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# 1. Change History

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.05.2016</td>
<td>• First version</td>
<td>1.0</td>
</tr>
<tr>
<td>17.06.2016</td>
<td>• New cover</td>
<td>1.1</td>
</tr>
<tr>
<td>08.07.2016</td>
<td>• Interface illustration update</td>
<td>1.11</td>
</tr>
</tbody>
</table>
2. Comments

2.1 General Comment

These operating instructions are provided to ensure the efficient handling of the device. The original version of these operating instructions was written in German. Any non-German version of these operating instructions is a translation of the German operating instructions.

2.2 Manufacturer

The product manufacturer is Jungheinrich AG, which will be referred to in the following as Jungheinrich.

2.3 Data, Diagrams, Changes

All data, text and diagrams have been compiled to best of our knowledge. However, they do not offer any guarantee of characteristics. Despite the utmost care, no liability can be accepted for accuracy, completeness or validity. We reserve the right to make changes.

2.4 Trademarks

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2.5 Copyright

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22047 Hamburg - Germany
Tel: +49 (0) 40/6948-0
www.jungheinrich.com
# 3. Product Description

## 3.1 Features of the WMT110 Device

### 3.1.1 Technical Specifications

<table>
<thead>
<tr>
<th></th>
<th>WMT110</th>
<th>WMT115</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display &amp; housing</strong></td>
<td>(WxHxD)290x254x59 mm – 3.3 kg</td>
<td>(WxHxD)344x266x62 mm – 4.6 kg</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>10.4&quot;, XGA 1024x768 pixels, 450 cd/m²</td>
<td>15.1&quot;, XGA 1024x768 pixels, 300 cd/m²</td>
</tr>
<tr>
<td><strong>Safety rating</strong></td>
<td>IP65</td>
<td></td>
</tr>
<tr>
<td><strong>Assembly preparation</strong></td>
<td>VESA 75 hole pattern on reverse, mounting bracket</td>
<td></td>
</tr>
<tr>
<td><strong>Operating temperature</strong></td>
<td>-30°C to +50°C</td>
<td></td>
</tr>
<tr>
<td><strong>Storage temperature</strong></td>
<td>-40°C to +80°C</td>
<td></td>
</tr>
<tr>
<td><strong>Rel. air humidity</strong></td>
<td>Constant 95%, non-condensing</td>
<td></td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>24-48 V DC (16.8 to 72 V) - Option: 12 V DC (6.5 to 16 V)</td>
<td>Typically 25 W, max. 58 W</td>
</tr>
<tr>
<td><strong>Processor</strong></td>
<td>Intel Atom E3827 (2x1.75 GHz) – Option: Intel Atom E3845 (4x1.91 GHz)</td>
<td></td>
</tr>
<tr>
<td><strong>Random access memory</strong></td>
<td>4 GB DDR3 RAM – Option: 8 GB</td>
<td></td>
</tr>
<tr>
<td><strong>Mass storage</strong></td>
<td>16 GB mSATA industrial SSD – Option: 32 or 64 GB</td>
<td></td>
</tr>
<tr>
<td><strong>Audio</strong></td>
<td>Inbuilt stereo speakers</td>
<td></td>
</tr>
<tr>
<td><strong>Touchscreen</strong></td>
<td>Resistive – Option: Capacitive, restricted use with gloves on</td>
<td></td>
</tr>
<tr>
<td><strong>Front buttons</strong></td>
<td>4 freely programmable front buttons, double assignment via additional FN button</td>
<td></td>
</tr>
<tr>
<td><strong>WLAN</strong></td>
<td>802.11 a/b/g/n via 3 internal antennae - Option 1 x R-SMA connection</td>
<td></td>
</tr>
<tr>
<td><strong>LAN</strong></td>
<td>2 x Ethernet 10/100/1000 Mbit RJ45</td>
<td></td>
</tr>
<tr>
<td><strong>USB</strong></td>
<td>3 x TYPE A USB 2.0 in service chamber, 1 x TYPE A USB 2.0 on the front All external USB ports are high current up to 1 A</td>
<td>1 x D-Sub 9-pin 5V DC switching Option: 1 x additional D-Sub 9-pin</td>
</tr>
<tr>
<td><strong>RS232</strong></td>
<td>2 x D-Sub 9-pin, of which 1 x 5 V DC on PIN 9 switching</td>
<td></td>
</tr>
<tr>
<td><strong>Bluetooth</strong></td>
<td>Option: Bluetooth 2.1 + EDR, class 1</td>
<td></td>
</tr>
<tr>
<td><strong>RFID</strong></td>
<td>Option: Integrated RFID Reader Mifare or Legic</td>
<td></td>
</tr>
<tr>
<td><strong>Operating system</strong></td>
<td>Windows Embedded Standard 7 Option: Windows 7 Ultimate / Windows Embedded 8.1 Industry / Windows 10 IoT Enterprise</td>
<td></td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td>Flexible-configuration on-screen keyboard, write protection filter (embedded OS only), tool for connecting a serial scanner, backup/restore tool Option: Terminal emulation, client management solution</td>
<td></td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>Commissioning instructions Option: Desktop power pack (230 V AC), scanner holder, keyboard and keyboard holder, mounting bracket, DC connection lead</td>
<td></td>
</tr>
<tr>
<td><strong>Warranty/support</strong></td>
<td>12-month warranty for defects Option: 3/5 years of standard support</td>
<td>Option: 3/5 years of premium support</td>
</tr>
</tbody>
</table>
No. | Description
---|---
1  | Display with touch function
2  | Front USB
3  | Front buttons
4  | On/off button
### 3.1.3 Rear View

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>5</td>
<td>VESA attachment option</td>
</tr>
<tr>
<td>6</td>
<td>Service chamber</td>
</tr>
<tr>
<td>7</td>
<td>Mounting support (optional)</td>
</tr>
<tr>
<td>8</td>
<td>Cover for WLAN antennae</td>
</tr>
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</table>
### 3.2 WMT Configuration Matrix

The item number for the WMT can be used to determine the equipment:

<table>
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<tr>
<th>Position</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<th>10</th>
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<th>12</th>
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<td>Mifare/Desfire RFID</td>
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<td></td>
<td>0</td>
<td></td>
<td></td>
<td>For future features</td>
</tr>
</tbody>
</table>

### 3.3 Data Plate

The data plate is on the back of the terminal.

The data plate contains the following information:
1. Manufacturer item number / feature number
2. Material number
3. Power supply
4. Serial number
5. WLAN MAC address
6. Date of manufacture (month/year)

### 3.4 Service Chamber: WMT110 Interfaces

<table>
<thead>
<tr>
<th>No.</th>
<th>Designation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>FE1 / FE2</td>
<td>PE earthing</td>
</tr>
<tr>
<td>X2</td>
<td>0V/IGN/V+</td>
<td>DC In</td>
</tr>
<tr>
<td>S1</td>
<td>Autostart ON/OFF</td>
<td>Autostart function</td>
</tr>
<tr>
<td>X3</td>
<td>COM1</td>
<td>COM port (RS232)</td>
</tr>
<tr>
<td>S2</td>
<td>COM2 +5V:OFF/ON</td>
<td>5V switching to COM 1 port</td>
</tr>
<tr>
<td>X4</td>
<td>COM2 (+5V)</td>
<td>COM port (RS232)</td>
</tr>
<tr>
<td>X5</td>
<td>WLAN(ext.)</td>
<td>Optional: External antenna connection</td>
</tr>
<tr>
<td>X6</td>
<td>LAN1</td>
<td>LAN ports (RJ45 10/100/1000 MBit)</td>
</tr>
<tr>
<td>X7</td>
<td>LAN2</td>
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</tr>
<tr>
<td>X8</td>
<td>USB1</td>
<td>USB ports (USB 2.0)</td>
</tr>
<tr>
<td>X9</td>
<td>USB2</td>
<td></td>
</tr>
<tr>
<td>X10</td>
<td>USB3</td>
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</tr>
</tbody>
</table>
3.5  Service Chamber: WMT115 Interfaces

<table>
<thead>
<tr>
<th>No.</th>
<th>Designation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>FE1 / FE2</td>
<td>PE earthing</td>
</tr>
<tr>
<td>X2</td>
<td>0V/IGN/24V</td>
<td>DC In</td>
</tr>
<tr>
<td>S1</td>
<td>Autostart ON/OFF</td>
<td>Autostart function</td>
</tr>
<tr>
<td>S2</td>
<td>COM 1 +5V:OFF/ON</td>
<td>5V switching to COM1 port</td>
</tr>
<tr>
<td>X3</td>
<td>COM2</td>
<td>Optional: additional COM port (RS232)</td>
</tr>
<tr>
<td>X4</td>
<td>COM1 (+5V)</td>
<td>COM port (RS232)</td>
</tr>
<tr>
<td>X5</td>
<td>WLAN(ext.)</td>
<td>Optional: External antenna connection</td>
</tr>
<tr>
<td>X6</td>
<td>LAN1</td>
<td>LAN ports (RJ45 10/100/1000 MBit)</td>
</tr>
<tr>
<td>X7</td>
<td>LAN2</td>
<td></td>
</tr>
<tr>
<td>X8</td>
<td>USB1</td>
<td>USB ports (USB 2.0)</td>
</tr>
<tr>
<td>X9</td>
<td>USB2</td>
<td></td>
</tr>
<tr>
<td>X10</td>
<td>USB3</td>
<td></td>
</tr>
</tbody>
</table>

3.6  COM1 / COM2 Serial Interface

A serial interface via pin 9 enables switching of an additional 5V. To be able to use this function, switch S2 in the service chamber must be set to ON and then the terminal must be restarted.

3.7  Autostart (S1)

The autostart function enables the device to start automatically when 24V / 48 V DC or 12 V DC is available at the V+ input. To be able to use this function, the autostart switch in the service chamber must be set to ON.

3.8  Release Contact (IGN)

The device provides the option of starting/blocking via an additional signal input. This function is used to protect the system against third-party access and also saves energy when used on battery-powered trucks or other mobile application sites. For configuration of the "ignition function", see section 6.2.8 Ignition Key.
4. Commissioning

4.1 Scope of Delivery

Check the contents of the packaging to ensure that they are complete:

- 1 x WMT truck terminal
- 1 x commissioning instructions
- 1 x lead-through terminal with 3-pin screw connection

4.2 Commissioning Instructions

A hard copy of the commissioning instruction is provided with the terminal.

4.2.1 Diagrams
### 4.2.2 Correct Use

The terminal must be operated and stored under the following conditions:

- **Temperature during operation**: -30°C to +50°C
- **Temperature during storage**: -40°C to +80°C
- **Air humidity**: 10% to 95% without condensate.

The terminal is protected against dust and jets of water in accordance with protection rating IP65.

Use in areas where there is a risk of explosion is prohibited.

### 4.2.3 Installation of the Grab Handle

**WARNING!**

Installation work on the terminal may be performed only by suitably trained electricians when the terminal has been secured and disconnected from the power.

Install the grab handle (Figure II, item 5) on the terminal using the screws supplied in the following sequence from the inside outwards:

1. WMT110 terminal
2. Mounting bracket
3. Washer
4. Torx Tx30

1. WMT115 terminal
2. Nord-Lock washer (large)
3. Mounting bracket
4. Nord-Lock washer (small)
5. Torx TX50
6. Cap

### 4.2.4 Installation of a VESA Support

Alternatively, the terminal can be installed using the VESA 75 hole pattern (Fig. II, item 3) with a suitable support, e.g. RAM Mount.

**Note**

The relevant safety measures must be observed at all times when handling electrostatically hazardous components. (DIN EN61340-5-1 / DIN EN 61340-5-2).
4.2.5 Opening the Service Chamber Cover
Remove the screws from the service chamber cover (Fig. II, item 4) using a Torx Tx10 screwdriver. Remove the service chamber cover from the terminal.

4.2.6 Connection of the Cables
Connect all required cables within the service chamber. Use the grommets (Fig. III, item 8) to ensure the IP65 protection rating. The grommets have a slot on the side for inserting the cables.

4.2.7 Connection of the Power Source
The terminal is supplied via a 3-pin connector (Phoenix Contact MC 1.5/ 3-STF-3.81) with either 12 V or 24 V/48 V DC depending on the version (Fig. III, item 7).

1: 0 V DC
2: Release contact/ignition
3: 12 V or 24 V/48 V DC

Note
Check the required power supply on the terminal data plate (Fig. II, item 2).
Input: 12 V – operating voltage 6.5 V to 16 V DC
Input: 24/48 V – operating voltage 16.8 V to 72 V DC

Earthing to the truck chassis is via 2x1.5 mm² flat-plug contacts (Fig. III, item 6).

Caution! △
The protective conductor must always be attached.
Without the protective conductor, there is a risk of overvoltage at the terminal.
The power supply must be equipped with a fuse:
7 A for 12 V DC
4 A for 24 V/48 V DC

4.2.8 Closing the Service Chamber Cover
Once the work is complete, the removed service chamber cover needs to be re-installed on the terminal with the screws. Make sure that the grommets (Fig. III, item 8) are in the correct position during installation.
4.2.9 Switching on the Terminal

Once the terminal has been connected to the power source and the service chamber has been re-sealed, the terminal can be commissioned. To do this, press the Power-On button on the front for approx. 1 second (Fig. I, item 1).

<table>
<thead>
<tr>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>To avoid condensation water, the terminal must not be switched on until it has adjusted to the room temperature.</td>
</tr>
</tbody>
</table>

If the terminal shows obvious signs of damage, caused e.g. by incorrect operating/storage conditions or improper use, it must be taken out of commission immediately and secured against inadvertent recommissioning.

4.2.10 Opening the Terminal

The terminal (apart from the service chamber) must not be opened by personnel not authorised by Jungheinrich; action to the contrary will invalidate the warranty.
4.3 Status Displays

SYS LED
A separate on/off button on the front with a status LED (active = green / inactive = off)

WLAN LED on the front (WMT110 only)

<table>
<thead>
<tr>
<th>WLAN display</th>
<th>Behaviour</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="WLAN icon" /> Green/static</td>
<td>Device is connected to a WLAN network.</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="WLAN icon" /> Red/static</td>
<td>Device is not connected to a WLAN network.</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="WLAN icon" /> Off</td>
<td>WLAN deactivated</td>
<td></td>
</tr>
</tbody>
</table>

NOTE
The WLAN LED indicates only the connection status. Correct IP configuration or routing is not verified by the LED display and must be ensured manually.

Bluetooth LED on the front (WMT110 only)

<table>
<thead>
<tr>
<th>Bluetooth display</th>
<th>Behaviour</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Bluetooth icon" /> Blue/static</td>
<td>Device is connected via Bluetooth</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Bluetooth icon" /> Off</td>
<td>Bluetooth has no connection to another subscriber</td>
<td></td>
</tr>
</tbody>
</table>

The Bluetooth interface is configured via the Windows tool.
5. Operation

5.1 Users

5.1.1 Windows Embedded Standard 7

When the device is switched on for the first time, the device automatically starts up in administrator mode and the Jungheinrich Setup Wizard appears (see 6.1 Jungheinrich WMT Setup Wizard). The device will continue to start up in administrator mode until the Setup Wizard has been completed.

5.1.2 User: User

Once the Jungheinrich Setup Wizard has been completed, the device automatically starts up in user mode.

- Username: User
- User group: Users
- Password: user

**NOTE**

**Changing the autologon user:**

To change the autologon user, e.g. after an active directory domain integration, the autologon settings in the registry can be changed as follows:

<table>
<thead>
<tr>
<th>Registry path</th>
<th>Value</th>
<th>Default</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>[HKLM\Software\Microsoft\Windows NT\CurrentVersion\winlogon]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AutoAdminLogon</td>
<td>REG_SZ 0 (off) / 1 (on)</td>
<td>1</td>
<td>Deactivate/activate automatic logon</td>
</tr>
<tr>
<td>DefaultUserName</td>
<td>REG_SZ &lt;string&gt;</td>
<td>user</td>
<td>Username for autologon</td>
</tr>
<tr>
<td>DefaultPassword</td>
<td>REG_SZ &lt;string&gt;</td>
<td>user</td>
<td>User password for autologon</td>
</tr>
<tr>
<td>DefaultDomainName</td>
<td>REG_SZ &lt;&lt;empty&gt;&gt;</td>
<td>&lt;&lt;empty&gt;&gt;</td>
<td>Domain name (if device is a domain member)</td>
</tr>
</tbody>
</table>

5.1.3 User: Admin

The administrator user is required in order to make changes to the configuration:

- Username: Admin
- User group: Administrators
- Password: jhwmt

When a USB barcode scanner is connected, the standard password can also be scanned in via the following barcode (barcode type: Code 128):
### 5.2 Front Operating Buttons

The device front buttons are preconfigured ex works as follows:

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
</table>
| ![Power Button](image) | On/off button for the device.  
The operating system is shut down, but the device is not disconnected from the input voltage. |
| ![Shift Button](image) | SHIFT button for the second keyboard level.  
The button is pressed. The corresponding function button can then be pressed. |
| ![Cancel Button](image) | Level 1: Cancel the relevant action (ESC)  
Level 2: Reduce brightness |
| ![Navigate Button Up](image) | Level 1: Navigate up  
Level 2: Increase brightness |
| ![Navigate Button Down](image) | Level 1: Navigate down  
Level 2: Decrease volume |
| ![Confirm Button](image) | Level 1: Confirm the relevant action  
Level 2: Increase the volume |

With the exception of the FN button and the on/off button, all buttons can be individually configured via the WMT Configuration Center.

**NOTE**

The assignment of the front buttons in the BIOS differs from that in the operating system. See chapter 7. BIOS.
6. Configuration

This section describes the functions for setting up the device and software-specific configuration options.

6.1 Jungheinrich WMT Setup Wizard

The Jungheinrich WMT Setup Wizard is used for the initial set-up of the device and is run automatically when the device is started up for the first time. This wizard is used to configure the following settings:

- Touchscreen calibration
- Language and region
- Date, time and time zone
- Terminal name
- Network settings (TCP/IPv4)
- WLAN profile

The wizard can be accessed later on manually via the Admin user's desktop shortcut "WMT Setup Wizard" or via the following path: "C:\Program Files\Jungheinrich\Setup Assistant\setupass.exe"

NOTE

Once the Setup Wizard is complete, the device restarts.
NOTE

The WMT Setup Wizard supports only WLAN profiles with WEP encryption or WPA / WPA2 encryptions with Pre-Shared-Key (PSK) authentication. WLAN profiles with EAP authentication must be set manually via the integrated Windows network configuration.

6.2 WMT Configuration Center

The "WMT Configuration Center" is used to configure the device-specific settings and can be launched via the "WMT Configuration Center" desktop icon or via this path: "C:\Program Files\Jungheinrich\devtools\WMT Configuration Center.LNK". Administrator rights are required in order to launch the applications.

The "WMT Info Center" can be run without administrator rights as "User" via the desktop icon and is used solely to display system information. System changes are not possible from here.
The following sections describe the individual menu items in the "WMT Configuration Center".

### 6.2.1 System Information

Displays system-specific information:
- Computer name
- Device type
- Serial number
- BIOS version
- Firmware version
- Network information
- Hardware equipment

The displays in the "WMT Configuration Center" and the "WMT Info Center" are identical.

### 6.2.2 USB Lock

Tool used to deactivate USB ports.
NOTE

Only the data connection is blocked. It is still possible to charge USB devices. The front USB port can be completely deactivated via the BIOS.

To deactivate a USB port, activate the checkbox for the corresponding USB port and save your selection via the disk symbol in the top-right corner.

Symbol for saving the settings:

6.2.3 Front Buttons

Enables user-specific configuration of the front buttons beneath the touchscreen. The standard assignment of the buttons can be overwritten with a user-specific configuration via the configuration menu.

For the standard assignment, see "Front Operating Buttons".
Changing the assignment of the front buttons:

1. Mark the front buttons to be changed. (Screenshot shows FN + X)
2. Select "Change".
3. Choose an action.
4. Follow the instructions in the wizard.
5. Save the configuration using the disk symbol in the top-right corner.

The configuration of the front buttons is stored at the following registry path:
"[HKEY_LOCAL_MACHINE\SOFTWARE\Jungheinrich\FkCommProxy]"

6.2.4 On-Screen Keyboard

As well as the Windows integrated on-screen keyboard (osk.exe), there is another configurable on-screen keyboard that can be launched from the following symbol in the taskbar.

Standard layout of the on-screen keyboard:

![On-screen keyboard layout]

The following settings for the on-screen keyboard can be adjusted via the Configuration Center:

- Input language
- Keyboard layout (alphanumeric / numeric)
- Display (colours / transparency)
- Auto-hide after a period of inactivity (timeout in seconds)
- Activation of key sequences
- Blocking of Control keys
6.2.5 Serial Port Wedge

The Serial Port Wedge tool is used to interpret all incoming data through keyboard input via the selected COM port. It is also possible to configure a precode or postcode that should also be transmitted before or after the input.

Application example: Barcode scanner with serial connection.
Configuring the Serial Port Wedge:
1. Select the COM port
2. Activate the checkbox next to "Enable port for Serial Wedge"
3. Configure the transmission data in accordance with the requirements of your serial device
4. Optional: Configure a precode (inserted before the input)
5. Optional: Configure a postcode (inserted after the input)
6. Save the configuration using the disk symbol in the top-right corner

**NOTE**
Only one process can access a COM port.

### 6.2.6 File-Based Write Filter (FBWF)

FBWF is a Microsoft driver that, when enabled, diverts all I/O operations to the hard drive and stores them in an intermediary cache. When the device is restarted, all changes made in this cache are discarded. To be able to store changes permanently on the device, the FBWF must be disabled and then the required changes must be made.
The WMT Configuration Center can be used to exclude folders or files from write protection; this setting will remain after a restart, even if write protection is activated. By default, the folder "C:\DATA" is excluded from write protection. Files and folders can be added manually via the "Add folder ..." or "Add file ..." button, or they can be removed via the "Remove item" button.

Once configuration is complete, it is recommended to operate the terminal with FBWF enabled in order to avoid unwanted changes to the configuration.

NOTE
The change to the status of the File-Based Write Filter is not applied until the device is restarted.

The current write-protection status can be determined either via the FBWF configuration menu or via the desktop background display.
This section is used to configure the system volume and the display brightness. It is also possible to activate automatic brightness control. The brightness sensor is directly above the power LED. The "Switching threshold" specifies at which difference in brightness between "Night mode" and "Day Mode" the switch takes place.

The "Night mode brightness" and the "Day mode brightness" values specify the percentage of maximum brightness that is used in the respective mode.

**Default values on delivery:**
Switching threshold: 20
Night mode brightness: 20%
Day mode brightness: 100%

### 6.2.8 Ignition Key

See introductory section [Release Contact (IGN)](#).
Activate ignition key functionality
Activates the ignition key function. If the ignition voltage is not present at the terminal, the function selected under "Action" is applied.

NOTE
If there is no ignition voltage at the terminal, the device can be rendered unusable by activating the ignition function from the software, as – depending on the configuration – the device can be immediately blocked or shut down.

Invert activation logic
Changes the logic for execution of the ignition key function. The function selected under "Action" is executed only if there is ignition voltage present at the terminal.

Show text
Option for individual text display when the ignition function is executed.

Block screen
Blocks / protects the screen against input.

Block screen and power off backlight
Blocks / protects the screen against input and switches off the display.
**Lock workstation**
Locks the current user's workstation.

**Shutdown**
Shuts down the device.

**Sleep**
Places the device in energy-saving mode.

**Timeout in seconds**
Specifies the number of seconds after which the selected action will be performed.

**Background color**
Specifies the colour of the background.

**Background color transparency (%)**
Specifies the transparency of the background colour.

**Text Color**
Specifies the colour of the text.

**Text color transparency (%)**
Specifies the transparency of the text colour.

**Font family**
Specifies the font.

**Font point size**
Specifies the font size.

**Image file**
Option of displaying an image file.

**Thumbnail**
Displays the image selected under "Image file".

**Image alignment**
Defines the image positioning.
6.2.9  Power Button

Controls the behaviour when the power button is pressed.

**Use Power-On delay**
Specifies the time in seconds for which the power button must be pressed in order to switch on the device.

**Use power button to turn the device off**
Specifies the behaviour when the power button is pressed during operation.

**Use Power-Off delay**
Specifies the delay after which the selected action will be performed.

**NOTE**
If the power button is pressed for more than 5 seconds, the device will undergo a hard shutdown regardless of the configuration.

6.3  Configuration Deviations from the Windows Standard

The following settings differ from the Windows standard configuration:

- Windows Remote Desktop (RDP) connections are activated for “Admin” and “User”
- Windows Action Center messages have been deactivated
- Windows Firewall has been deactivated for home networks, work networks and public networks
- AutoPlay options have been deactivated
- File extensions are displayed
- The power options have been adapted for continuous operation
- The home page for Internet Explorer is www.jungheinrich.com
- All symbols and icons are displayed in the notification area

6.4 Pre-Installed 3rd-Party Software

The following third-party software is pre-installed on the Jungheinrich WMT11X:

<table>
<thead>
<tr>
<th>Product name</th>
<th>Manufacturer</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Reader XI</td>
<td>Adobe Systems Inc.</td>
<td>Opening PDF files</td>
</tr>
<tr>
<td>Atheros Client</td>
<td>Atheros</td>
<td>See WLAN configuration</td>
</tr>
<tr>
<td>Elo Touchscreen</td>
<td>Elo Touch Solutions</td>
<td>Configuring the touchscreen</td>
</tr>
<tr>
<td>Wavelink Telnet Client</td>
<td>LANDesk Software Inc.</td>
<td>Enables Telnet connections</td>
</tr>
<tr>
<td>CCX Diagnostic Utility</td>
<td>Cisco</td>
<td>WLAN diagnostic tool</td>
</tr>
</tbody>
</table>

6.4.1 Elo Touchscreen

This software is used to configure the touch display and can be accessed via the system controls.

The following functions are available:
- Handling the touch controls
- Defining the double-click zones
- Defining acoustic touch feedback
- Performing calibration
- Deactivating the touch function

In "normal" calibration mode, a 3-point calibration is performed. In "enhanced" mode, a more precise, 29-point calibration is carried out.
6.4.2 Wavelink Telnet Client

Wavelink Telnet Client is one of the leading emulation clients for presenting emulation connections to host servers with connection protocols VT, 5250, 3270 and HP, and is pre-installed as standard on every Jungheinrich WMT11X terminal. Wavelink can be called up as standard via the Start menu or via the following path:

"C:\Program Files\Wavelink\Telnet\TelnetWin\TelnetWin.exe"

NOTE

The client is only pre-installed and must be licensed to enable full usage. The Wavelink Client can be used for testing and demonstration purposes for one hour without restrictions. After one hour, all connections are severed and the client must be restarted. Wavelink licences can be obtained via Jungheinrich.

Further information and the operation instructions for the Wavelink Telnet Client are available from www.wavelink.com.
7. BIOS

**NOTE**
The BIOS setup menu and the BIOS one-time boot menu are secured with the standard BIOS administrator password "jhwmt" ex works.

When a USB barcode scanner is connected, the standard password can also be scanned in via the following barcode (barcode type: Code 128):

![Barcode Image]

To start the BIOS menu, please press the delete/return key (external keyboard) directly after switching on the device.

The one-time boot menu can be opened via the ESC key (external keyboard) or via the following front button when the Jungheinrich boot logo is displayed:

![Front Button Image]

The BIOS setup menu can be launched from the "Enter Setup" entry.

### 7.1 Navigating in the BIOS Menus

**NOTE**
The assignment of the front buttons in the BIOS differs from that in the operating system.

<table>
<thead>
<tr>
<th>FN</th>
<th>SHIFT button for the second keyboard level. The button is pressed. The corresponding function button can then be pressed.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level 1: Cancel the relevant action (ESC)</td>
</tr>
<tr>
<td></td>
<td>Level 2: No function</td>
</tr>
</tbody>
</table>
## 7.1.1 Activating/Deactivating Interfaces

### BIOS menu: Advanced & Chipset

Enables the configuration of power, hardware and interface properties. The settings are tailored to the Jungheinrich WMT 11X ex works and should be changed only by experienced personnel.

Selected interfaces can be activated/deactivated via the following menu path:

<table>
<thead>
<tr>
<th>Interface</th>
<th>Menu path</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXE boot</td>
<td>Advanced → System Settings → PXE ROM</td>
<td>Disabled</td>
</tr>
<tr>
<td></td>
<td>See also: Advanced → Network Stack Configuration</td>
<td></td>
</tr>
<tr>
<td>Front USB</td>
<td>Advanced → System Settings → Front USB</td>
<td>Enabled</td>
</tr>
<tr>
<td>Bluetooth module</td>
<td>Advanced → System Settings → Bluetooth</td>
<td>Enabled</td>
</tr>
<tr>
<td>WLAN card</td>
<td>Advanced → System Settings → EC-Firmware Configuration → EC-Firmware Device Enables → WLAN</td>
<td>Enabled</td>
</tr>
<tr>
<td>Audio card</td>
<td>Chipset → South Bridge → Azalia HD Audio → Audio Controller</td>
<td>Enabled</td>
</tr>
</tbody>
</table>
8. New Installation / Backup & Clone / Restore

The sections that follow describe a new installation, creating a backup of the terminal and restoring a backup:

- **Installation / Restore**
  A new installation or a restore resets the terminal to factory settings or to the status of a backup.

- **Backup**
  A backup "backs up" the terminal and can be restored in the event of an error or used to configure a new terminal. There are two types of backup:
  
  o **Clone master image:**
    A clone master image is a backup of a terminal that has already been configured, and can be restored on any number of Jungheinrich WMT terminals. To enable loading of the backup onto multiple devices, the following settings are reset during the clone process and must be configured manually following the restore:
  
  o **Device backup image:**
    A device backup image is a one-to-one backup of a device, and can be restored only on that device (same serial number). A device backup image cannot be restored on multiple WMT terminals. To restore a backup on multiple devices, please use the clone master image.

**NOTE**
An installation USB stick must be used for new installation and for backup and restore
8.1 Creating the Installation USB Stick

The new installation of the terminal requires a bootable USB stick.

8.1.1 Requirements:

- USB stick with at least 7 GB storage space
- Administrative rights

**NOTE**
The size of the USB stick depends on the occupied storage space on the terminal or the size of the backup image file (.wim). A 7 GB USB stick is sufficient for a new installation.

- PC with Microsoft Windows 7 (or later)
- Bootable USB Wizard for creating the installation USB stick:
  Download the latest version of the "Bootable USB Wizard" from the Jungheinrich RDT Support home page:
  https://support-rdt.jungheinrich.com/support/

**NOTE**
Run the wizard from your local PC; not from a network drive.
8.1.2 Creating the Installation USB Stick

Download the latest version of the bootable USB wizard from the support website. Extract the archive then launch "bootusbcreator.exe" with administrative rights.

Confirm the welcome page with "Next".

Connect the USB stick to the computer and select the USB stick from the drop-down menu. Now select the image file to be installed on the terminal. If only a device image backup is to be performed, check the box next to "Don’t want to copy a image file to the flash drive".

To reset the device to factory settings, download the latest image from www.support-rdt.jungheinrich.com.

Continue with "Next" and check the settings before completing the process with "Finish". The USB stick is then formatted and prepared for the installation.
NOTE
All data on the USB stick is irretrievably deleted once the "Finish" button is pressed.

8.1.3 Booting from the Installation USB Stick

Before switching on the device, connect the installation USB stick to one of the USB ports. Switch on the device, launch the one-time boot menu via the "ESC" key (see section 7 BIOS) and select the USB stick.

NOTE
When performing the new installation, only the boot USB stick should be connected to the terminal. Do not use a USB hub; connect the boot USB stick directly to one of the available USB ports.

The terminal loads the setup files from the USB stick and launches the "Backup and Restore System" tool. Continue with the required installation.
Command Prompt
Opens a command line window. This option is required only for troubleshooting measures.

Shutdown
Switches off the terminal.

Restart
Restarts the terminal.

The "Create System Backup" and "Restore System from Backup" are covered in the next sections.

8.2 Creating a Device Image Backup
Create an installation USB stick and boot from this USB stick (see previous section). From the "Backup and Restore System", select "Create System Backup".

Requirements for a device image backup:
- Prepared installation USB stick without operating system image
- Sufficient space on the USB stick depending on the storage space occupied on the terminal
- Deactivated File-Based Write Filter (FBWF)
NOTE
This does not relate to a clone master image backup. The next section covers how to create a clone master image. A device image backup creates one backup for one device and may be restored only on that device (same serial number).

NOTE
The "File Based Write Filter" must be deactivated before performing a backup. Otherwise, the backup will contain errors.

A command line window opens that automatically executes creation of the backup. The progress of the backup creation is displayed during the backup process. Once the backup is complete, the terminal is automatically restarted and booted from the internal memory card.

The backup is stored on the USB stick under "X:\images\install.wim", where X: is the drive letter for the USB stick. To restore the backup, select this image file while creating the installation USB stick. (See previous section.)
8.3 New Installation / Restore System from Backup

Restores the image selected during the creation of the installation USB stick wizard (see previous section) on the terminal.

Once the button is pressed, a command line window opens that automatically performs the new installation of the device. The progress is displayed during the installation process.

Once the installation is complete, the terminal is automatically restarted and booted from the internal (newly installed) memory card.

8.4 Creating a Clone Master Image

A clone master image is a backup of a terminal that has already been configured, and can be restored on any number of Jungheinrich WMT terminals. To be able to restore the backup on multiple devices, some device-specific settings are removed during the clone process, e.g. computer name, IP configuration. These settings must be manually reconfigured once the clone process is complete.
Requirements for a clone master image:

- Administrative rights
- Deactivated File-Based Write Filter (FBWF)
- USB stick of at least 7 GB – depending on the occupied storage space on the terminal.

The "Clone Master Image" is created via the "Clone Wizard". This can be launched via the link on the desktop from the "Admin" start menu, or from the following path:
"C:\Program Files\Jungheinrich\Clone Assistant\cloneass.exe"

If the File-Based Write Filter is enabled, you will receive the following message:

Confirm this message with "Yes"; the terminal will be automatically restarted and the File-Based Write Filter will be disabled. If you wish to disable the FBWF manually and restart the device, select "No". Then launch the Clone Wizard again in order to continue with the clone master image.
Confirm the welcome message with "Next".

Give the backup image file a name and connect a USB stick with at least 7 GB of storage space.
NOTE
The size of the USB stick depends on the occupied storage space on the terminal and may need to be larger depending on the storage requirements.

NOTE
Only one USB storage device may be connected to the terminal during the clone process.

NOTE
The "Next" button is available only once all conditions have been met.

If all conditions have been met, continue with "Next".

Select the language and regional settings for the clone master image and confirm with "Next". To save storage space, it is possible to exclude languages that are not required via the "Other languages shall be removed" option.
Read the overview page carefully and launch the clone process with "Finish".

**NOTE**
All data on the USB stick is irretrievably deleted.

The terminal restarts automatically and boots the "**Jungheinrich Backup and Restore System**", which automatically backs up the clone master image.

Once the clone master backup is complete, the device is restarted automatically and boots from the internal memory card.

The master clone image is stored under "X:\images\WMT1XX-WS7P-<<filename>>.wim", where <<filename>> is the name entered previously and "X:" is the drive letter for the USB stick.

To restore the image, use this file while creating the installation USB stick.
(See previous section.)