have enabled the WLAN. • Check that the other WLAN partner is active. • Check the WLAN connection settings Observe the corresponding notes on WLAN configuration and operation in the Online Help of the WLAN adapter.
Data transmission speed is too low	• Please note that the data rate stipulated and visible under Windows is only a theoretical value / corresponds to the gross value. Determined by the transmission procedure, the actual applicable data rate for the data transmission is usually around 50% of the gross value. • The maximum data transmission speed depends on many factors. Start by verifying that the transmission mode of all network components is set up in accordance with the IEEE 802.11 a/b/g/n/ac/ax or ac standard. The spatial arrangement of the network components can also negatively influence the transmission. – The distances between the components should be as short as possible. – Masonry or reinforced concrete walls have a negative effect on the transmission performance and can, under some circumstances, prevent a connection from being established. For the best performance, a line-of-sight connection of the network components is preferred. – A high load on the network, perhaps from too many simultaneous access attempts from different nodes, can lead to lower data rates or communication problems.

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