SIEMENS

SIMATIC NET
Industrial Communication

MOBIC T8

Manual

The following supplement is part of this documentation:

No.	Designation	Drawing number	Edition
1	Product information	A5E00882110-01	08/2006

C79000-G8976-C151-05

Release 12/2004

Classification of Safety-Related Notices

This manual contains notices which you should observe to ensure your own personal safety, as well as to protect the product and connected equipment. These notices are highlighted in the manual by a warning triangle and are marked as follows according to the level of danger:

Danger

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

Warning

indicates that death, severe personal injury or substantial property damage **can** result if proper precautions are not taken.

Caution

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

Caution

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

Notice

highlights important information on the product, using the product, or part of the documentation that is of particular importance and that may have detrimental effects if ignored.

Note

highlights important information on the product, using the product, or part of the documentation that is of particular importance and that will be of benefit to the user.

Trademarks

MOBIC®, SIMATIC® and SIMATIC NET® are registered trademarks of SIEMENS AG.

Third parties using for their own purposes any other names in this document which refer to trademarks might infringe upon the rights of the trademark owners.

Safety Instructions Regarding your Product:

Before you use the product described here, read the safety instructions below thoroughly.

Qualified Personnel

Only **qualified personnel** should be allowed to install and work on this equipment. Qualified persons are defined as persons who are authorized to commission, to ground, and to tag circuits, equipment, and systems in accordance with established safety practices and standards.

Correct Usage of Hardware Products

Note the following:

Warning

This device and its components may only be used for the applications described in the catalog or the technical description, and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens.

This product can only function correctly and safely if it is transported, stored, set up, and installed correctly, and operated and maintained as recommended.

Before you use the supplied sample programs or programs you have written yourself, make certain that no injury to persons nor damage to equipment can result in your plant or process.

EU Directive: Do not start up until you have established that the machine on which you intend to run this component complies with the directive 89/392/EEC.

Correct Usage of Software Products

Note the following:

Warning

This software may only be used for the applications described in the catalog or the technical description, and only in connection with software products, devices, or components from other manufacturers which have been approved or recommended by Siemens.

Before you use the supplied sample programs or programs you have written yourself, make certain that no injury to persons nor damage to equipment can result in your plant or process.

Notes on MOBIC T8

Radio Applications

Note the following:

⚠ **Warning**

If you use radio applications, for example in conjunction with GSM, wireless LAN etc., make sure that you adhere to the pertinent legal regulations and conditions of use.

Note the following:

⚠ **Warning**

Turn off the MOBIC T8 in an aircraft. Prevent the MOBIC T8 from being turned on accidentally.

Note the following:

⚠ **Warning**

Turn off the MOBIC T8 if you are in the vicinity of gas stations, fuel depots, chemical plants or blasting operations. The MOBIC T8 can interfere with technical installations.

Note the following:

⚠ **Warning**

Improper use of the MOBIC T8 invalidates the warranty.

Preface

Purpose of the Manual

This manual provides you with an overview of the functions and applications of the MOBIC. It explains the special functions of the MOBIC that allow the major features of this device to be used to the full.

Aims

Based on this manual, you can commission and work with the MOBIC.

The Package

The MOBIC shipping package with order number 6GK1611-0TA00-0AA1 is made up of the following components:

- MOBIC T8 V1.0
  Basic unit

- Battery
  Replaceable lithium-ion battery supplying the MOBIC with power for mobile use.

- Power supply unit with cable
  Allows connection of the MOBIC to the standard power supply for stationary use and to charge the battery. The three power supply cables shipped with the unit (EU, USA, UK) meet the requirements of the respective countries.

- RS-232 cable
  This is used to establish a serial link with a host computer or other peripheral device.

- Pen (stylus)
  The pen is used to enter data on the touchscreen. When not in use it should be kept in the loop on the hand strap.

- Carrying straps
  The device ships with a hand strap and shoulder/neck strap.

- Protective screen foil
  The screen foil protects the screen from damage and can be replaced easily.

- MOBIC CD
  The MOBIC CD contains the software for the MOBIC and the documentation in PDF format.

- Getting Started
  Brief instructions to get you off to a quick start with your MOBIC T8.

- Stopper
  The stopper prevents a CP 1515 inserted in the internal PCMCIA slot (battery compartment) from coming loose in rough operating conditions (see also Section 4.6).

Accessories

Accessories available from SIEMENS:

- MOBIC battery
- MOBIC power supply unit
- MOBIC power cable
- MOBIC protective foils
- MOBIC carrying straps
- MOBIC pen
- MOBIC carrying case
- Protective cover for MOBIC ports
- MOBIC replaceable battery
- MOBIC battery charger for replaceable battery
- MOBIC charging tray and station
- MOBIC headset adapter

Accessories – not included in the consignment

Information about other accessories that do not ship with the product can be found on the Internet at **www.siemens.com**/**mobic**.

Validity of the Manual

This manual applies to the following version:

- MOBIC T8 V 1.2

Further Documentation/Literature

1. MOBIC Programming Instructions
   Included on the MOBIC CD in PDF format.

2. Introducing Microsoft Windows CE for the Handheld PC
   Author: Robert O'Hara
   ISBN: 1-57231-515-6

3. Microsoft Windows CE Programmer's Guide
   Author: Microsoft Corporation
   ISBN: 1-57231-634-8

4. Microsoft Windows CE Developer's Kit
   Author: Microsoft Corporation
   ISBN: 0-7356-0619-6

To contact the mailbox, use a modem with up to 28.8 Kbps, V.34 (parameters: 8, N, 1, ANSI) or ISDN (parameters: x.75, 64 Kbps).

Workshop MOBIC Toolkit

To familiarize you with the MOBIC, we also offer a training course.

The MOBIC Toolkit package includes the following:

- EVC 4.0 (Embedded Visual C 4.0)

- MOBIC CD

- 1 day workshop

- 8 hours of support

Overview

1

This chapter provides you with an overview of the possible applications and functions of the MOBIC. The quick start section will allow an experienced user to start working with the MOBIC more or less right away. You will find a complete list of the components supplied with the product and the accessories available from SIEMENS. On our Web pages, you will find further up-to-the-minute information on the MOBIC. How to get this information is explained in Section 1.5.

1.1   Welcome

Congratulations on your purchase of the **Mob**ile **I**ndustrial **C**ommunicator (MOBIC).

The Mobile Industrial Communicator is a mobile, industrial Internet pad for local or worldwide access to an Intranet and the Internet.

The MOBIC is mobile thanks to plug-in wireless cards allowing wireless LAN for local communication or GSM for worldwide communication.

The MOBIC is designed for an industrial environment and has an extremely robust, splash-proof construction (corresponding to IP 65).

The high-resolution TFT screen allows a detailed display and easy reading even in poor lighting conditions.

The unit is operated simply with a touch screen using a pen or finger and also has additional function keys.

The standard operating system is Windows CE and the Microsoft Internet Explorer V5.5 with the Java Virtual Machine as the basic software.

The battery allows operation throughout a complete working shift.

Areas of Application of the MOBIC

The MOBIC can be used in the following areas:

- **Service**

  - Service in the field

  - Vehicle service

  - Infrastructure operators

  - Building service

- **Production**
  Manufacturing, test, and quality data of the active process can, for example, be displayed, documented, and archived.

- **Logistics and Transport**
  The unit can be used, for example, as a fork-lift control system or for manual warehouse management.

- **Safety Services**
  Possible applications: displaying dangerous goods or documenting rescue operations.

The MOBIC can, for example, be used for the following applications:

- **Mobile Documentation**
  Information, for example, about machines that could previously only be displayed on a few stationary PCs in the factory can now be displayed anywhere thanks to the mobility provided by the MOBIC. This means that you have access to centrally stored data, such as operating instructions or circuit diagrams for service purposes.

- **Scheduling and Mobile Data Input**
  The MOBIC can be used for distributing service tasks. The job data is sent by wireless transmission, processed online, and the results documented.

Structure of the MOBIC

- **Software**

  - Microsoft Windows CE.NET 4.1

  - Microsoft Windows CE Inbox, Pocket Word, Viewer for Excel, Power Point, Word, Image and PDF files

  - Microsoft Windows CE Internet Explorer V5.5

  - Java Virtual Machine with plugin for Internet Explorer

  - MOBIC system software

  - Software keyboard

  - Handwriting recognition

- **Hardware**

  - CPU NEC VR4121

- MQ 200 graphics controller

- 64 Mbyte battery-backed memory (RAM)

- 32 Mbyte non-volatile memory for the operating system (flash)

- **Touchscreen color display**

    - SVGA TFT

    - 800 x 600 pixels

    - Backlit

- **Function keys**

    - 5 function keys (user-configurable)

- **LEDs**

    - 4 LEDs (status display)

- **Ports**

    - Two PCMCIA ports
      for connecting
      – wireless adapters, integrated in the casing, providing IP65 degree of
        protection
      – expansions, such as additional flash memory or a bar code reader

    - 10/100 Mbps Ethernet port
      for connection to an industrial or office network

    - IR port
      For bi-directional data exchange between a host, for example notebook and
      the MOBIC

    - RS-232 port
      For example for connection with the host computer, for reading out machine
      data

    - USB port
      For connecting a mouse, keyboard, or printer.

Functional Overview

The MOBIC has various communications functions. With the installed browser, the user can dial in to the intranet/Internet to get information such as process and diagnostic data, wiring cubicle documentation, product information, and even operating instructions.

Various functions can be started using the touchscreen and the freely assignable function keys (F1 to F5) such as acquiring data or triggering processes and starting software updates.

Using the mail function of Windows CE, E-mails can be written, sent, and received on site.

System software is also integrated in the MOBIC allowing simple individual configuration to meet the user's needs (MOBIC Configurator).

With its battery, the MOBIC can be operated for eight hours. The battery can be replaced without any loss of program data.

The accessories and expansion modules available for your MOBIC are described in Section 1.4 of this manual.

1.2   Quick Start

This section "Quick Start" provides you with a brief overview of putting the MOBIC into operation and a brief explanation of the most important operating controls. You will find more detailed information on these topics in the relevant chapters in this manual (follow the references).
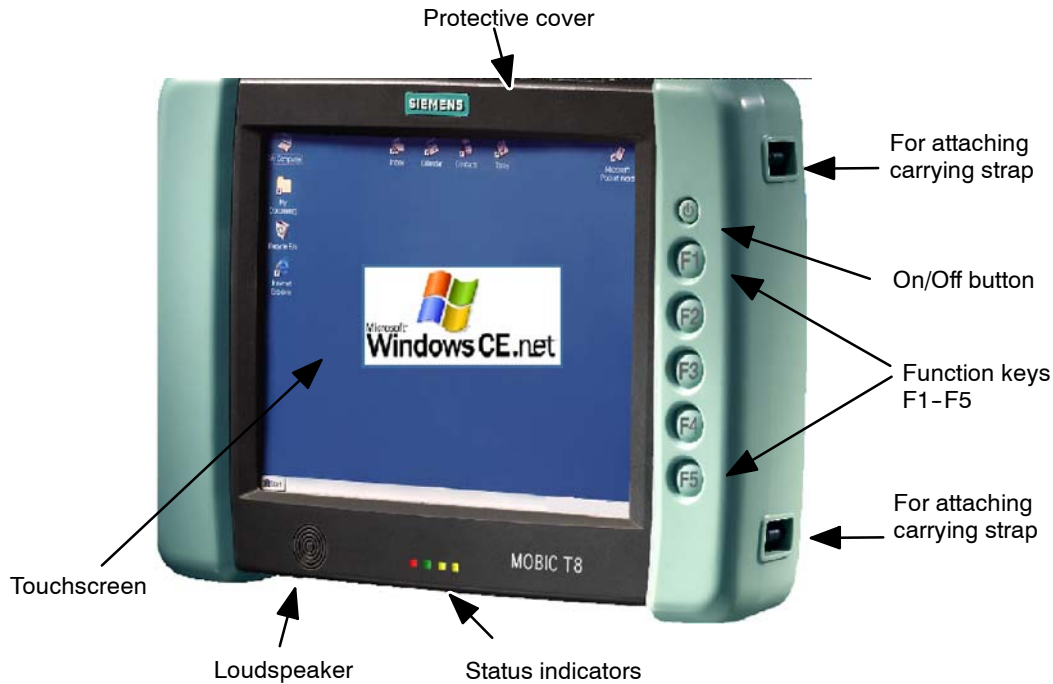
Figure 1-1   Front View of the MOBIC

Checking the Consignment

When you receive your consignment, unpack all the supplied components and check that they are complete and undamaged.

The components of your MOBIC are listed in Section 1.3.

If you discover any damage caused by transport or if the consignment does not match the delivery note please contact the vendor immediately.

Caution

Do not put any damaged components into operation.

Getting Started

The basic steps required when starting up your MOBIC for the first time are described in detail in Chapter 4.

5. Turn the device on (see Section 2.9).

6. Calibrate the touchscreen (see Section 11.6).

Charging the Battery in the MOBIC

1. Charge the battery (see Section 4.8).

Ports

The ports of the MOBIC are located either directly integrated in the casing, under the protective cover, or in the battery compartment. Figure 1-2 shows the location of the ports.

Ethernet RJ-45
(Section 4.7)

PCMCIA under protective cover
(Section 4.5)

Infrared
(Section 4.2)

Power supply socket
(Section 4.8)

PCMCIA (on the back in the battery compartment)
(Section 4.6)

USB
(Section 4.4)

Headset
(Section 4.3)

RS-232
(Section 4.1)
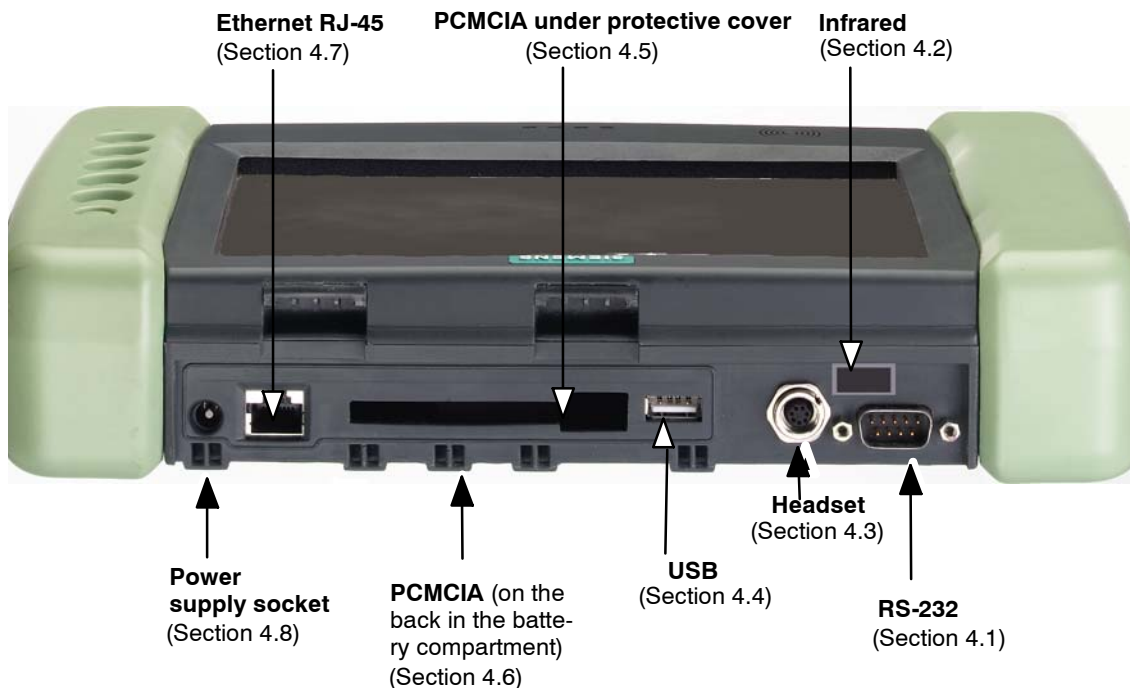
Figure 1-2   Ports of the MOBIC

Reset Button

The MOBIC has two reset buttons (see Section 2.4 and Figure 2-3):

- Warm reset button

- Cold reset button

Function Keys

The MOBIC has five function keys (F1 to F5) on the right front panel of the device (see Figure 1-1). You can assign repetitive tasks to these keys to suit your needs (see Section 2.5 or 7.2).

Status Indicators

The MOBIC has LEDs on the front panel of the device below the screen (see Figure 1-1). The meaning of the LEDs is explained in Section 2.6.

1.3　Components of the Product

When you receive your MOBIC, first check that all the components are present and that nothing has been damaged during transportation.

Caution

Do not put any damaged components into operation.

If you discover any damage caused by transport or if the consignment does not match the delivery note please contact the vendor immediately.

Table 1-1　Components of the Product

MOBIC T8	Basic unit
Battery	Exchangeable lithium-ion battery
Power supply unit with cable	Allows the MOBIC to be operated while connected to the main power supply and is used to charge the battery. The three power supply cables shipped with the unit (EU, US, UK) meet the requirements of the respective countries.
RS-232 cable	Used to connect to a host computer or another peripheral device.
Getting Started	Brief instructions to get you up and working with your MOBIC T8 in no time.
Pen	The pen is used to enter data on the touchscreen. **Caution:** Input on the touchscreen must only be made with the stylus point and **not** with the ballpoint.
Carrying straps	The hand strap and shoulder/neck strap make it easy to transport the unit.
Protective foil	The protective foil for the screen is already fitted. **Note:** Never use the touchscreen without the protective foil in place.

Table 1-1   Components of the Product

CD-ROM	The CD contains the following: – ActiveSync software – Programming instructions (*.PDF) – MOBIC manual – Adobe Acrobat Reader 4.05 – Information on the MOBIC
Stopper	The stopper prevents a CP 1515 inserted in the internal PCMCIA slot (battery compartment) from coming loose in rough operating conditions (see also Section 4.6).

Apart from the basic components belonging to the MOBIC, you can also order accessories.

1.4   Accessories

Accessories

Accessories available from SIEMENS:

- Lithium-ion battery

- Power supply unit with cable

- Protective foil

- Carrying strap

- Pens

- Carrying case

- Replaceable battery

- Charger for replaceable battery

- Charger tray and charging station

- Headset adapter

Accessories – not included in the consignment

Information about add-on products that are not part of the SIMATIC NET range can be found on the Internet at **www.siemens.com**/**mobic**

- Protective cover for MOBIC ports

1.5   Up-to-the-Minute Information on the Internet

In our Web site, you will find wide-ranging information about the product, customer support, and tips and tricks to help you make the best use of your MOBIC.

www.siemens.com/mobic

Design and Functional Elements

2

This chapter describes the basic design of your MOBIC. All the operator controls, functional and display elements required to work with your MOBIC are illustrated and described.

2.1 Front View

The following section introduces you to the operator controls and features of the MOBIC.

Figure 2-1   Front View – Protective Cover Closed

- **Protective cover**
  This is used to protect the USB, external PCMCIA, and Ethernet ports and the power supply connector (power supply unit) (see also Figure 2-2).

- **On/Off button**
  To save battery power you can set the unit to a sleep mode (off) and then return it to normal operation (on).

- **Function keys F1 to F5**

  You can assign regularly required functions to the five function keys (see also Section 7.2).

- **Touchscreen**
  Touch-sensitive screen of your MOBIC, your input interface.

- **Status indicators (LEDs)**
  There are a total of four LEDs that indicate the status of the unit.

- **Loudspeaker**
  The integrated loudspeaker allows you to play audio files.

- **Carrying strap attachment points**
  These are used to secure the shoulder or hand strap.

2.2   Top with Protective Cover Open

Figure 2-2 shows the MOBIC with the protective cover open and shows you the position of the ports.

For more detailed information on the ports, refer to Chapter 3.

Ethernet RJ-45
(Section 4.7)

PCMCIA under protective cover
(Section 4.5)

Infrared
(Section 4.2)

Power supply socket
(Section 4.8)

PCMCIA (on the back in the battery compartment)
(Section 4.6)

USB
(Section 4.4)

Headset
(Section 4.3)
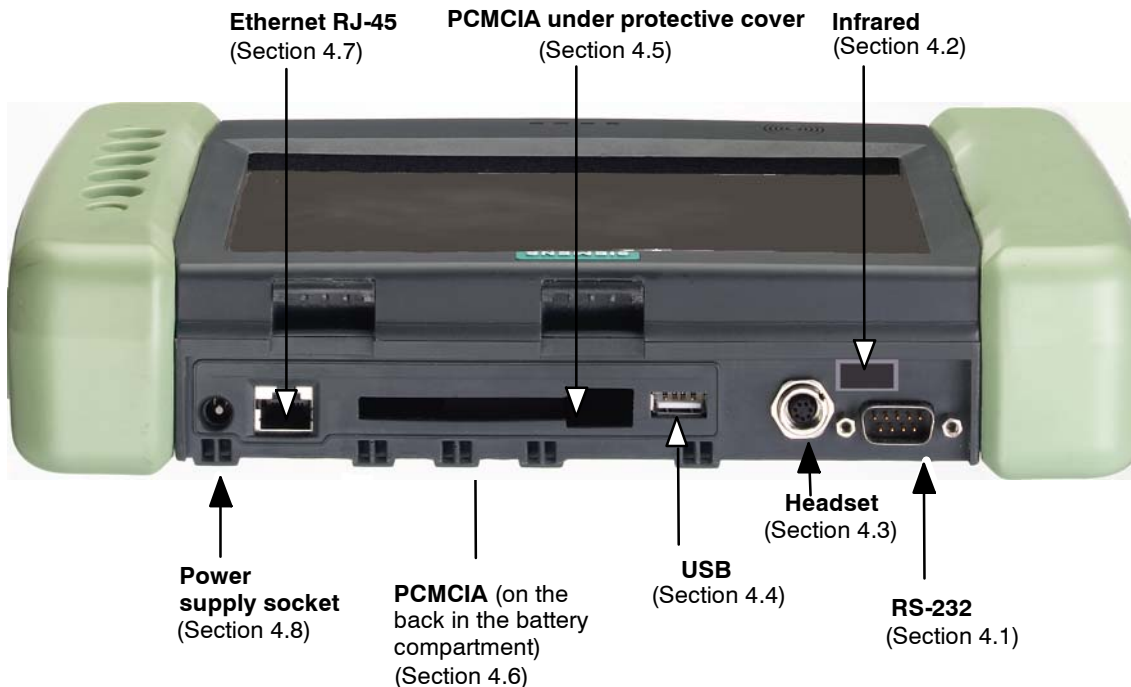
RS-232
(Section 4.1)

Figure 2-2   Ports of the MOBIC

Ports in the Casing

- RS-232 (serial port)
  Standard serial port, for example, for reading out machine data or for synchronization with the host computer. An additional power supply 5V/200 mA can also be activated on pin 9 of the RS-232 port. The default setting is "deactivated" (see also 7.2.6).

- IR Port
  Infrared port for bi-directional exchange of data between stations with an IR port, for example notebooks, PCs and the MOBIC. An infrared port is used for communication with devices complying with the IR standard.

- Headset
  Allows the connection of a headset with a microphone to the MOBIC.

Ports under the Protective Cover

- USB Port
  For connecting USB-compatible devices (Universal Serial Bus). Note that only USB devices with Windows CE 4.1-compatible drivers can be connected. The MOBIC already has a driver for keyboard and mouse.

- PCMCIA (under the protective cover)
  External PCMCIA slot, for example for connecting a barcode reader.

- Ethernet (RJ-45)
  For direct attachment to existing Ethernet networks.

- Power Supply Connector
  Used to connect the shipped power supply unit.

⚠ **Warning**

Injury to persons and damage to property is possible in hazardous areas.

Neither make or break live circuits (for example, connecting cables) unless absolutely sure there is no risk of explosion.

2.3 Rear

Warm reset button   Cold reset button   Battery

Screw holes

Screw holes

PCMCIA port
in battery compartment
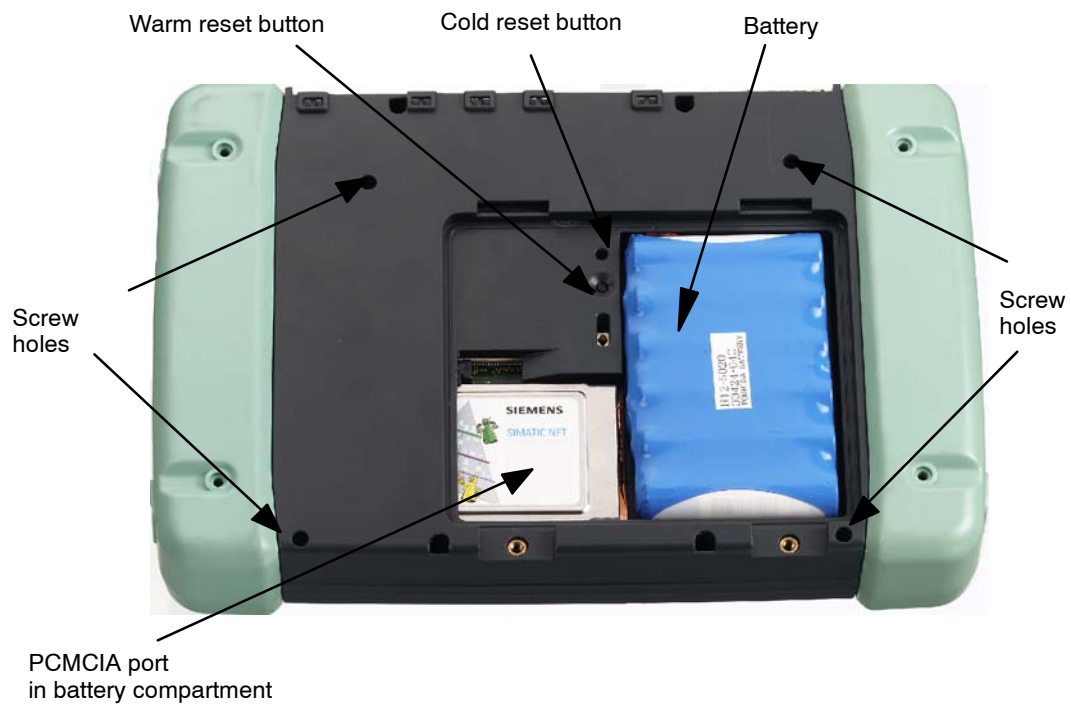
Figure 2-3   Rear View with Battery Cover Open

Elements in the Battery Compartment

- Battery
- Warm reset button
- Cold reset button
- PCMCIA port in battery compartment

2.3.1 Main Battery

Location

The battery compartment is on the rear of your MOBIC (see Figure 2-3).

Battery

The battery powers the MOBIC during mobile application. Fully charged, the battery allows approximately 8 hours of operation. Whenever possible, you should activate the energy-saving function (see Section 9.1) to extend this time.

Warning

Danger of injury to persons and damage to property, danger of release of hazardous chemicals.

When handled incorrectly, a lithium-ion battery can explode; incorrect disposal of old batteries can release harmful substances. Do not attempt to burn lithium batteries, do not solder the body of the cell, do not attempt to open a battery forcibly.

Order batteries only from Siemens.

Old lithium batteries should be returned to the battery manufacturer/recycler or be disposed of as hazardous waste.

Backup Battery

In addition to the main battery, your MOBIC also has a backup battery on the motherboard.

The backup battery (3.6 V-NIMH battery) is used only to back up data while the main battery is being replaced.

If a cell is leaking or has vented, replace immediately wearing protective gloves. The backup battery must only be replaced by a specialist.

Warning

Risk of explosion if the battery is replaced incorrectly. The battery must only be replaced by a specialist. Only replace the battery with the same battery or with a battery of the same type as recommended by the manufacturer.

Do not incinerate or mutilate may burst or release toxic chemicals. Do not short circuit may cause burns.

Removing/Inserting the Battery

Batteries must only be replaced by a specialist.
Follow the steps outlined below when removing/inserting the battery:

1. Turn off the MOBIC.

2. If it is connected, disconnect the power supply unit from your MOBIC.

3. Lay the unit on its front.

4. Open the battery compartment cover by loosening the two screws.

5. The battery is connected to the MOBIC with a plug-in cable.
   To remove or insert the battery, disconnect or connect the battery cable from the MOBIC at the socket (see Figure 2-4)

6. Remove or insert the battery.

Figure 2-4   Inserting/Removing the Battery

Caution

The backup battery provides the minimum necessary power supply when the main battery is removed. To avoid loss of data, you should only leave the device without its normal power supply for a short period (a few hours).

⚠

Warning

Risk of explosion if the battery is replaced incorrectly. Only replace the battery with the same battery or with a battery of the same type as recommended by the manufacturer.

Risk of fire, explosion, and burns: Do not squash, take apart, or burn. The battery must not be exposed to a temperature in excess of 212 °F (100 °C).

7. Close the battery compartment again.

Charging the Battery

The battery can only be charged using the power supply unit while it is installed in the MOBIC. Follow the steps outlined below:

1. Connect the power supply unit to your MOBIC (connector see Figure 2-2).

2. Connect the power supply unit to the main power supply.

If the battery is fully discharged, charging takes approximately 5.5 hours.

Displays:

Charging is indicated by the red status LED.

The battery charge level is indicated by the battery icon in the status bar when the device is on.

Note

You can continue to work with the MOBIC while it is being charged.

Charge Level of the Battery

The charge level of the battery is displayed only when disconnected from the power supply unit. The charge level of the battery is displayed by the battery symbol in the status bar of the system.

You can check the charge level of the battery when the device is on as follows:

1. Open the Control Panel (***Start - > Settings - > Control Panel***)

2. Start the "Power" program".

In the "Battery" tab, you will see the status of the main battery and backup battery.

You can also display this menu by double-tapping the battery icon in the status bar of the system.

Note

The MOBIC monitors the battery so that it cannot be overcharged.

2.3.2   Fixed Mounting of the MOBIC

Securing

You can also secure the MOBIC to a surface (for example on a wall) with the aid of 4 screws.

Select a location so that the environmental conditions defined in Chapter 14 can be adhered to.

Screw Holes

There are four M4 screw holes on the rear of the MOBIC (see Figure 2-3).

Caution

Only use M4 screws and keep to the maximum screw-in depth of 7 mm.

When mounting the unit, do not exceed the maximum torque (2 Nm) for the screw holes.

Drilling Template

The dimensions for the drilling template are shown in Figure 2-5.
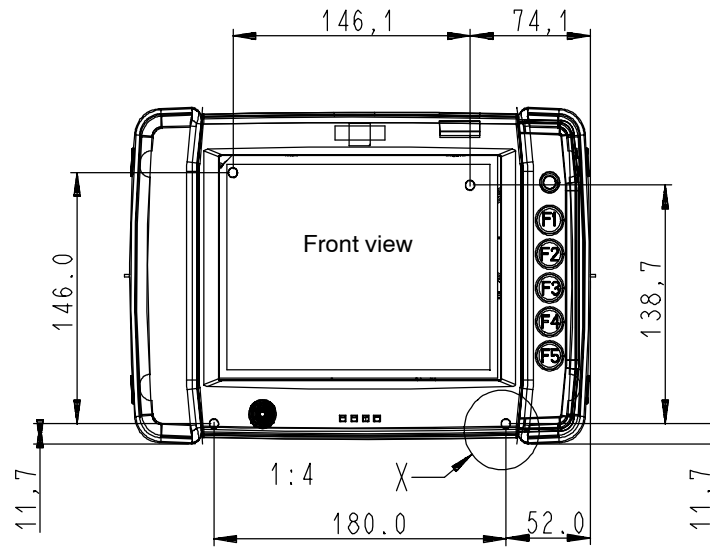
Detail X: Screw holes for wall–mounting on rear of device (4 x)

Figure 2-5   Dimensions for a Drilling Template

2.4 Reset Buttons

Location

The two reset buttons are located under the battery compartment cover (see Figure 2-3).

- **Warm reset button**
  Pressing the warm reset button boots the device. The MOBIC must be turned on.

- **Cold reset button**
  Pressing the cold reset button boots the device.

Caution

In contrast to the warm reset, this cold reset button also clears the RAM and restores the "Default Registry".

Note

You can also start a warm reset with the MOBIC Configurator.

2.5 Function Keys

The MOBIC has five function keys (F1 to F5) located on the right front panel of the unit beside the screen (see Figure 2-6).

Figure 2-6   Function Keys

Assignment

As default, the following functions are assigned to the function keys:

F1: Starts help on the operating system

F2: Starts the terminal server client

F3: Starts MOBIC configuration

F4: Corresponds to the "right mouse button" function
Prepares for a right mouse click. The next action with the pen executes a right mouse click.

F5:   Toggles the software keyboard on or off

Individual Assignment

You can also assign functions that you require often to the five function keys. You make this assignment in the MOBIC Configurator. The MOBIC Configurator is described in detail in Chapter 7.

2.6　Status Indicators (LEDs)

On the front of the unit, there are four LEDs for status display in the center of the panel below the screen (see Figure 2-7). These LEDs provide you with information about the status of the unit.

Loudspeaker　red LED

green LED
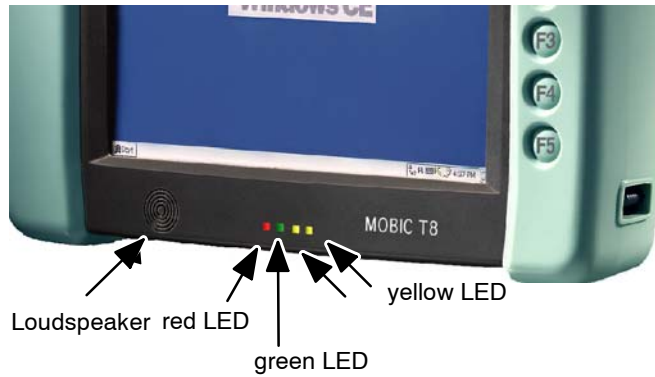
yellow LED

Figure 2-7　Status Indicators and Loudspeaker

Meaning of the Status Indicators

Table 2-1

	Red LED	**Green LED**	**Yellow LED**
lit	The battery is being charged by an external power supply		User-defined
flashes	The battery must be charged	There is a system message	User-defined
off	Power supply unit not connected: Power supply from battery Power supply connected: Battery fully charged.	There is no system message	User-defined

2.7 Loudspeaker

Location

The loudspeaker is located on the front of your MOBIC to the left of the status indicators (see Figure 2-7).

Settings

You set the properties using the Control Panel of Windows CE (***Start->Settings->Control Panel***).

Volume

You can set and change the volume of the loudspeaker by tapping on the Volume & Sounds" icon in the Control Panel (***Start->Settings->Control Panel***). In the "Volume" tab, you can adapt the volume of the loudspeaker to your working environment with a slider.

Mute

You can also turn off the loudspeaker by deactivating all the check boxes for "Enable sounds for:".

Assigning Acoustic Signals

In the "Sounds" tab, you can also assign acoustic signals to certain events.

Note

If the headset is plugged in, the loudspeaker is automatically disabled.

2.8 Touchscreen

The MOBIC can be operated directly using the touchscreen. You can make your input either using the MOBIC pen or using a finger.

Resolution

In contrast to many products with VGA or ¼ VGA resolution, the MOBIC has a high resolution display and a strong contrast (high-resolution TFT screen: 21.3 cm (approx 8.4") monitor SVGA 800x600).

Figure 2-8   Touchscreen

Note

The display achieves full brightness after approximately 10 minutes of operation.

Input with the Pen

You make your input and control the MOBIC by tapping the touchscreen.

Caution

Input on the touchscreen must only be made with the stylus point and **not** with the ballpoint.

Software Keyboard

When using your MOBIC as a mobile unit, it is convenient to make use of the integrated software keyboard. This is displayed by tapping on the keyboard icon or by pressing the F5 function key.

Special character shift key   Numeric keypad shift key   Keyboard icon
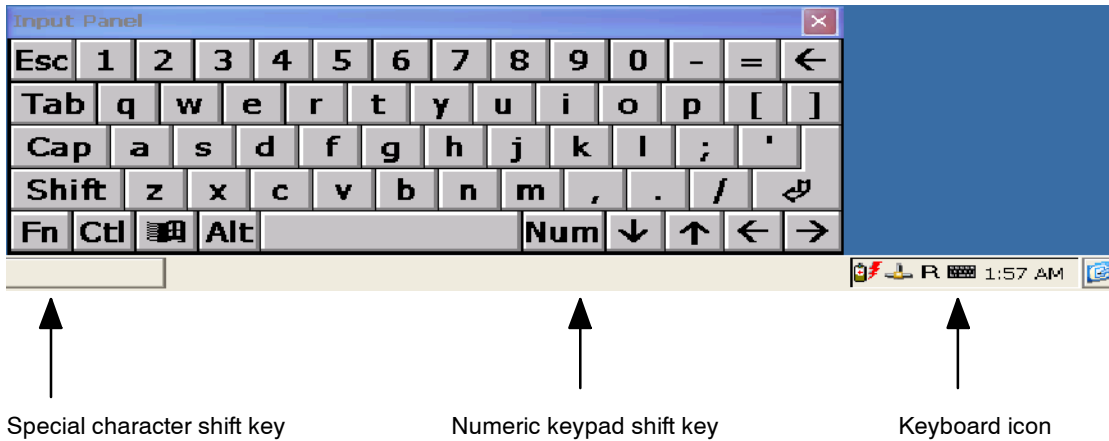
Figure 2-9   Software Keyboard

Umlauts and Special Characters

Using the software keyboard, it is possible to enter umlauts (ä, ö etc.) and all normal special characters. You can switch over the keyboard with the special character shift key at the bottom left.

It is also possible to connect a normal keyboard to the USB port (see Section 4.4).

Numeric Pad

The numeric keypad mode is used to enter numbers with an optimized key layout. You can change to the numeric pad with the numeric pad shift key.

Entering Chinese Characters

It is only possible to enter Chinese characters in programs that allow this.
To enter Chinese characters, for example in WordPad, follow the steps outlined below:

1. Start WordPad.
   The selection list for Chinese characters appears automatically.
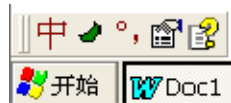
2. Display the default keyboard, for example with the F5 key or the keyboard icon.

3. Enter the Chinese term in Pinyin, for example "zhang"
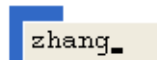
4. The term is converted to the Chinese character when you press the Enter key or spacebar. The most common character with this syllable is displayed. The character is then underscored with a broken line.

5. With the "Arrow left" key, you can display the characters with the same pronunciation. You can then select the required character. Either click on the character or enter its number.
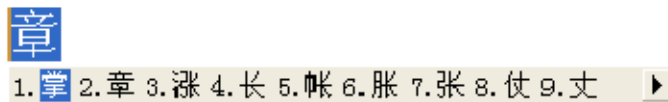
Deactivating Chinese Characters

1. You can toggle the entry of Chinese characters on and off by clicking on the left button of the selection list.
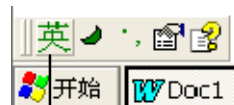
   On   Off

Note

Clicking on the "?" button displays the help for Chinese characters.

Handwriting Recognition

With the Transcriber handwriting recognition program you can also write directly on the touchscreen. Whether or not Transcriber is activated is indicated by the icons in the status bar (see Figures 2-10 and 2-11).

Start Transcriber with the icon on the desktop.
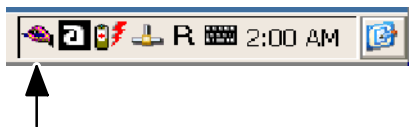
Figure 2-10   Transcriber (not active)
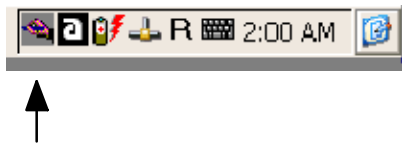
Figure 2-11   Transcriber (active)

Note

The Transcriber program cannot be used on the MOBIC with the Chinese version.

2.9   On/Off Button

You turn your MOBIC on and off by pressing the **on**/**off** button. This is located on the right front panel of the MOBIC above the function keys (see Figure 2-12).

When you press this button, the MOBIC is set to the "Sleep" mode. By pressing the on/off button again, the device is immediately ready for operation ("instant on" function in Windows CE).

Figure 2-12   Location of the On/Off Button

Note

You can lock the on/off button using the Lock/Unlock function in the MOBIC Configurator so that it has no effect if it is pressed accidentally (see Section 7.2)

Accessories

3

This chapter describes the accessories for the MOBIC.

It also explains how to fit the accessories to the MOBIC.

3.1 Carrying Straps

The following carrying straps are supplied with the MOBIC:

- Shoulder/neck strap
- Hand strap

3.1.1 Shoulder/Neck Strap

The shoulder/neck strap is attached to the mounting pins (see Figure 3-1) on the device.

Fitting the Strap

You can fit the straps as shown in Figure 3-1.

Figure 3-1   Fitting the Shoulder/Neck Strap or Hand Strap

Caution

Make sure that the straps are securely attached to the device.

Possible Applications

You can use the shoulder/neck strap in different ways.

When simply carrying the MOBIC around with you, you can attach the strap so that it functions as a shoulder strap.

Figure 3-2   MOBIC with Shoulder Strap

If you fit the strap to the left and right of the MOBIC, you can put the strap round your neck and have your hands free to make input.

Figure 3-3   MOBIC with Neck Strap

3.1.2 Hand Strap

The hand strap is attached to the mounting pins (see Figure 3-4) on the device.

You can fit the straps as shown in Figure 3-1.

You can also keep the pen in the strap.

Figure 3-4   MOBIC with Hand Strap Fitted

Caution

Make sure that the strap is securely attached to the device.

Possible Application

The hand strap is used to hold the MOBIC during mobile operation (see Figure 3-5).

Figure 3-5   MOBIC in Mobile Operation with the Hand Strap

SIEMENS

SIMATIC HMI

HMI Device
MOBIC T8 in areas susceptible to
electromagnetic interference

Product information

This documentation is valid for delivery units with order
number:
• 6GK1611-0TA01-1DX0
• 6GK1611-0TA01-1DV0
• 6GK1611-0TA01-0DX0

Safety Guidelines

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

with a safety alert symbol, indicates that minor personal injury can result if proper precautions are not taken.

Caution

without a safety alert symbol, indicates that property damage can result if proper precautions are not taken.

Notice

indicates that an unintended result or situation can occur if the corresponding information is not taken into account.

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 device/system may only be set up and used in conjunction with this documentation. Commissioning and operation of a device/system may only be performed by **qualified personnel**. Within the context of the safety notes in this documentation qualified persons are defined as persons who are authorized to commission, ground and label devices, systems and circuits in accordance with established safety practices and standards.

Trademarks

All names identified by ® are registered trademarks of the Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Prescribed Usage

Note the following:

	Warning
⚠	This device may only be used for the applications described in the catalog or the technical description and only in connection with devices or components from other manufacturers which have been approved or recommended by Siemens. Correct, reliable operation of the product requires proper transport, storage, positioning and assembly as well as careful operation and maintenance.

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.

MOBIC T8 in areas susceptible to electromagnetic interference

1

Validity

This product information is valid for the MOBIC T8 with one of the following order numbers:

- 6GK1611-0TA01-1DX0

- 6GK1611-0TA01-1DV0

- 6GK1611-0TA01-0DX0

A MOBIC T8 with one of these order numbers is delivered with a CP 1515 Wireless-LAN PCMCIA card already built-in.

This product information contains important information. The notes supplement the operating instructions for the HMI device and take precedence over statements in the operating instructions, the release notes, and in the online help.

This product information contains important notes on the following issues:

- Use in areas susceptible to electromagnetic interference

- Enhancement of the WLAN range

- Enhancement of the rechargeable battery time

Use in areas susceptible to electromagnetic interference

Caution

Wireless LAN PCMCIA card CP 1515

If you use the MOBIC T8 in an area susceptible to electromagnetic interference, for example an airplane or in a hospital, then you have to disable the wireless LAN PCMCIA card CP 1515 or, depending on how it is installed, remove or unplug it. This applies also for all other areas in which wireless LAN is not permitted.

If a CP 1515 is installed or inserted in a MOBIC T8, then the icon is visible in the status area.

If the icon is displayed in the status area, the CP 1515 is not operational, but it is enabled. Disable the CP 1515 if you are in an area susceptible to electromagnetic interference with the MOBIC T8.

If no icon is displayed in the status area, the CP 1515 has been disabled or removed.

Removing the CP 1515

It makes sense to remove the CP 1515 if the MOBIC T8 is to be used continually in an area susceptible to electromagnetic interference. The removal and installation of the CP 1515 is described in the manual "Industrial Communication" for the MOBIC T8, chapter 4.5.

Unplugging or disabling the CP 1515

It makes sense to unplug or disable the CP 1515 if the MOBIC T8 is to be used temporarily in an area susceptible to electromagnetic interference.

Procedure

1. Switch on the MOBIC T8.

2. Select "Start ► Settings ► Control Panel ► Regional and Language Options".

3. Open WLAGS641.

   The dialog "Siemens Wireless Network Driver" opens.

4. Select the "IP Address" tab.

5. Select the "Disabled" checkbox.

6. Press OK.

   The icon no longer appears in the status area.

7. Close the open window.

Result

The CP 1515 is disabled. The icon WLAGS641 is identified with a red "x" in the window "Network Connections".

Installing the CP 1515

Procedure

1. Insert the CP 1515 in the internal slot.

2. Protect the CP 1515 with the terminal block.

   The terminal block prevents the CP 1515 from slipping out of the slot during rough usage conditions.

Enhancement of the WLAN range

The range of the WLAN can be enhanced if you place the Wireless LAN PCMCIA card CP 1515 on the front side of the device under the protective cover instead of in the battery compartment. In this case, protection rating IP65 is not guaranteed.

Caution

IP65 degree of protection

The MOBIC T8 only has the level of protection IP65 if the PCMCIA port under the protective cover can be closed when the PCMCIA card is inserted.

Enhancement of the rechargeable battery time

If the CP 1515 is not required, removing or disabling it increases the rechargeable battery time. Additional notes on this are available on the Internet at:

http://support.automation.siemens.com, ID-Nr.: 23335406

3.2   Pen

The pen is used to enter data on the touchscreen.

The pen has a dual function. It is primarily a stylus but also has a ballpoint refill that can be used to jot down notes.

Caution

Input on the touchscreen must only be made with the stylus point and **not** with the ballpoint refill.

There is a loop on the hand strap where you can keep the pen.

Figure 3-6   Hand Strap with Pen

3.3   Power Supply Unit

The supplied power supply unit is described in detail in Section 4.8.

3.4   RS 232 Cable (serial port)

The supplied RS–232 cable is described in detail in Section 6.2.2.

Ports

4

Chapter 2 introduced you briefly to the various ports of your MOBIC. Here in Chapter 4 we will describe the ports in greater detail.
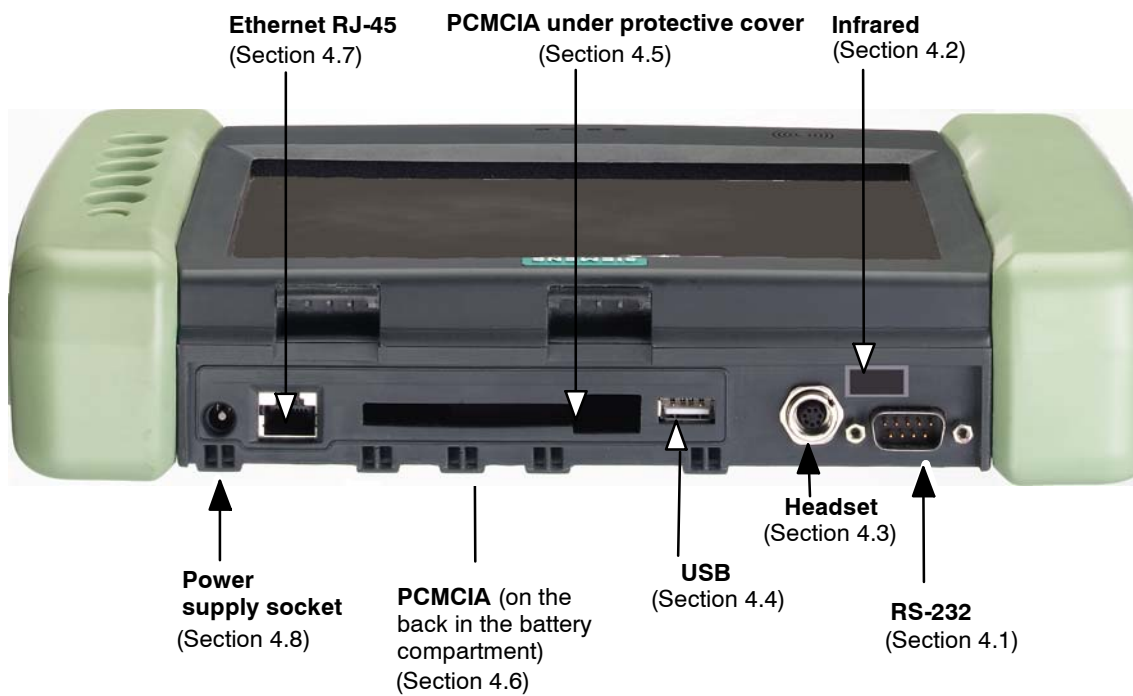
Figure 4-1   Ports of the MOBIC

4.1   RS-232 (Serial Port)

Location

The serial RS-232 port is located directly in the casing to the top left of the MOBIC (see Figure 4-2).

RS-232 port

Figure 4-2   Location of the RS-232 Port

Class of Protection

The RS-232 port complies with class of protection IP65

Connections

You can connect a cable with a 9-pin sub-D female connector to this port.

Possible Applications

Via the RS-232 port, you can, for example, establish a connection to your host computer using the Microsoft ActiveSync program or to another peripheral device with an RS-232 port.

4.2   Infrared Port (IR)

Location

The infrared port is located on the top left of your MOBIC (see Figure 4-2)

Infrared port

Figure 4-3   Location of the Infrared Port

Class of Protection

The infrared port complies with class of protection IP65.

Connections

This port is used for transmission of data without a cable connection (maximum distance to the partner device 20 cm).

Possible Applications

Using the IR port, you can exchange data without a wire connection with peripheral devices that also have an infrared port (for example with a laptop).

Cable-Free Connection

Using the IR port, you have a convenient method with which you can connect your MOBIC to a PC with an infrared port and exchange data between the devices without any cable connection.

For more detailed information on establishing a connection with your host computer via the infrared port, refer to Section 6.2.

You can also use the infrared port to connect peripheral devices such as printers to your MOBIC.

Note

It is not possible to operate the infrared port and serial port at the same time.

⚠ **Warning**

Do not examine the active infrared interface using optical magnification devices.

4.3 Headset Port

Location

The headset port is located directly in the casing to the top left of the MOBIC (see Figure 4-4).

Headset port

Figure 4-4   Location of the Headset Port

Class of Protection

The headset port complies with class of protection IP65.

Note

If you plug in a headset (earphones and microphone), the internal loud speaker is automatically turned off.

Connections

You can connect a cable with a 7-pin subminiature round connector to this port.

Possible Applications

With a headset (earphones and microphone) connected to the headset port, you can, for example, record conversations.

The MOBIC accessories include a headset adapter that you can order separately. With this adapter, you can connect commercially available headsets with 2 x 2.5 mm jack plugs.

4.4   USB Port

Location

The USB port is located at the top right of the unit under the protective cover (see Figure 4-5).

USB port

Figure 4-5   Ports under the Protective Cover

Class of Protection

Caution

The USB port is a MOBIC port that does **not** comply with class of protection IP65.

Connections

You can connect a cable with a USB connector (USB full speed type A plug) to this port.

Possible Applications

The USB host port of the MOBIC allows connection of USB-target compatible devices (Universal Serial Bus). These include PC peripherals such as printers, mouse, keyboard, WEB CAM, barcode readers etc. (see also Section 1.4).

Driver

Important notes on connecting devices to the USB port:

Note

A suitable USB driver must be installed for each connected device.

Note

Note that only USB devices with Windows CE NET 4.1-compatible drivers can be connected. When purchasing a USB device for which there is no driver installed in Windows CE, **make sure** that the manufacturer of the device supplies a Windows CE USB driver with the device.

USB drivers for a mouse and keyboard are integrated in Windows CE NET 4.1. Special drivers do not need to be installed for these devices.

4.5   PCMCIA Port under the Protective Cover

Location

The PCMCIA port is at the top right of the device under the protective cover (see Figure 4-6).

PCMCIA port

Figure 4-6   Location of the PCMCIA Port

Class of Protection

Caution

The **PCMCIA** port under the protective cover does **not** comply with class of protection IP65 (in contrast to the PCMCIA port in the battery compartment).

Connections

This port allows the use of suitable PCMCIA cards (Type II).

Possible Applications

The PCMCIA port under the protective cover is suitable, for example, for connecting a barcode scanner with a read pistol.

Driver

Note

A suitable driver must be installed for a PCMCIA card.

Note

When purchasing a device that can be connected via a PCMCIA card and for which there is no driver supplied in Windows CE.NET 4.1, make sure that the manufacturer of the device supplies a Windows CE PCMCIA driver (Version Windows CE.NET 4.1).

For more detailed information on installing drivers, refer to Chapter 10.

Inserting a PCMCIA Card

Follow the steps below to insert a PCMCIA card:

1. Fit the card with the contacts to the front into the slot guide.

2. Push the card into the slot until you feel it lock in place.

Removing a PCMCIA Card

Follow the steps outlined below to remove a card:

1. Before you remove a card, make sure that it is no longer operational (close down the corresponding application).

2. Press the ejector button so that the card extends out of the slot.

3. Pull the card carefully from the slot.

Note

The two PCMCIA ports (under the protective cover and in the battery compartment) can be used at the same time.

Caution

If you encounter problems with the PCMCIA card after dropping or jolting the MOBIC T8 heavily, check that the PCMCIA card is inserted correctly and restart the MOBIC T8.

4.6 PCMCIA Port in the Battery Compartment

Location

The PCMCIA port is located inside the battery compartment (see Figure 4-7).

PCMCIA
port
in the battery
compartment

Figure 4-7   Location of the PCMCIA Port in the Battery Compartment

Class of Protection

The PCMCIA port in the battery compartment complies with class of protection IP65 (in contrast to the PCMCIA port under the protective cover).

Inserting/Removing a PCMCIA Card

The procedure for inserting and removing a PCMCIA card is the same as for the PCMCIA port under the protective cover (see Section 4.5).

Connections

This port allows the use of suitable PCMCIA cards (Type II).

Stopper

A stopper is supplied along with the MOBIC. The stopper was designed to be used with the SIEMENS WLAN card CP 1515 and is inserted between the CP 1515 and the battery. This prevents the card from slipping out under rough operating conditions.

Note

After inserting or removing a PCMCIA card, make sure that you close the battery compartment again.

Connections

This port allows the use of suitable PCMCIA cards (Type II).

Driver

Note

A suitable driver must be installed for a PCMCIA card.

Note

When purchasing a device that can be connected via a PCMCIA card and for which there is no driver supplied in Windows CE.NET 4.1, make sure that the manufacturer of the device supplies a Windows CE PCMCIA driver (Windows CE.NET 4.1).

For more detailed information on installing drivers, refer to Chapter 10.

Dimensions

The maximum possible dimensions of a PCMCIA card in the battery compartment are as follows (length x width x height):

127 mm x 54 mm x 5 mm

4.7   Ethernet (RJ-45) Port

Location

The Ethernet (RJ-45) port is located at the top right of the unit under the protective cover (see Figure 4-8).

Ethernet (RJ-45) port

Figure 4-8   Location of the Ethernet (RJ-45) Port

Class of Protection

Caution

The Ethernet (RJ-45) port is a MOBIC port that does **not** comply with class of protection IP65.

Connections

To this port, you can connect a cable with an RJ-45 connector cat. 5 (8-way RJ-45 fully shielded plug).

Possible Applications

Using the Ethernet (RJ-45) port, you can connect the MOBIC to a local network (for example, your intranet).

Caution

Only for use in the LAN. Do not connect to telecommunications facilities.

Setting the Network Parameters

Before you can access the data of servers or a host computer via the Ethernet (RJ-45) port, you must first set the network parameters for operation. To do this, perform the steps described in Section 6.3 "Configuration of the Ethernet Port".

Note

It is not possible to operate Ethernet (RJ-45) if a wireless LAN card is inserted.

Saving Energy

When working with the MOBIC, you can save energy. To use this option, the Ethernet port must be disabled if it is not required.

When shipped, the Ethernet port of the MOBIC is disabled.

To enable the port, follow the steps outlined below:

Open Start –> Settings –> Network and Dial-up Connections.

Select the ONBOARD icon.

Select "Enable" in the menu.

To save energy, you should disable the Ethernet port again, when it is no longer required. To do this, repeat the steps above but in this case select "Disable".

4.8 Power Supply Unit

Location

The connector for connecting the external power supply unit to your MOBIC is located on the top of the device under the protective cover (see Figure 4-9).

Figure 4-9   MOBIC with Connected Power Supply Unit

Class of Protection

Caution

The power supply connector does **not** comply with class of protection IP65.

Connecting the Power Supply Unit

To connect the power supply unit and the main power supply cable (UK, US, EU) to your MOBIC and to a power outlet, follow the steps below:

1. Remove the protective cover from the top of the unit.

2. Connect the power supply unit to the MOBIC.

3. Connect the main power cable to the power supply unit.

4. Plug the power cable into a socket.

Note

- Use only the power supply unit supplied with the device.
- Make sure that the power cable (UK, US, EU) is approved for the country in which you use it.
- Make sure that you have read the technical data relating to the power supply unit (see Chapter 14).
- Check whether the permitted rated voltage of the device matches the local rated voltage.
- To achieve complete isolation from the power supply network, the power supply connector must be removed from the socket. This must be at a location that is easily accessible. If the MOBIC is installed in a fixed location, a central power supply disconnector must be present.

Caution

- Make sure that nobody can walk on or trip over the cables.
- Make sure that the power supply unit is not placed on a heat-sensitive surface.
- In an emergency (for example damaged casing, controls or power supply cable, penetration of fluids or foreign bodies), disconnect the main power cable and inform customer service.
- When using the power supply unit, make sure that there is adequate ventilation so that the ambient temperature does not exceed the permitted operating temperature (risk of heat accumulation).

Note

There are two contacts on the rear of the MOBIC for charging the battery in the MOBIC charging tray or charging station.

Getting Started

<div align="right">

5

</div>

This chapter describes the basic steps required to put your MOBIC into operation.

You should read this information carefully before starting to work with the unit.

5.1 Getting Started

Before you start to work with the unit, please follow the steps below:

1. Check that the consignment you have received is complete (refer to Section 1.3)

2. Check whether a protective foil is fitted to your display. You will find instructions on fitting the protective foil in Section 11.4.

3. The device must be connected to the main power supply using the power supply unit supplied before you use the unit for the first time. After approximately 5.5 hours, the installed battery and backup battery are completely charged.

Turning on your MOBIC

Once you have completed the steps above, you can turn on the unit by pressing the on/off button.

When you first turn on the MOBIC, you will be requested to calibrate the touch screen.

Calibrating

Follow the instructions displayed to calibrate your screen. The calibration program displays a crosshair in the middle and at each corner of the screen one after the other. Tap with the pen exactly in the middle of the displayed crosshair.

When you have tapped the last of the five crosshairs, a dialog is displayed. Tap on the screen within 30 seconds if you want to save the new calibration settings. If you do not tap the screen within the 30 seconds, the new calibration settings are ignored (see also Section 11.6).

Setting the Time

Once you have calibrated the screen, you should set the time of day. Tap the "*Date/Time*" icon in the Control Panel of Microsoft Windows CE (**Start->Settings->Control Panel**) and set the current date, time and time zone.

Further Settings

You can still make a wide range of further individual settings in MOBIC configuration.

Data Exchange

6

This chapter describes how you communicate with the MOBIC.

6.1 Communication in Networks

Your MOBIC provides you with a range of options allowing you to communicate with other computers or servers, for example using:

- ActiveSync
- Internet Explorer
- FTP (File Transfer Protocol)
- Mail
- Microsoft Terminal Server
- Linking network drives

Hardware

To transfer data to the server, the following hardware can be used:

- Wireless LAN (PCMCIA)
- Wireless network GSM modem (PCMCIA)
- Serial (RS-232)
- Ethernet PCMCIA
- IR port
- Ethernet (RJ-45)

6.2   Connecting using ActiveSync

With *Microsoft ActiveSync*, you can exchange data between a host computer (Windows 95/98/2000/NT/XP) and your MOBIC (Windows CE).

Examples of Possible Applications

- Synchronizing data on your MOBIC and the host computer to make the latest information available on both devices.

- Backup and restore

- Installing and uninstalling programs on your MOBIC

- Copying files between your MOBIC and the host computer. During transfer, certain data is converted immediately to a Windows CE format (for example .doc –> .pwd).

To be able to connect your MOBIC to the host, you must first install *Microsoft ActiveSync* on your host computer. *Microsoft ActiveSync* is on the MOBIC CD.

Specifying the Partner Relationship

In the partnership between your MOBIC and the host computer, you can keep the data up to date on both computers by synchronizing. If you modify the data on one computer, this modification is automatically made to the data on the other computer the next time you synchronize. This means that the data is always up to date regardless of which computer is used for display.

Specifying a partnership is also a requirement for establishing an ActiveSync connection via Ethernet (see below).

6.2.1 Installation

1. Insert the MOBIC CD in the CD-ROM drive of the host computer.

2. Start the Setup.exe in the \ActiveSync folder of the MOBIC CD.

3. Follow the instructions on the screen until you arrive at the "Get Connected" dialog.

4. Now connect the MOBIC to your host computer via the serial cable and turn on the MOBIC.

5. You can now continue to follow the instructions of the installation routine on the host computer.

The MOBIC has now been detected and you can establish the partnership.

6. In the "Set Up a Partnership" dialog, select "Yes" to specify the partnership.

7. Follow the instructions on the screen until the installation is completed.

After successful installation of the program, you will find additional information on using *ActiveSync* in the *ActiveSync* help on your host computer.

After installing *ActiveSync*, you will see an icon in the status bar of your host computer (see Figure 6-1) that displays the status of the connection to your MOBIC.

Icon

Green = connected
Gray = not connected

Shows the status of the connection on the host computer
to the MOBIC
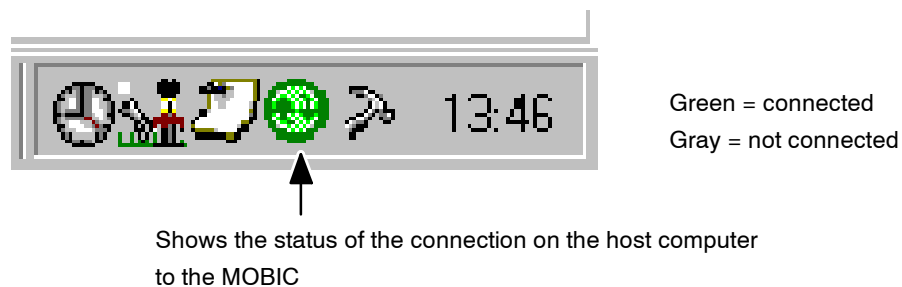
Figure 6-1   Status of the Connection to the MOBIC

6.2.2 Establishing a Serial Connection

To establish a serial connection, connect your MOBIC to the host computer. Connect your MOBIC (RS 232 port) via a serial cable (see Section 1.4) to the COM port of your host computer (Figure 6-2) and follow the instructions on the screen.

Figure 6-2   Connecting the MOBIC to the Host Computer with the Supplied Serial Cable

Note

Use only the supplied serial cable.

Icon

Once the connection to your MOBIC is established, an icon appears in the status bar of your MOBIC in the form of a connection icon (see Figure 6-3).

Connection icon (Status: Connection active)

Figure 6-3   Connection Icon for a Serial Connection

Synchronizing the Data

When you synchronize, the data on your MOBIC is compared with the data on your host computer. The data on both computers is then updated according to the rules set in ActiveSync.

You can synchronize the data if Inbox on your MOBIC with the data of Outlook on your host.

Caution

Please make sure that the correct time zone for the country in which you are operating the MOBIC is set otherwise data can be lost or corrupted.

Example: For Germany you would set the time zone "(GMT+01:00) Brussels, Berlin, Rome" in the "Date/Time Properties" in the Control Panel. The check box "Automatically adjust clock for daylight saving changes" is used to change automatically to daylight saving or normal time.

6.2.3 Establishing an Infrared Connection

You can use an infrared connection to establish a direct connection between the mobile unit and the desktop computer quickly and simply. You only need to align the infrared ports and establish the connection from the mobile unit. This method is ideal for fast data exchange between several devices since no cables or adapters need to be replaced.

Infrared connections are supported only under Windows 95/98/2000 and Windows XP.

How to use an Infrared Connection

1. Setting Up an Infrared Connection

   Install and configure an infrared port on the host computer according to the instructions of the manufacturer.

   Note:
   If you operate a computer with Windows 95, install the infrared driver of Windows 95.

2. Change to the infrared port on the mobile device

   The serial port is the standard COM port on the MOBIC. To be able to use the infrared port, you must change the COM port on the MOBIC.

   - Click/tap on Start, Settings and Control Panel one after the other

   - Double-click or double-tap on the PC Connection icon.

   - Click/tap Change...

   - Select infrared port in the list and confirm with "OK".

   Note
   The MOBIC retains these settings following a reset. If, however, you run a cold reset, the settings are reset to the standard serial port.

3. Establishing a Connection using Infrared

   - Align the infrared ports on both computers. Infrared links function best when the distance between the two infrared ports is approximately 15 cm.

   - Click/tap Programs, Communication and PC Link one after the other on the MOBIC.

   To establish an infrared connection follow the steps as explained in the help system of ActiveSync on your **host PC** (*Start - > Programs - > Microsoft ActiveSync - > Help - > Microsoft ActiveSync Help - > Index - > IR Connections*). The procedure is otherwise basically the same as establishing a serial connection (see 6.2.2).

6.2.4   Establishing a Connection with a Host Computer via Ethernet

Before you establish a connection via Ethernet, you must first configure the connection (see Section 6.3)

To establish a connection via Ethernet, follow the steps below:

1. As described above, set up a partnership via a serial connection.

2. Then disconnect the serial connection by removing the serial cable.

Note

Steps 1 and 2 are only necessary when you want to establish a connection for the first time. After this, you can start connection establishment directly at step 3.

---

3. Connect the MOBIC to the network via the Ethernet port.

4. Start *ActiveSync* on your MOBIC
   (***Start->Programs->Communication->ActiveSync***).

5. From the upper list box ("*Choose a method to connect to the selected desktop computer*") select the setting "*Network connection*" and from the list box "*Connect to*" select the computer to which you want to establish a connection.

   Note: The "*Connect to*" list displays all computers with which you have set up a partnership.

6. Tap on "*Connect...*" to establish the connection.

   Note: The first connection may take several seconds.

6.2.5 Ports with an ActiveSync Connection

Table 6-1 below provides an overview of all the ports with which an ActiveSync connection can be established.

Table 6-1   Overview of ActiveSync Connections

Connection method	Operating system on the host PC				
	Windows 95	Windows 98	Windows 2000	Windows NT	Windows XP
Serial	Yes	Yes	Yes	Yes	Yes
Ethernet	Yes	Yes	Yes	Yes	Yes
Infrared	Yes	Yes	Yes	No	Yes
USB	No	No	No	No	No

6.3   Configuration of the Ethernet Port

Before you can work with the Ethernet port, you must first set the parameters for your network.

1. Open the network connections (***Start->Settings->Network and Dial-up Connections***).

2. Double-click on the "ONBOARD_ETHERNET1" icon.

3. Set the network address in the "*IP Address*" tab.

   Here, you have two options:

   • **"Obtain an IP address via DHCP"** (most common configuration)
     In this case there must be a DHCP server and a WINS server in the network.

   • **"Specify an IP address"**

     Select this option is there is no DHCP server available.

     • Select the "*IP Address*" box.
       Here, you can enter the IP address. Please remember that the IP address must be unique. Check with your network administrator.

     • Select the "*Subnet Mask*" box.
       Here you can enter the subnet mask for your IP address. Check with your network administrator.

     • Select the "*Default Gateway*" box.
       Enter the address of the gateway. The gateway is necessary to gain access to other networks (for example the Internet).

     • Select the "Primary DNS" box in the "Name Servers" tab and enter the address of the primary DNS. If in doubt, ask your network administrator.

     • Select the "Primary WINS" box in the "Name Servers" tab and enter the address of the primary WINS. If in doubt, ask your network administrator.

4. If there is no WINS server in the network, select the "Primary WINS" box in the "Name Servers" tab and enter the address of your PC.

5. Confirm your entries with OK.

6.4 Access to HTML Pages with the Microsoft Internet Explorer V5.5

You start the Internet Explorer with "***Start->Programs->Internet Explorer***".

The Microsoft Internet Explorer program provides you with a subset of the functions of the Internet Explorer familiar from your PC.

Note

Before you can view pages on an intranet or on the Internet, you must first configure the network access as explained in Section 6.3.

6.5 Java

The standard software of the MOBIC also provides you with a Java Virtual Machine (JVM). The JVM is also adapted to the Internet Explorer V5.5 using a plugin interface. This means that you can also load and execute Java Applets embedded in HTML pages on the MOBIC using the Internet Explorer V5.5.

You can also create your own applets and run them locally on the MOBIC.

The JVM installed on the MOBIC

- corresponds to the pJava V3.1 specification (Personal Java)

- is based on the API (Application Interface) of the JDK V 1.1.8 (Java Development Kit)

6.6 Access to an FTP Server with the Microsoft Internet Explorer V5.5

Using the FTP client function, (for example Microsoft Internet Explorer V5.5 on the MOBIC), the user can read or write files of the server.

It is only possible to copy complete files. There must also be space for the entire file on the Windows CE device. The data must exist in a format that can be read by a Windows CE application.

6.7 Access to Network Drives with the Windows Explorer

It is possible to access network drives with the Windows CE device. This allows files on the network to be opened. The network drives can be displayed with the Windows Explorer. To display such drives, you must specify the server name and drive name as the address in the form \\Computername\drivename.

To open files, you must specify the complete network path. When you open a file, the entire file is transferred. The data must exist in a format that can be read by a Windows CE application.

6.8 E-mails with Microsoft Pocket Outlook

The MOBIC includes the E-mail program "Inbox" which is part of Microsoft Pocket Outlook. To send and receive E-mails, you must establish a connection to an E-mail server.

- You can also use Inbox to send or receive mails directly using the POP3 and IMAP4 protocols. If you are unsure, check with your network administrator to find out whether your mail server supports one of these protocols. If this is the case, you can add the POP3 mail or IMAP4 mail services in the inbox using Services–>Options.
  In this way, you can send and receive E-mails as long as you have a network connection (see Section 6.3).

6.8.1 Microsoft Terminal Server Client

In this mode, the MOBIC functions simply as an input device (thin client) that requires a permanent network connection to a Windows terminal server (for example in a wireless LAN).

You will find further information in our Web site: www.siemens.com/mobic

Supplied Programs and Tools

7

The MOBIC is supplied with both a number of Microsoft Windows CE standard programs and additional programs some of which were developed especially for the MOBIC.

This chapter lists the supplied standard programs and includes a brief description of each of these programs.

7.1   Standard Programs

7.1.1   Microsoft Pocket Word

Microsoft Pocket Word provides you with a reduced range of the functions of Microsoft Word. You can create new documents on your MOBIC or copy documents from a host computer to your MOBIC.

Since Microsoft Word (*.doc) and Microsoft Pocket Word (*.pwd) use different file formats, ActiveSync converts the file formats during transfer.

Starting

To start Pocket Word:

Tap on the icon for Microsoft Pocket Word in the **Start- >Programs** menu.

7.1.2   Microsoft Inbox

Microsoft Inbox includes functions for sending and receiving E-mails.

Using ActiveSync (see Section 5.1), you can synchronize data in Microsoft Outlook on your host computer with the data in Inbox on your MOBIC.

Starting

Tap on **Inbox** in the **Start- >Programs** menu.

7.1.3 Microsoft Internet Explorer V5.5

Using the Microsoft Internet Explorer V5.5, you can establish a connection to the Internet (or to an enterprise network) so that you can surf on the Internet or the Intranet of an enterprise.

Starting

To start ***Microsoft Internet Explorer V5.5:***

Tap on the icon for the Internet Explorer in the ***Start -> Programs*** menu.

Java

A Java Virtual Machine was adapted using a plugin. This makes it possible for you to download and execute Java Applets embedded in HTML pages via the Internet.

7.1.4 Handwriting Recognition with Transcriber

Note

The Transcriber program described here cannot be used on the MOBIC with the Chinese version.

Transcriber is the software responsible for handwriting recognition on your MOBIC. Using the pen, you can also write entries on the touchscreen that are then recognized by the software.

To activate handwriting recognition, start the Transcriber program (*Start–>Programs–>Transcriber*).

When you start Transcriber, you will see a start dialog in which you can call up the online help. If you require the help system later, double-click on the Transcriber icon in the taskbar (see Figure 7-1 or Figure 7-2)

You can recognize whether or not Transcriber is active by the two icons in the system tray (see Figure7-1 and Figure 7-2):

- The "*Transcriber not active*" icon (see Figure 7-1) tells you that the pen can only be used for tapping in the current status. The pen cannot be used for writing on the screen in this status.
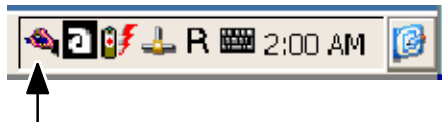

Figure 7-1   Transcriber (not active)

- The "*Transcriber active*" icon (see Figure 7-2) tells you that the pen can only be used for writing on the screen in this status.
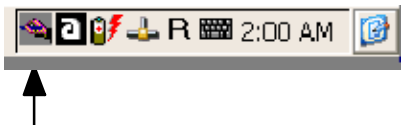

Figure 7-2   Transcriber (active)

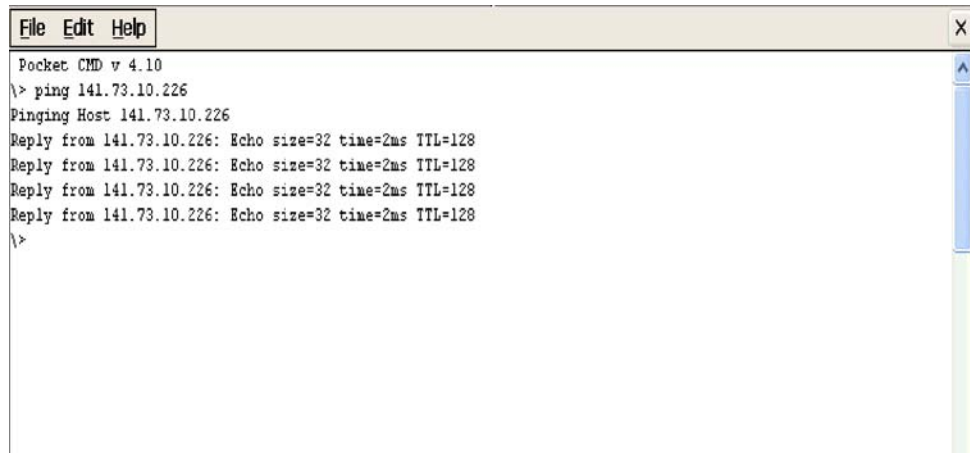By tapping on the currently displayed icon in the system tray, you can activate or deactivate Transcriber.

You can open a menu for setting the Transcriber properties by double-tapping on the Transcriber icon.

7.1.5 Ping

With the Ping program, you can check the TCP/IP connection.

Below you can see the output produced by Ping (Figure 7-3)

The user attempted to reach a computer with the IP address 141.73.10.226.


```
File  Edit  Help                                               X

 Pocket CMD v 4.10
\> ping 141.73.10.226
Pinging Host 141.73.10.226
Reply from 141.73.10.226: Echo size=32 time=2ms TTL=128
Reply from 141.73.10.226: Echo size=32 time=2ms TTL=128
Reply from 141.73.10.226: Echo size=32 time=2ms TTL=128
Reply from 141.73.10.226: Echo size=32 time=2ms TTL=128
\>
```

Figure 7-3   Display of Ping Results

Starting

You start the program from the command line:

(***Start - > Programs - > Command Prompt***).

7.1.6 Microsoft Terminal Server Client

In this mode, the MOBIC functions simply as an input device (thin client) that requires a permanent network connection to a Windows terminal server (for example in a wireless LAN).

You will find further information in our Web site: www.siemens.com/mobic

7.2 MOBIC Configurator

Your MOBIC has a configuration tool with which you can make specific settings for your MOBIC. The MOBIC Configurator consists of the following **components**:

- Memory overview and utilization
- Trace module configuration
- Error module configuration
- Function key assignment
- Overview of installed software
- Disabling the on/off button
- Backup/restore of the registry on the flash card
- Warm reset
- Setting the screen orientation
- Enable/disable power supply (5 V/200 mA) on pin 9 of the RS-232 port.

Starting

1. Tap on *Start - > Programs - > Tools - > MOBIC Configurator*

After you start the MOBIC Configurator, a window appears (see Figure 7-4) with the following six tabs:
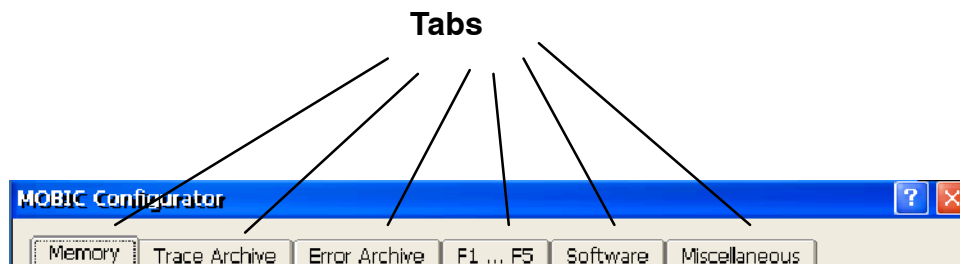

Figure 7-4   MOBIC Configurator

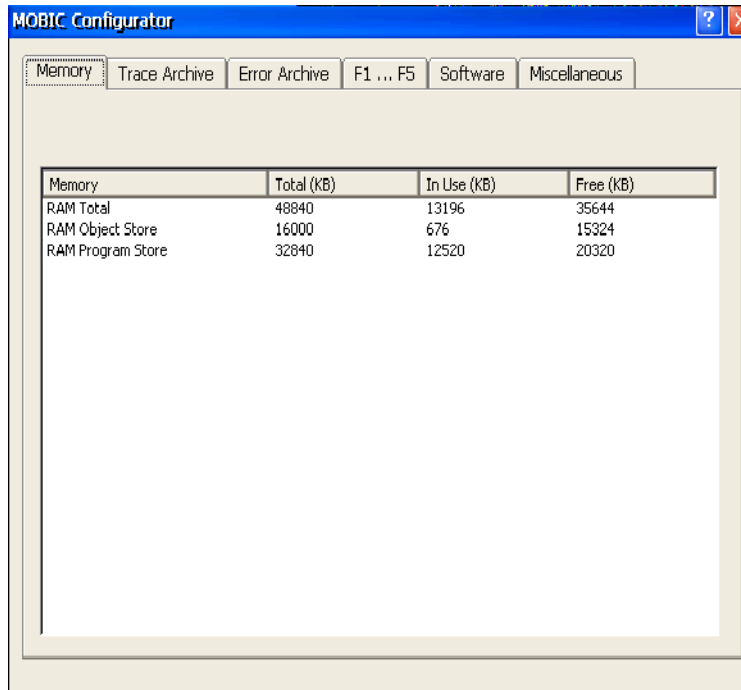These tabs are assigned to the components listed above.

Online Help

The MOBIC Configurator has an online help system with descriptions of all the specific MOBIC settings that you can refer to at any time.

To start:

Tap the "?" button

Supplied Programs and Tools

7.2.1   *Memory Tab*

In the *"Memory"* tab (see Figure 7-4), the MOBIC Configurator displays
information about the memory configuration and memory utilization:

Figure 7-5   MOBIC Configurator

- • RAM Total
  RAM available to Windows CE

- • RAM Object Store
  Programs and data installed or created later are stored here.
  Exception:
  Programs or data were stored in internal disk.

- • RAM Program Store
  Work memory available to all programs.

- • Storage Card
  External PCMCIA flash card

For each area, you can see the information "Total" (*total available memory"), "In
Use" ("currently used memory*") and "Free" (*free memory*") displayed in Kbytes.

MOBIC T8
C79000-G8976-C151-05

7-7

7.2.2 Trace Archive Tab

The trace archive function is a tool to help you develop new user programs under Windows CE. It supports the developer when testing or debugging programs.

After tapping on the "***Trace Archive***" *tab,* you display the user interface for configuring the trace archive (see Figure 7-6).

Note

Standard Windows CE programs do not use this trace archive.
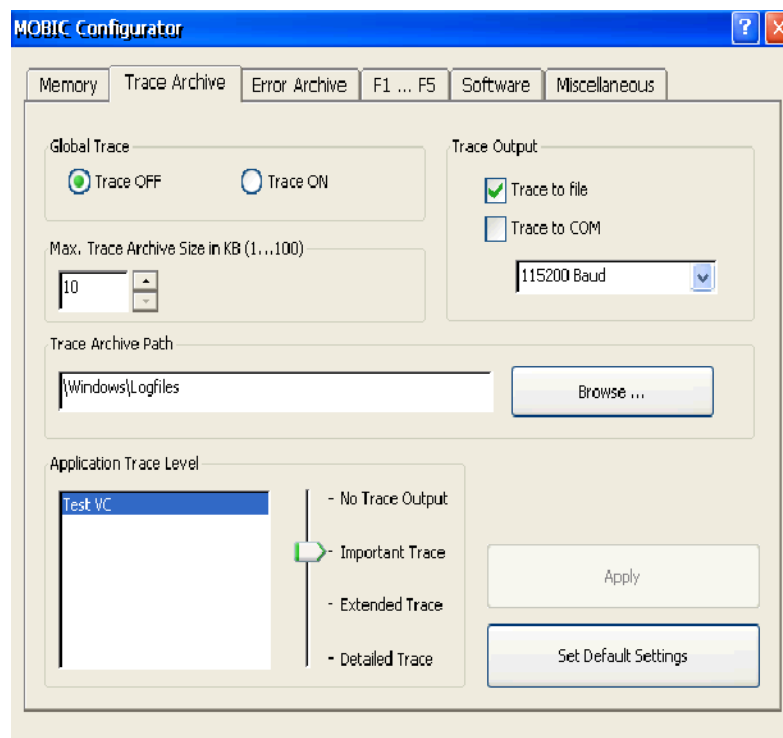

Figure 7-6   User Interface for Configuring the Trace Archive

---

Note

Each modification to the trace archive made in the MOBIC Configurator is only entered in the registry after you tap the *"Apply"* button. You can restore the default values for the trace archive by simply tapping on the *"Set Default Settings"* button and then tapping on the *"Apply"* button.

Trace ON/OFF

Using this global trace flag, you can deactivate all trace output (*"Trace OFF" option button)* or activate them *"Trace ON"* option button).

If trace output is deactivated with the trace flag, no trace outputs are written to the trace archive regardless of the trace level of individual programs.

If trace output is activated, the trace output depends on the local trace levels of the individual programs (see below).

To activate the trace flag, select the *"Trace ON"* option button, to deactivate it, select the*"Trace OFF" option button.*

Default setting: Trace OFF

Trace Output

If you select the *"Trace to File"* check box and/or *"Trace to COM"*, you specify whether the trace output is written to a file and/or output via the COM interfaces.

You can also set the baud rate of the COM interface with which the trace output is made. You can select (9600, 19200, 57600 or 115200) in the list box.

Default settings: Trace to File   (Trace Output)

8 data bits, no parity, 1 stop bit, no handshake

115200   (baud rate)

Trace Archive Path

Here, you can change the path for the trace archive.

Default setting: \Windows\Logfiles

Max. Trace File Size in KB (1...100)

Here, you set the maximum size of the trace archive. The trace archive always contains the latest traces. Older entries are overwritten by new entries.

You can specify the maximum size of the trace file in Kbytes. The selectable range is between 1 Kbyte and 100 Kbytes; the default is 10 Kbytes.

You can set the size of the trace file using the *"UP"* and *"DOWN"* arrow keys.

Default setting: 10

Application Trace Level

These settings only have significance when the global trace flag is activated (see trace ON/OFF).

To set the **program-dependent** trace levels, select a program from the list and assign one of the trace levels to it using the slider. The slider remains gray and cannot be moved if the *"Application Trace Level"* list box is empty.

The trace levels are used by the programs as follows:

- **No Trace Output**

  At this trace level, no trace is written.

- **Important Trace**

  With this setting, only important trace output is made, for example message received, function calls etc.

- **Extended Trace**

  This level means extended trace output such as parameters of function calls etc.

- **Detailed Trace**

  At this trace level, all trace output that is possible is written.

All trace messages that either have the selected trace level or a trace level with higher priority are written to the trace file.

Default setting: No trace output

7.2.3 Error Archive Tab

The Error Archive function is a tool to help development of new user programs under Windows CE.

After tapping on the "***Error Archive"*** tab, you display the user interface for configuring the error archive (see Figure 7-7).

Note

Standard Windows CE programs do not use this error archive.

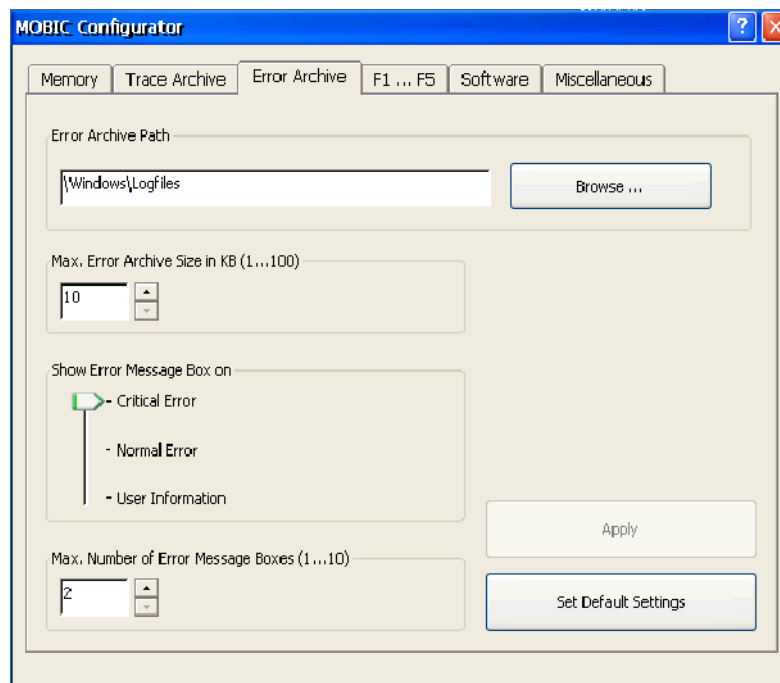
Figure 7-7   User Interface for Configuring the Error Archive

---

Note

Each modification to the error archive made in the MOBIC Configurator is only entered in the registry after you tap the *"Apply"* button. You can restore the default values for the error archive by simply tapping on the *"Set Default Settings"* button.

Error Archive Path

Here, you can change the path for the error archive.

Default setting: \Windows\Logfiles

Max. Error Archive Size in KB (1...100)

Here, you set the maximum size of the error archive.

The possible range is between 1 Kbyte and 100 Kbytes.

Default setting: 10

Max. Number of Error Message Boxes (1...10)

Here, you can enter the maximum number of error message boxes requiring acknowledgment that can be displayed on your screen at one time. The range is between 1 and 10; the default setting is 2 message boxes.

You select the number with the *"UP"* and *"DOWN"* arrow buttons.

Default setting: 2
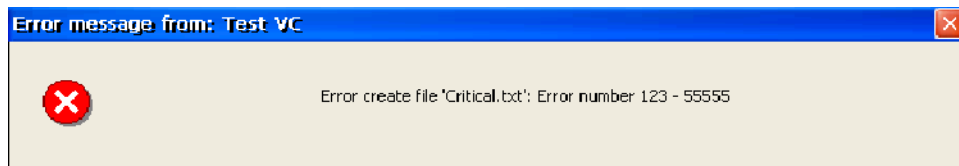
Figure 7-8   Error Message Box

Show Error Message Box on

You can set one of three possible error levels.

- **Critical Error**

  This is the error level with the highest priority.

- **Normal Error**

  Errors with medium priority are included in this error level.

- **User Information**

  This level has the lowest priority of all three error levels.

Default setting: critical error

Note

If you change the error level, the relevant programs must be restarted.

7.2.4 F1...F5 Tab

After tapping on the "*F1...F5*" tab, you open the dialog in which you can assign functions to the five function keys (see Figure 7-9).
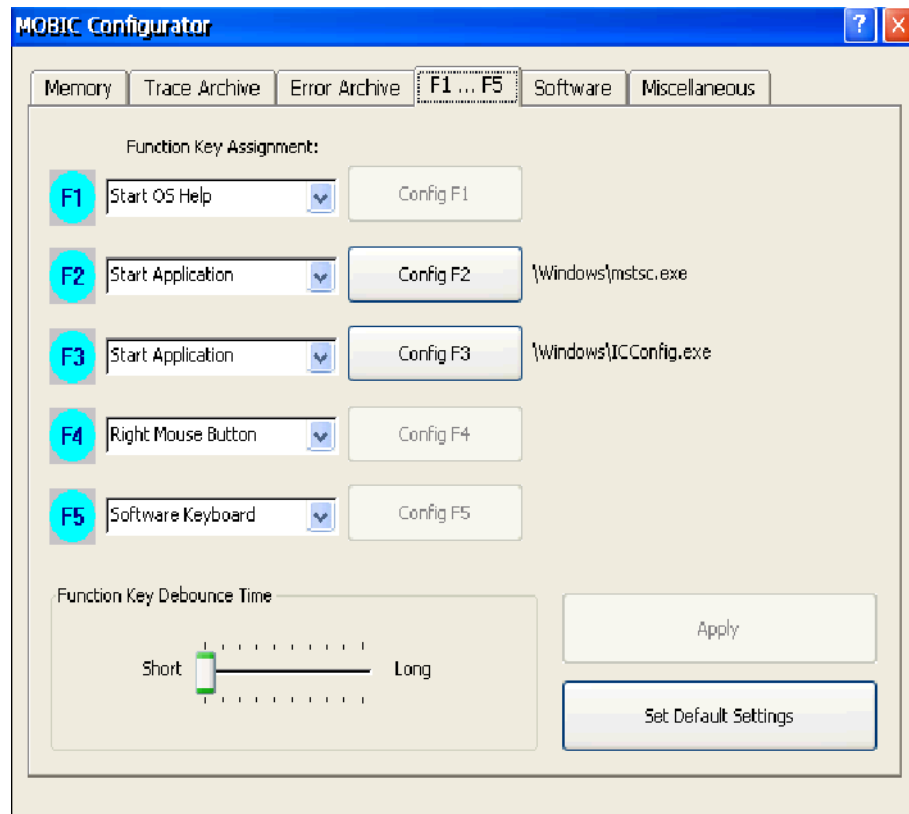
Figure 7-9   MOBIC Configurator

Note

Any modifications you make to the function key assignment in the MOBIC Configurator are entered in the registry only after tapping the *"Apply"* button. You can restore the default values for the function keys at any time by simply tapping on the *"Set Default Settings"* button.

The current configuration of the five function keys is displayed in the *"Function Key Assignment:"* list boxes.

Default settings for the function keys F1...F5:

F1: Start operating system help

F2: Start Microsoft Terminal Client

F3: Start MOBIC Configurator

F4: Right mouse button function

F5: Display software keyboard

Using the list box, you can assign one of the following four functions to each function key:

Start OS Help

Starts help on the operating system

Start Application

Starts a program and transfers the call parameters

After selecting the **Start Application** function in the list box and then tapping the *"Config Fx"* button, a dialog is displayed in which you can select the application (exe file) you want to start with the particular function key. The selected application is then displayed to the right of the *"Config Fx (x= 1, 2, 3, 4, 5)"* button.

Software Keyboard

Toggles the software keyboard on or off.

Right Mouse Button

Prepares a mouse click with the right mouse key.

The "Right Mouse Key" function covers two steps:

1. First you select the "right mouse button" function or "R" in the status bar (see Figure 7-10); this starts the function (comparable with pressing the Alt key).
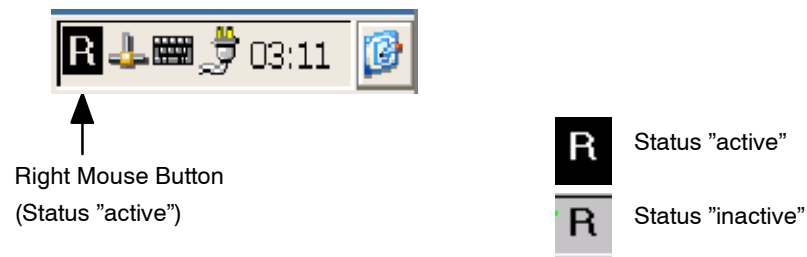

Right Mouse Button
(Status "active")

R Status "active"

R Status "inactive"

Figure 7-10   Right Mouse Button" Function

2. The next action with the pen executes a right mouse click.

Keyboard Events

This is used to trigger keyboard events. You can assign one of the keyboard events shown in Figure 7-11 to each of the five function keys.
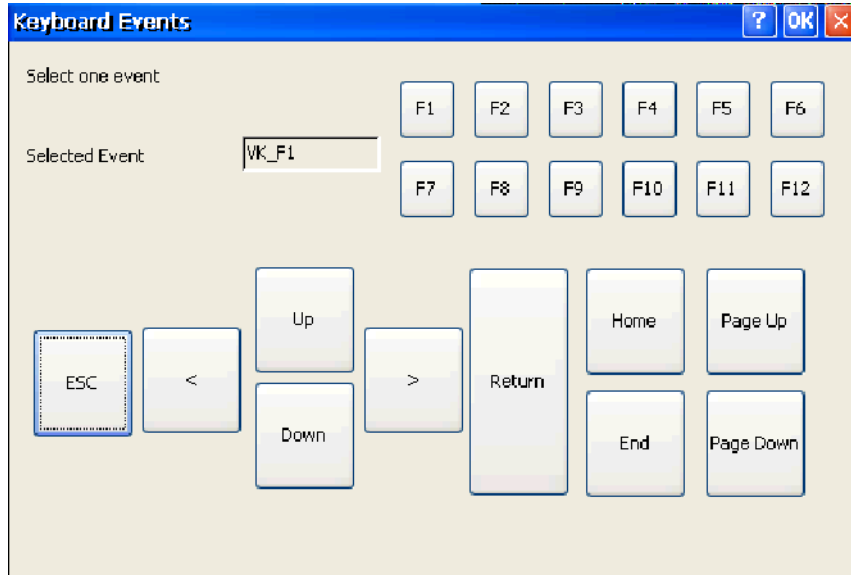
Figure 7-11   Keyboard Events

After selecting the "Keyboard Events" function in the list box and then tapping the *"Config Fx"* button, the *"Keyboard Events"* dialog box appears in which you can select a keyboard event.

The *"Keyboard Events"* dialog includes an additional output box in which the selected event is displayed.

Function Key Debounce Time

You have the option of setting the reaction time (debounce time) of the five function keys F1...F5 in a range from approximately 0 to 300 milliseconds. The debounce time is the time for which a key must be pressed before it triggers the keyboard event (see Figure 7-9).

You can make the *"Function key debounce time"* setting in various stages using a slider. If the slider is at the extreme left, this is the shortest possible debounce time, moving it to the extreme right sets the longest possible debounce time.
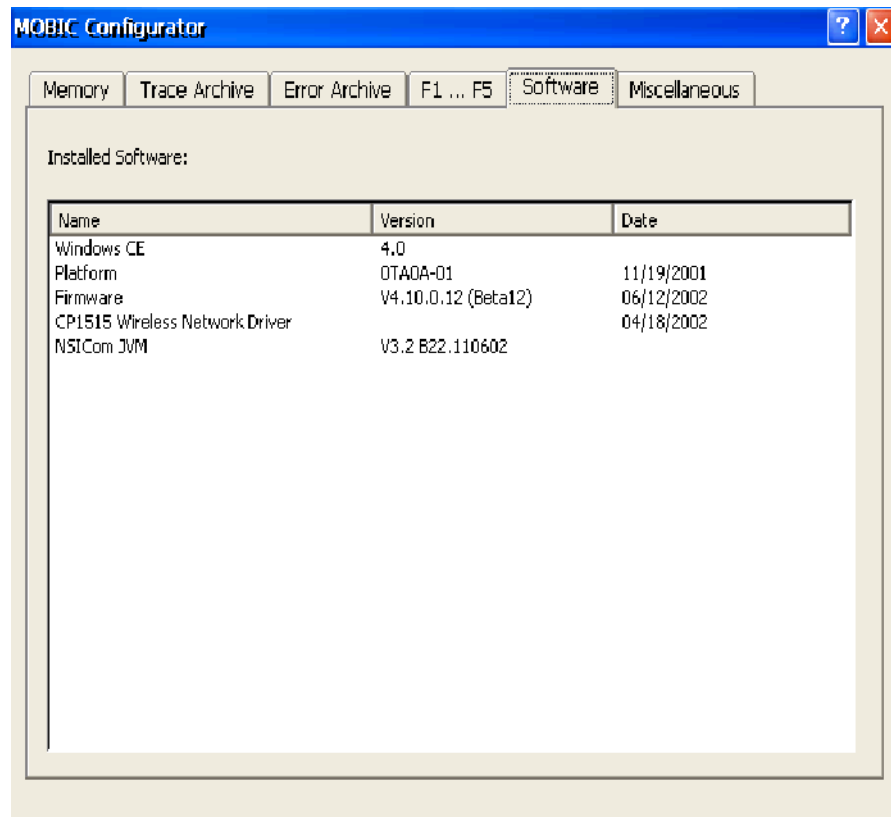
Default setting: Shortest debounce time (slider at the extreme left)

7.2.5 Software Tab

If you tap on the "***Software***" tab, you display the overview of all the applications installed on the MOBIC (see Figure 7-12).

You obtain the following information about each application.

• Application name (Name)

• Version number of the application (optional)

• Date the application was created (optional)

Figure 7-12   Overview of all Installed Applications

7.2.6 Miscellaneous Tab

If you tap on the "***Miscellaneous***" tab, you display the user interface of the MOBIC Configurator in which you can make further settings (see Figure 7-13).
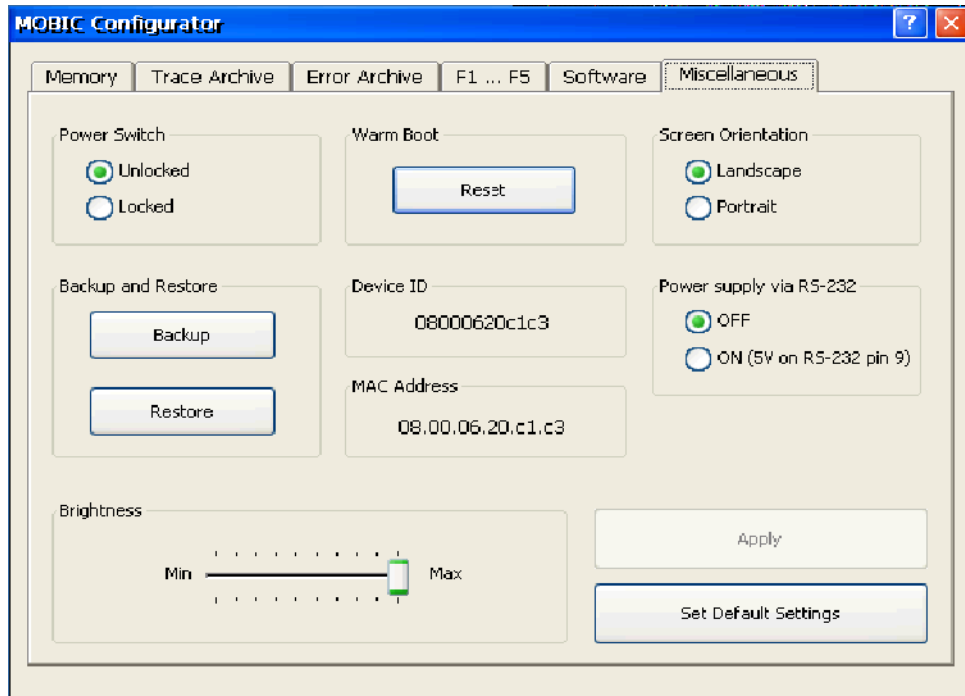
Figure 7-13   Miscellaneous Tab

Note

Any modifications you make in the "***Miscellaneous***" tab of the MOBIC Configurator is entered in the registry only after you tap on the *"Apply"* button. You can restore the default values for the "**Miscellaneous***"* tab at any time simply by tapping on the *"Set Default Settings"* button.

Power Switch

In the "*Power Switch*" group, you can lock or unlock the on/off switch. If you select the "*Unlocked*" option, this function is not disabled, if you select the "*Locked*" option, the function is disabled and the MOBIC is then permanently on (example: terminal operation).

Default setting: unlocked

Registry

You can save the current registry from the buffered RAM to a PCMCIA flash card. Each time you save, you can give the new version a different name. Saving the registry is advisable whenever you install new software that writes information in the registry. If the registry becomes unstable following an installation, you can always write back the last stable version from the PCMCIA flash card to RAM.

After you tap the "*Save as...*" button, the "*Backup registry*" dialog is opened. Here, you can enter the name of the file in which the backup of the registry will be stored. As default, the MOBIC Configurator proposes a file name containing the year, month and day of the backup, (for example 2000_7_19_Registry.reg).

If, on the other hand, you tap on the "*Load from...*" button, this opens the "*Restore Registry*" dialog. Here you can enter the name of a backup registry file saved earlier. When you tap on the "OK" button, the restore function writes the registry back to the RAM.

Backup and Restore

You can use the backup function to create a backup copy of your complete system. This includes all files and programs you installed subsequently. Storage media is necessary for the backup (PCMCIA card). You have the option of using a backup version when a ColdBoot is executed on the MOBIC.

You can use the restore function to load a previously created backup manually. Loading the backup restores the MOBIC to its state at the time the backup was created. This means that subsequently installed programs and files are deleted.

Note

Backups created with a specific firmware version can only be loaded to a MOBIC with the same firmware version. You can find the detailed firmware version in the tab "Software" in the MOBIC configurator.

Backups contain information about the touchscreen calibration. Therefore, the touchscreen has to be recalibrated after you load a backup created with a different MOBIC. To calibrate, press the function keys F1 + F5 simultaneously.

MAC Address

The MAC address of the On-Board Ethernet Controller is displayed here.

Device ID

The Device ID is the unique identifier for this MOBIC.

Brightness

You can use a slider to set the back lighting. When the slider is at the extreme left, this sets the lowest level of back lighting. If the slider is set to the extreme right, this sets the maximum possible back lighting.

Default setting: Maximum back lighting (slider at the extreme right).

Power Supply on the RS-232 Port

The MOBIC can provide a power supply (5 V/200 mA) on the RS-232 port (pin 9). This power supply can be disabled or enabled. The default is "disabled".

Reset

Tapping on the Reset button starts a warm reset on the MOBIC. Remember that data can be lost.

You can also trigger a warm reset by pressing the function keys F2, F3 and F4 simultaneously. In this case, you do not need to be in the MOBIC Configurator.

Screen Orientation

With this function, you can turn the image through 90° (portrait or landscape).

7.3 Error and Trace Archive

The error and trace archive function is a tool that can be used in the development of new user programs with Windows CE. It supports the developer when testing or debugging programs.

The user interface allows you to evaluate error and trace messages. The error archive provides the user with information if any form of malfunction occurs. Error messages, for example, generated by the operating system or by programs are logged in the error archive.

The trace archive is used for troubleshooting during development and testing of application programs for your MOBIC under Windows CE.

How to configure the error and trace archive in the MOBIC Configurator is described in detail in the previous section 7.2.

Starting

Tap on the "*View Trace&Errors*" icon (taskbar **Start - > Programs - > Tools -> LogView Trace&Errors**).

After you start the LogView, the error archive is always displayed first (see Figure 7-14).

Trace archive display (Figure 7-15):

Instead of the *"Error Messages"* option button, select the "*Trace Messages*" option button.
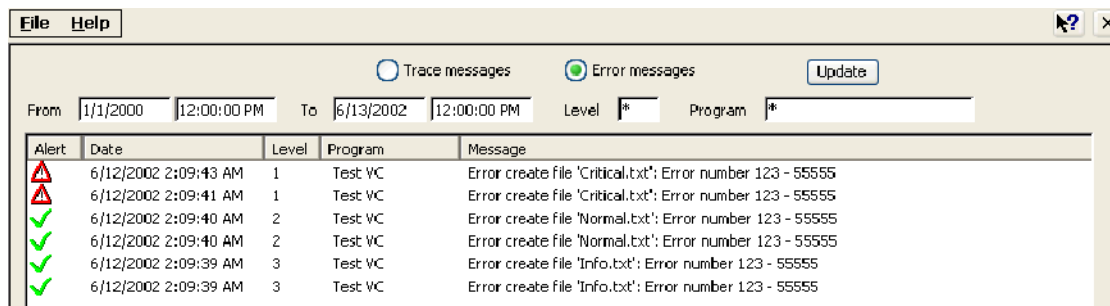
Figure 7-14   Error Archive

The user interface of the error archive provides you with various input boxes with which you can filter all existing error messages according to specific criteria. When you open the error archive, the filter is set so that all messages are displayed.

Input fields in the error archive:

- **From**
  Here, you can enter the date and time from which the messages will be displayed.

  Enter the date in the format mm/dd/yy (where mm=month, dd=day, yy=year) and the time in the format hh:mm:ss (where hh=hour, mm=minute, ss=second).

  Default setting: 1/1/00   12:00:00 PM

- **To**
  Here, you can enter the date and time up to which messages will be displayed (format as above).

  Default setting: Date of the following day   12:00:00 PM

- **Trace Level**
  Here, you can enter one of three possible error levels (see Section 7.2.2). The options are: "Important Trace", "Extended Trace", "Detailed Trace" or "*".
  Default setting:*

- **Program**
  You can enter the name of the program that generated the messages and for which all pending messages will be displayed.

Default setting: *

The display of the error archive is not updated until you tap on the "Update" button of the error archive. When you tap on the "Update" button, the messages are read from the error archive again and displayed according to the selected filter (entries made in the four input boxes). The latest (most recent) message is always displayed in the first line of the log view.

Structure of an Error Archive Entry

The error archive entries have a uniform structure. A message (divided into the following five columns) is displayed in the error archive as follows (see Figure 7-15):

- **Alert**
  Depending on the error class of a message, an icon is displayed here so that important errors can be recognized more quickly.

- **Date**
  Displays the date and time at which the error message was generated in the format yy/mm/dd hh:mm:ss

- **Level**
  Error level of the message

- **Program**
  that generated the message

- **Message**
  Error text with up to 10 parameters

The user interface of the error archive also has its own online help. You can start this using the *"Help"* menu.

You exit the error archive with "Exit" in the "*File*" menu.

Up to now, we have only shown you the user interface of the error archive. As mentioned above, you can change from the error archive to the trace archive user interface (see Figure 7-15) by selecting the "*Trace Messages*" option button instead of the *"Error Messages"* option button.

Structure of a Trace Archive Entry

The trace archive entries also have a uniform structure. In contrast to the error archive, however, a message is displayed in the trace archive as shown below:

- **Date**
  Date and time at which the trace message was generated in the format dd/mm/yy hh:mm:ss

- **Level**
  Trace level of the trace message

- **Message**
  Trace output text
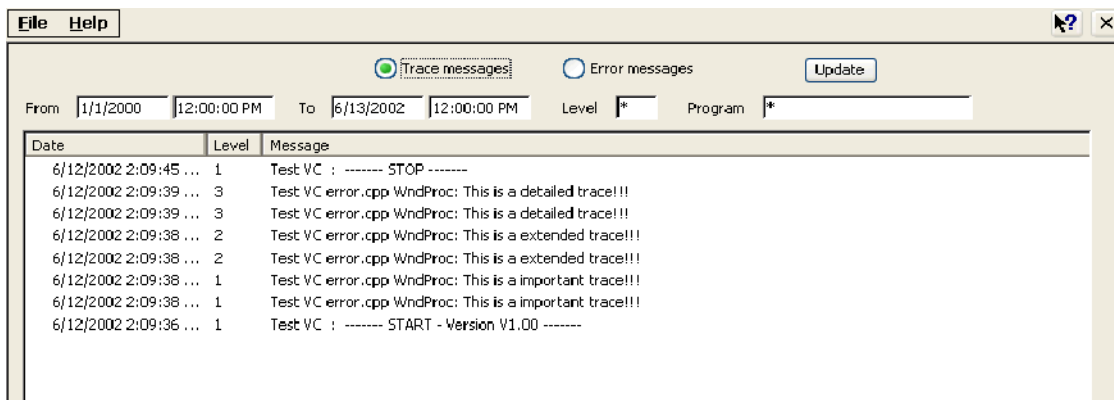
Figure 7-15   Trace Archive

Backup and Restore

8

This chapter explains how you can save your data.

Saving Data

To prevent the loss of data resulting from your work on the MOBIC, it is advisable to save data such as program files, word files and the registry regularly.

There are various ways in which you can save data:

*   On your host computer using ActiveSync via a serial connection

*   On a PCMCIA flash card

*   The registry on a PCMCIA flash card using MOBIC configuration

---

Note

You can find out how to create a backup of your complete system in section 7.2.6

ActiveSync

How to set up an ActiveSync connection and work with it is described in detail in Section 6.2.

You have the following options:

*   Saving individual files

*   Making a Backup/Restore of your complete system with ActiveSync. In this case, a complete copy is created on your host computer and is downloaded again to the MOBIC with Restore. This function also saves the registry.

*   Running an automatic data synchronization whenever an ActiveSync connection is established (see Section 6.2 Synchronizing Data)

PCMCIA Flash Card

To save data on a PCMCIA flash card, follow the steps outlined below:

1. Insert the PCMCIA flash card in one of the two PCMCIA slots.

2. Open the Windows Explorer (***Start - > Programs - > Windows Explorer***)

3. The card appears in the Windows Explorer as "Storage Card".

4. Click on the file you want to save and then select the "Paste" command in the "Edit" menu.

5. Now double–click on "Storage Card" and select the "Paste" command in the "Edit" menu.

Your file is now saved on the "Storage Card".

Saving the Registry with the MOBIC Configurator

How to save the registry with the MOBIC Configurator is described in detail in Section 7.2.

How the Auto Restore Function Works after a Cold Reset:

Backup and Restore
With the backup function, you can create a backup of your entire system. This contains all the programs and data you installed after receiving your device. A storage medium (PCMCIA card) is required for the backup. When you cold boot the MOBIC, you can, if you wish, restore a backup you made earlier.

The restore function allows you to restore a previously created backup manually. Restoring the backup on the MOBIC recreates the state as it was when you made the backup. In other words, programs and data installed after you made the backup are deleted!

Note

Backups created with a particular firmware version can only be restored to a MOBIC with the same firmware version. the detailed firmware version is entered in the 'Software' register of the MOBIC Configurator. Backups also contain information on the touchscreen calibration. This means that if you restore a backup created on a different MOBIC, the touchscreen must be recalibrated. To calibrate the touchscreen, press F1 + F5 simultaneously.

Changing the Settings of the MOBIC

9

This chapter explains how you can change the settings of your MOBIC to meet your own specific requirements.

9.1   Energy Saving

When you use your MOBIC as a mobile unit, the integrated battery provides the MOBIC with the necessary energy. You can extend the operating time of the battery by using the available energy saving functions.

If you always use your MOBIC as a stationary unit, you should connect it to the main power supply via the power supply unit as described in Section 4.8.

When you have finished working with your MOBIC or if you do not intend to use it for a longer period of time, you should switch it to the **Energy Saving Mode**. This puts the unit to sleep and saves battery power.

Energy Saving Mode

- Double–tap with the pen on the "Power" icon in the control panel (***Start -> Settings -> Control Panel -> Power***). Select the *"Schemes"* tab and set the time after which the unit changes automatically to the energy saving mode. The shorter the time you select, the longer your battery will remain operational.

- Reduce the back lighting (LCD contrast) using the MOBIC Configurator (see also Section 7.2).

- Double–tap with the pen on the "Display" icon in the control panel (***Start->Settings->Control Panel->Display***). Then select the "Backlight" tab and set the time after which the device automatically darkens the display. The shorter this time (can be selected between 15 seconds and 5 minutes), the longer the battery will remain operational.

9.2   MOBIC Configuration

With the MOBIC Configurator, you have a tool with which you can make or modify specific settings for your MOBIC.

You can, for example assign input that you require often (for example starting a particular program) to one of the five available function keys.

For detailed information on working with the MOBIC Configurator, refer to Chapter 7.

Installing Additional Applications and Drivers

10

This chapter explains how you can expand the functionality of your MOBIC.

Expanding the Functionality

You can expand the functionality of your MOBIC by installing additional applications and drivers. Make sure that the applications and drivers are suitable for Windows CE .NET 4.1 and the "MIPS" processor platform.

Installation

Typical installation procedure:

1. First load the driver or application software on your desktop PC or insert the diskette or CD in the appropriate drive on your host computer.

2. Establish a connection between your MOBIC and the host computer using ActiveSync.

3. If the program includes an installation program (generally Setup.exe or Install.exe), double–click on the installation program on your desktop PC, otherwise double–click directly on the program file (*.exe).

4. Follow the instructions displayed on your host computer. The installation program now copies the required files to the MOBIC.

5. Follow the instructions displayed on the MOBIC.

Note

Applications and drivers installed by the user are installed in the battery–backed RAM.

Uninstalling Additional Applications and Drivers

You can delete programs you no longer require and regain storage space. You can only delete the programs you yourself have installed. Follow the steps outlined below:

1. Connect your MOBIC to the host computer (for example RS-232).

2. Establish a connection using ActiveSync.

3. Select "Software" in the "Extras" menu in the ActiveSync window.

4. Select the check box for the program you want to remove.

5. Click "Remove" to remove the selected program from the MOBIC and the host computer.

Repair, Care and Maintenance

11

This chapter contains useful tips and information on repair, care, and maintenance of your MOBIC.

11.1 Repairs

Warning

The MOBIC should only be repaired by authorized trained personnel. Incorrectly performed repairs can lead to considerable danger for the user.

Caution

Install only system expansions that are intended for this computer. Installing other expansions can damage the system or violate the safety directives and regulations for interference suppression. For information on the system expansions suitable for installation, contact the technical customer service or sales department.

Note

The guarantee is nullified if defects are caused on the MOBIC by installing or replacing system expansions.

11.2 TFT Screen

Caution

If the screen of your MOBIC becomes damaged, make sure that any fluid escaping does not come into contact with your skin, mucosa (eyes, mouth etc.) or with foodstuffs. Do not inhale any vapors escaping from the screen. If your skin or clothing becomes contaminated, clean thoroughly with plenty of soap and water.

11.3 Cleaning

To clean the display of your MOBIC, rub it gently with a soft cotton cloth dampened with water or denatured alcohol.

Note

Cleaning the surface of the display with denatured alcohol can leave smears on the screen. In this case, polish the surface of the screen gently with a soft, dry cloth.

11.4   Changing the Protective Foil

With time, dust and dirt can collect on the tip of the pen. Working with a dirty pen on the screen without a protective foil would scratch the screen. How to prevent this, is explained in the note below.

Note

When working with the pen, we recommend that you always have the screen protective foil fitted. No guarantee is accepted for scratched screens on which the screen protective foil is not fitted.

Below, you will find brief instructions on fitting and changing a protective foil for the screen. Follow the steps outlined below in the order shown.

1. If there is already a protective foil on your screen, remove this before fitting a new one. The protective foil of the screen is secured by a thin adhesive strip at the edges of the screen. One corner of the screen protective foil (bottom left) has a notch. At this point, you can easily detach the protective foil with a fingernail and then pull it off.

2. Remove any remnants of the adhesive from the surface of the screen by cleaning it gently with a soft cotton cloth dampened with denatured alcohol. Make sure that all the remnants of the previous foil are removed from the screen before you fit the new foil.

3. Remove the protective cover from the adhesive side of the new screen foil.

4. Place the screen foil on the surface of the screen with the adhesive side of the foil to the screen surface. The notched corner of the foil must be at the left bottom corner of the screen.

5. Press the screen foil on to the screen with your fingers. Gently stroke the foil to flatten it starting from the middle and working towards the edges. After 48 hours, the adhesive is completely dry. To achieve a good seal between the screen foil and the display, do not remove the foil again after it has been fitted to the display.

11.5   Seals

Before you replace the protective cover or the cover of the battery compartment, make sure that all the seals are clean and if necessary clean them with a damp cloth.

11.6   Recalibrating the Screen

Calibrating the screen is necessary so that the cursor position of the pen on the screen can be determined by the system. The screen must be calibrated when you first start up the unit. If you find that the pen selects a different area of the screen from the area you require, the screen must be recalibrated.

To recalibrate the screen:

1. Double-tap with the pen on the *"Pen" icon in the Control Panel* (**Start -> Settings ->Control Panel->Pen**). Select the *"Calibration"* tab and tap on *"Recalibrate"*.

    As an alternative, you can also press the F1 and F5 function keys simultaneously to start the calibration. This can be helpful if the current calibration is so out of line that the device can no longer be operated.

2. Position your MOBIC as you would during normal use. Make sure that the pen is held at the normal angle for writing. Touch the screen only with the tip of the pen.

Note

Accidentally touching the screen with your finger or hand during calibration can lead to an incorrect calibration.

---

3. Calibrate the screen following the displayed instructions. A crosshair is displayed in the center and then one after the other in each corner of the screen. Hold the pen as you would normally when working with the device and tap as close as possible to the center of each displayed crosshair.

4. When you have tapped the last of the five crosshairs, a dialog is displayed. Tap on the screen within 30 seconds if you want to save the new calibration settings. If you do not tap on the screen within 30 seconds, the "old" calibration settings are retained.

11.7 Pen

Working with a worn or dirty pen can scratch the screen. Make sure that you replace the pen in good time.

11.8 Battery

Storage of Batteries not Installed in the MOBIC

If you store batteries for a longer period of time (longer than two months), they should have a charge level of approximately 50%. If you store batteries for up to two months, the batteries should have a charge level of approximately 30%. Batteries should be stored at temperatures between +10°C and +25°C in a dry place.

- The battery must only be replaced by a specialist.

- When replacing a battery, replace it with a battery of the same type!

- If a battery is defective, it must no longer be used! Do not touch the terminals of the battery!

- Batteries must be disposed of as hazardous waste according to the local regulations!

Warning

Risk of explosion if the battery is replaced incorrectly. Only replace the battery with the same battery or with a battery of the same type as recommended by the manufacturer.

Risk of fire, explosion, and burns: Do not squash, take apart, or burn. The battery must not be exposed to a temperature in excess of 212 °F (100 °C).

Certificates, Directives, and Declarations   **12**

12.1 Notes on the CE Mark

Product Name

SIMATIC NET MOBIC T8

The above-mentioned SIMATIC NET product meets the requirements of the following EU directives:

EMC Directive

Directive 89/336/EEC "Electromagnetic Compatibility"

Uses	Requirements	
	Noise emission	Noise immunity
Industrial environment	EN 50081-2: 1993	EN 61000–6–2: 1999
Household	EN 50081–1: 1992	EN 50082–1: 1997

Installation Guidelines

The product meets these requirements if you adhere to the installation instructions and safety-related information contained in this manual during installation and operation.

Declaration of Conformity

The EU declarations of conformity and corresponding documentation are available for the responsible authorities according to the above-mentioned EU directive at the following address:

Siemens AG
Bereich Automation & Drives
Industrielle Kommunikation (A&D PT2)
Postfach 4848
D-90327 Nürnberg

DIN ISO 9001- Certificate

The quality assurance system of our entire product manufacturing process (development, production, and marketing) meets the requirements of DIN ISO 9001 (corresponds to EN29001: 1987).

This was confirmed by DQS (Deutsche Gesellschaft zur Zertifizierung von Qualitätsmanagementsystemen mbH) .

EQ-Net Certificate No.: 1323-01

The MOBIC is supplied with the software installed. Please adhere to the corresponding license agreements.

12.2 Certificates for USA, Canada, and Australia

Safety

If the device has one of the following marks, the corresponding approval has been obtained:

	Underwriters Laboratories (UL) complying with Standard UL 60950 (I.T.E) or complying with UL508 (IND.CONT.EQ)
	Underwriters Laboratories (UL) complying with Canadian Standard C22.2 No. 60950 (I.T.E) or complying with C22.2 No. 142 (IND.CONT.EQ)
	Underwriters Laboratories (UL) complying with Standard UL 60950, Report E21 6641 and Canadian Standard C22.2 No. 60950 (I.T.E) or complying with UL508 and C22.2 No. 142 (IND.CONT.EQ)
	UL Recognition Mark
	FM approved, Class I Division II, Class 3611, 3810

EMC

USA

**Federal Communications Commission
Radio Frequency Interference Statement**

This equipment has been tested and found to comply with the limits for a Class A 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 A digital apparatus complies with Canadian ICES-003.

Avis Canadien

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Australia

This product fulfills the requirements of the AS/NZS 2064 Standard (Class A).

Frequently Asked Questions (FAQs) 13

Problems/Faults

If you encounter problems with your MOBIC, attempt to correct the problem as outlined below.

If you cannot rectify the problem, follow the steps below:

1. Note down the steps that led to the problem and the status as the problem occurred. Note down any error messages that may be displayed.

2. Contact our service department (see Chapter 13).

3. Turn off your MOBIC.

If you require information about troubleshooting with the Windows CE Services, click the **Windows CE Services Help Topics** in the **Help** menu in the **Mobile Devices** folder.

The device does not start up after it is turned on

If the device does not restart after you have turned it on or following the suspend mode, this may be due to one of the following causes:

• The battery is not correctly installed

    1. Turn off your MOBIC.

    2. Install the battery correctly according to the description in Section 2.3.1.

    3. Turn on your MOBIC again.

• The battery is dead

    1. Charge the battery as described in Section 4.8.

• The power supply unit is not connected correctly

    2. Turn off your MOBIC.

    3. Check whether the power supply unit is connected correctly to the MOBIC.

    4. Check whether the power supply cable is connected correctly to the power supply unit and to the power supply socket.

    5. Turn on your MOBIC again. The display on the power supply unit must be lit.

Screen is not calibrated

If the pen selects a different area of the screen from the point at which you tap, you should recalibrate the screen. Follow the instructions in Section 11.6 – Recalibrating the Screen.

The MOBIC screen remains dark or is difficult to read

If the screen of your MOBIC remains dark or is difficult to read, this can have one of the following causes:

- Brightness of the device set too low

  Set the brightness of the backlighting with the MOBIC Configurator.

- The energy saving time for the backlighting has elapsed

  Tap on the screen to reactivate the display.

Ports

Can the IR port be operated at the same time as the RS–232 port?

No.

Operating system:

Why is Windows CE used as the operating system?

Windows CE provides the following:

- Instant On/Off and Reset
- Significantly longer operating time due to intelligent power management

What do I need to note when programming with Windows CE as opposed to Windows 9x/NT?

Windows CE API is a subset of Windows 9x/NT API. There are also APIs specifically for Windows CE. You will find more information at: http://msdn.microsoft.com/cetools/

Can Java applications run on the MOBIC?

Yes

Wireless LAN

Which Wireless LAN can be used?

You will find this information on the Internet page www.siemens.com/mobic

How far does a Wireless LAN extend?

A Wireless LAN can extend approximately 30 to 100 m around an access point depending on the architecture of the room and whether the card is operated in the internal (IP65) PCMCIA or in the external PCMCIA slot.

Possible problems with IR:

- IR window dirty

- Incorrect alignment

- Partner devices too far apart

Connections

The connection to the MOBIC is not established?

- First, make sure that the cable is correctly attached to the COM port of your host computer and to the serial port of your MOBIC.

- Make sure that the option "Allow connection with desktop computer when device is attached" is selected in "PC Connection" in the Control Panel.

If you require further help, refer to the *ActiveSync* help.

What is the "Network Resources" program used for?

Your MOBIC has a program with the name "Network Resources". Using this program, you can establish a connection between the MOBIC and a network computer or network folder.

To start the program:
Tap on *Start - > Programs - > Tools - > Network Resources*.

You establish a connection between the MOBIC and a network computer or network folder as follows:

1. Open the "Network Resources" program.

2. Tap on "New Connection"

3. In "Remote Path", specify the server and the share name of the resource as follows: \\Servername\Sharename.

4. In "Local Name", enter a name to be assigned to this shared resource.

5. Confirm with "OK" and close "Network Resources" with the "Close" button.

6. This newly created connection is stored in the "NETWORK" folder (**My Computer *- > Network***) in the name specified in "Local Name".

7. By double–clicking the connection stored in the "Network" folder, you can open it again.

To disconnect the MOBIC from a network computer or network folder:

1. Open the "Network Resources" program.

2. Select the network connection to be deleted.

3. Tap on "Disconnect".

4. Then tap on "OK".

5. The network connection has been removed from your network folder.

Why does a double-click does not always work when the MOBIC is operating as terminal client ?

The terminal server recognizes a double–click only when the touchscreen is tapped twice on the same spot. Due to the high resolution, this is, however, relatively difficult.

Remedy:
In the registry of the terminal server, change the maximum deviation for a double click to a higher value (for example to 20).

[HKEY_CURRENT_USER/Control Panel/Mouse]
"DoubleClickHeight"="20"
"DoubleClickWidth"="20"

Technical Specifications

<div style="text-align: right; font-size: 3em; font-weight: bold;">14</div>

Operating System/Software

Operating System	MS Windows CE .NET 4.1
Software	• Viewer for Excel, Power Point, Word, Images and PDF files • MS Inbox • MS Pocket Word • MS Internet Explorer V5.5 • Java Virtual Machine with plugin for Internet Explorer • MS Thin Client • Software keyboard • Handwriting recognition Transcriber • MOBIC System Software

Technical Specifications

Ports	2 x PCMCIA slots type II (rear and battery compartment) (max. current consumption 300 mA per slot)
	Fast Ethernet/Ethernet (10/100 Mbps) RJ-45
	Serial RS-232 (up to 115 Kbps)
	Infrared IR
	USB (12 Mbps)
	Connector for headset
	Connector for power supply unit
Display	• Type TFT color display, backlit • Display size 8.4" (21.3 cm) • Resolution SVGA 800 x 600 pixels • Touchscreen resistive • Surface protection replaceable protective foil
Operator controls	• Function keys 5 in right side panel, user-defined • On/off switch in right side panel • RESET button in battery compartment
Display elements	1 LED red, 1 LED green 2 LED yellow (function user-defined)
Processor	NEC VR4121
Graphics controller	MQ 200
Memory	RAM 64 MB Flash 32 MB (max. number of write cycles 100,000)
Operating time	Approx. 8 hours with one charge

Battery	• 7.4V, 4.8 Ah lithium-ion battery, replaceable
	• Charge time, maximum 5.5 hours
	• Capacity after 500 charge cycles ≥ 3120 mAh
	• The battery can be charged only at ambient temperatures between 0 and +40 °C.
	• Operating time approx. 8 hours
	• The operating time depends on the connected peripherals (PCMCIA, USB) and the active application.
Loudspeaker	mono
Power supply MOBIC T8	DC 16 V current input max. 1.6 A from MOBIC power supply unit
Supply voltage of the power supply unit	AC 100 – 240 V, 50/60 Hz
Power loss	typically 4.4W in operation max. 8 W in operation 48 mW in standby mode
Backup batter, integrated	• NiMH • 3.6 V, 300 mAh
Permitted ambient conditions	see page 14-5
Shock resistance	see mechanical conditions page 14-6
Resistance to vibration and impact	see mechanical conditions page 14-6
Materials MOBIC T8 power supply unit	Silicone-free yes no
Construction	see mech. data 14-6
Function keys	5 function keys in right side panel, functions of all keys can be freely configured

Electromagnetic compatibility

Noise emission	Class B (EN 55022) Industrial environment (EN 50081–2: 1993) Household (EN 50081–1: 1992)
Noise immunity	Industrial environment (EN 61000–6–2: 1999) Household (EN 50082–1: 1997)
Noise immunity on signal lines RS-232 (short signal line < 30m) Ethernet (long signal line > 30 m)	 +/– 1kV (IEC 61000-4-4, 1995 (burst)) +/– 2kV (IEC 61000-4-4, 1995 (burst)) +/– 2kV (IEC 61000-4-5, 1995 (surge))
Noise immunity to static discharge	+/– 4kV, Contact discharge +/– 8kV Air discharge (IEC 61000–4–2, 1995)
Noise immunity to RF interference	10 V/m with 80% amplitude modulation at 1 kHz, 80 MHz to 1000 MHz in the range 87 MHz to 108 MHz, 174 MHz to 230 MHz, 470 MHz to 790 MHz: 3 V/m (IEC 61000-4-3, 1995)

Permitted ambient conditions

Operating temperature MOBIC T8 Battery charging Power supply unit	 0 to 50 °C 0 to 40 °C 0 to 40 °C
Storage/transport	–20 °C to 60 °C
Relative humidity	max. 85% at 30 °C (with protective cover open and no condensation)

Caution

Do not expose the MOBIC T8 to direct sunlight.

Mechanical conditions

Vibration Operating	10 to 58 Hz, displacement 0.075 mm
	10 cycles per axis, 1 octave/min.
	(IEC 60068-2-6, test Fc)
	58 to 150 Hz, acceleration 9.8 m/s^2
	10 cycles per axis, 1 octave/min.
	(IEC 60068-2-6, test Fc)
Shock Operating	Acceleration 150m/s^2, shock duration 11 ms (IEC 60068-2-27, test Ea)
	Requirements from EN 61131-2
Freefall of unpacked MOBIC T8	Fall height 1.20 m with protective cover closed (MIL Std 810E 516.4)

Mechanical Data

Dimensions (H x W x D)	19.5 x 28.4 x 5.7 cm
Securing	Four M4 screw holes (max. torque 2 Nm, max screw-in depth 7 mm)
Weight	approx. 1.7 kg
Class of Protection Protective cover: closed open	IP65 IP 20

Marks of conformity

Marks of conformity	CE, UL, CUL, FCC Class A, FM Class I Division II "FM", e1 approval "e1"

Pinout

Serial RS-232

Pin	Signal	Description
1	DCD	Data carrier detect
2	RXD	Receive data
3	TXD	Transmit data
4	DTR	Data terminal ready
5	GND	Signal ground
6	DSR	Data set ready
7	RTS	Request to send
8	CTS	Clear to send
9	+5V	Power supply +5V/200 MA

Headset

Pin	Signal	Description
1	MP	Microphone positive
2	MGND	Microphone ground
3	GND	Signal ground
4	ASL	Audio status link
5	SP	Speaker positive
6	SN	Speaker negative
7	n/c	No connection

USB

Pin	Signal	Description
1	VCCout	Power supply output 0.4 A (when both PCMCIA slots loaded with 600 mA together.) max. current 0.5 A (when both PCMCIA slots loaded with not more than 500 mA.)
2	DN	Data negative
3	DP	Data positive
4	GND	Signal ground

Ethernet RJ-45

Pin	Signal	Description
1	TD+	Transmit data positive
2	TD–	Transmit data negative
3	RD+	Receive data positive
4	n/c	No connection
5	n/c	No connection
6	RD–	Receive data negative
7	n/c	No connection
8	n/c	No connection

Functional electrical isolation: 500 V (DC)

Power supply connection

Pin	Signal	Description
1	+VCC	Power supply positive
2	GND	Signal ground

Glossary

ActiveSync

A program for synchronizing data between your MOBIC and a host computer. You can specify the type of data to be synchronized.

Client

The client is a device or simply an object that requests a -> server to provide a service.

Cold reset

Resets the MOBIC to its default status without deleting the flash.

COM port

A serial communications port for connecting to mobile devices, modems, and printers.

Driver

A control program that allows your computer to use a specific (peripheral) device.

E–mail

Messages and other information you send or receive in your mailbox.

Flash

Non–volatile memory comparable with the hard disk of a PC.

Headset

Combination of headphones and microphone.

Host computer

A computer with which a partnership with the MOBIC can be established.

Infared port
> A port via which optical signals (infrared) are transmitted instead of via wires or cables.

Internet
> A worldwide network of computers providing services such as E–mail, Worldwide Web, FTP, and much more.

IrDA (Infrared Data Association Protocol)
> Standard for infrared communication between computers and other devices.

Partnership
> A relationship between your MOBIC and your PC established to synchronize and transfer data.

PC card
> A removable card such as a modem, Ethernet, wireless LAN, or memory card complying with the PCMCIA specification.

Pen (stylus)
> A pointing device for selecting (tapping) and entering information on the touch-screen.

Power supply unit
> An adapter for external power supply for the MOBIC.

RAM (Random Access Memory)
> Volatile memory from which data can be read and to which data can be written. Data in RAM is retained only as long as the power supply is on.

Remote link
> A link between your MOBIC and a computer or server at a remote location.

Serial cable
> A cable for connecting your MOBIC to a host computer.

Serial connection
> A cable connection between your MOBIC (RS–232 port) and a serial port (COM) on your host computer.

Server

A server is a device or simply an object that can provide certain services in response to a request from a -> client.

Software keyboard

A keyboard operated on the touchscreen or by mouse.

Synchronization

The process of comparing files or data on two computers to make sure that the same data are on both computers.

Touchscreen

The touch–sensitive screen of your MOBIC that recognizes when its surface is touched (normally with the pen) and converts this touch into the desired action (for example, moving the cursor).

Transcriber

Software for handwriting recognition on your MOBIC.

USB (Universal Serial Bus)

A standard for connecting peripherals. USB supports relatively high data trans-mission rates and can be used to connect several devices to one computer.

Index

A

ActiveSync, 6-3
Application trace level, 7-10

B

Backup battery, 2-6
Battery, 1-9, 2-6, 11-6
    charge level, 2-9
    charging, 2-8
    removing/inserting, 2-7

C

Calibrating, 5-2
    recalibrating, 11-5
Carrying straps, 1-9, 3-2
CD-ROM, 1-10
Chinese characters, 2-17
Cold reset button, 2-11
Configuration, 7-6
Configurator, 9-2

D

Device ID, 7-18
Drivers, 10-2

E

E-mails, 6-13
Energy saving mode, 9-2
Error archive entry, 7-22
Error Archive tab, 7-11
Ethernet, 1-4, 4-12
    configuration, 6-10
Explorer, 6-13

F

F1...F5 tab, 7-13

FTP server, 6-13
Function keys, 1-8, 2-2, 2-12
    assignment, 2-12

H

Hand strap, 3-4
Handwriting recognition, 2-18
Headset, 2-3, 4-5
HTML, 6-11

I

Installation, 6-4
Internet Explorer V4.0, 6-13
IR, 1-4, 2-3, 4-3

J

Java Virtual Machine, 6-12, 7-3

K

Keyboard event, 7-15

L

LED, 1-4
LEDs, 2-13
Loudspeaker, 2-2, 2-14
    mute, 2-14

M

MAC Address, 7-18
Memory, 7-7
Microsoft Pocket Internet Explorer V4.0, 7-3
Microsoft Pocket Outlook, 7-2
Microsoft Pocket Word, 7-2
Miscellaneous tab, 7-17
MOBIC Configurator, 7-6, 9-2