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[Home](#) » [Beijer ELECTRONICS](#) » **Beijer ELECTRONICS OS3 Unveils Human Machine Interface**

**User Guide** 



**OS3 1.0**

**User Guide**

**MAEN435A**

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## Contents [ [hide](#) ]

- 1 [OS3 Unveils Human Machine](#)
- 2 [About OS3](#)
- 3 [Initial Device Setup](#)
- 4 [How to Access OS3](#)
- 5 [OS3 Menu](#)
- 6 [About Page](#)
- 7 [Apps](#)
- 8 [User Management](#)
- 9 [System Settings](#)
- 10 [Reboot the HMI panel](#)
- 11 [System or Factory Reset](#)
- 12 [Update OS3](#)
- 13 [Optimize the HMI Panel's Lifespan](#)
- 14 [FAQ](#)
- 15 [Documents / Resources](#)
  - 15.1 [References](#)

## OS3 Unveils Human Machine

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## About OS3

OS3 is the operating system for all X3 HMI panels, excluding the X3 web variants. With OS3, the panel administrator can efficiently install and manage applications, configure system settings, and ensure that the end-user experience is securely contained within the HMI environment.

## Initial Device Setup

### ❗ IMPORTANT

During the first startup, the screen may remain black for over a minute before displaying any content. Do not cut the power during this boot process. If the panel loses power five times in a row during startup, it will enter Recovery Mode.

After the boot process, the initial setup wizard will appear. Here you must:

1. Accept the End User License Agreement (EULA).
2. Create Usernames and Passwords for the OS3 users Administrator and App Manager (optional).

For more information on OS3 users, see User Roles and Permissions.

### ❗ IMPORTANT

- After five consecutive failed login attempts, you must wait five minutes before trying to login again.
- Store OS3 login credentials securely, as they cannot be easily recovered. If they are lost, refer to Lost Username or Password.

## How to Access OS3

There are two ways to access OS3:

- Open OS3 From an App (recommended), or
- Open OS3 From Reboot

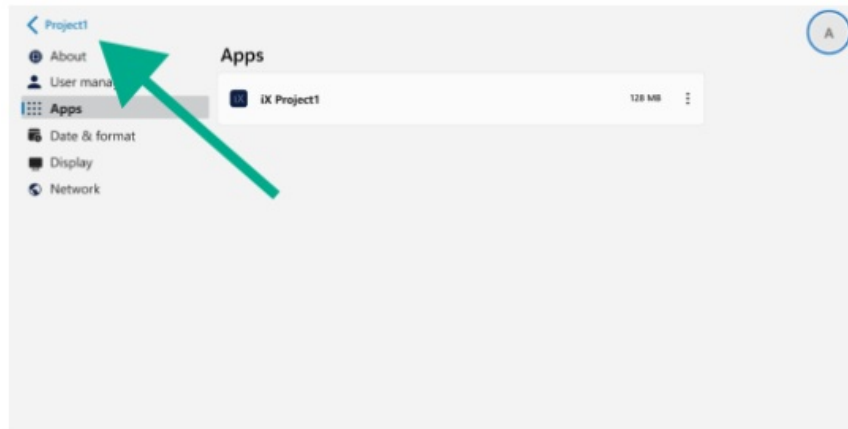
### 3.1. Open OS3 From an App

The recommended method for accessing OS3 is from a running app.

By default, OS3 is not accessible when an app is active in the foreground. The app developer must decide whether users can switch to OS3. To enable access, the app must include an action, such as a button, that opens OS3.

#### 3.1.1. Return to the App From OS3

To return to the app, tap the app name in the upper-left corner of the screen.



### 3.2. Open OS3 From Reboot

To access OS3 from reboot without starting an app:

1. Create an empty .txt file and name it bootinterrupt.txt.
2. Copy the file to a USB drive.
3. Connect the USB drive to the HMI panel.
4. Reboot the HMI panel.
5. Wait for the Device Reset window to appear.
6. Tap Cancel.

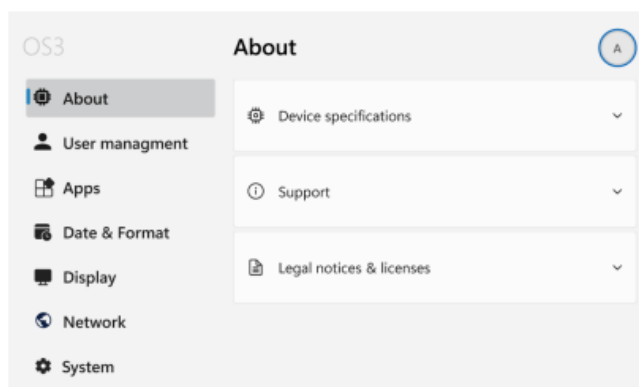
## OS3 Menu

The OS3 Menu includes the following pages:

- About – View device specifications, support, and legal information.
- User management – Change user password.
- Apps – Start applications, such as an iX App.
- Date & Format – Configure date, time, and regional settings.
- Display – Adjust brightness and set automatic turn-off display.

- Network – Check cable connection status and manage IP settings.
- System – Reboot the HMI panel, Perform a System Reset or Update OS3.

## About Page



On the About page you can view:

- Device Specifications – Device type, resolution, versions, IP settings, serial port configuration.

If logged in as Administrator, you can also see the device's serial number.

- Support – Link to this manual.
- Legal Notices & Licenses – Links to the End User License Agreements (EULA) and Third party license declarations.

## Apps

When logged in as Administrator or App Manager (see User Roles and Permissions), you can access the Apps page. Here you can Run, Stop, or Uninstall apps as needed.

### 6.1. Install Apps

Apps are installed from the development tool used to design them. Refer to the app's manual for installation instructions. When a new app is installed, the existing app is automatically stopped and uninstalled.

### 6.2. Automatic App Restart (App Watchdog)

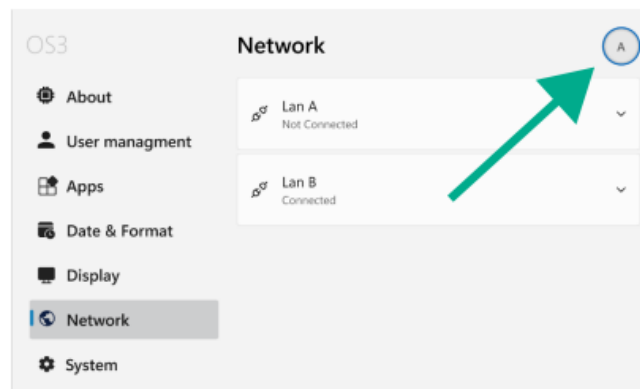
If an app shuts down—either by accident or on purpose—the system will automatically restart it within 10 seconds. During this time, the user can manually stop the restart. If the app exits with code 3011, it restarts immediately. This exit code allows the app developer to force an immediate restart.

## User Management

This section describes how to manage users in OS3. It explains how to switch users, outlines the available user roles and their permissions, and provides guidelines for managing usernames and passwords.

### 7.1. Switch User

To switch users in OS3, tap the user icon in the upper right of the screen.



### 7.2. User Roles and Permissions

OS3 includes three predefined user roles, each with different permissions:

Permission	Administrator	App Manager	Anonymous (not logged in)
<a href="#">Configure system settings</a>	Yes	No	No
<a href="#">Update OS3</a>	Yes	No	No
<a href="#">Perform system reset*</a>	Yes	Yes**	Yes**
<a href="#">Install apps</a>	Yes	Yes	No
<a href="#">Change password</a>	Yes	Yes	No
<a href="#">View the About page</a>	Yes	Yes	Yes
<a href="#">Reboot from OS3</a>	Yes	Yes	No

\* To Perform a System Reset, you need the HMI panel's serial number.

\*\* To perform a system reset, this user type must have physical access to the back of the HMI panel to locate the serial number and plug in a USB drive. For detailed instructions, see Perform a System Reset.

#### **TIP**

OS3 users are separate from app users. The app developer can implement additional security measures to protect specific pages.

### **7.3. Usernames and Passwords**

The usernames and passwords of the Administrator and the App Manager roles are set on Initial Device Setup.

#### **IMPORTANT**

- After five consecutive failed login attempts, you must wait five minutes before trying to login again.
- Store OS3 login credentials securely, as they cannot be easily recovered. If they are lost, refer to Lost Username or Password.

#### **7.3.1. Password Guidelines**

- Keep passwords confidential. Do not share them.
- Change your password immediately if you suspect it is compromised.
- Use passwords with at least eight characters; Beijer Electronics recommends fourteen or more.
- Avoid common words or patterns. Choose a strong password that is hard to guess—even by someone who knows you.
- Sign out when you leave the device unattended.
- Do not reuse the same passwords in OS3 and iX Developer.

#### **7.3.2. Change Password**

To change the password for the signed-in user, go to the User Management page and update the password.

#### **7.3.3. Lost Username or Password**

If a username or password for an OS3 user is lost, the only way to restore access is to Perform a System Reset. This will reset the system to default settings, erase all your

data, apps, and licenses, and require you to rerun the Initial Device Setup to set new usernames and passwords for the OS3 users. For more information on OS3 users, see User Roles and Permissions.

## System Settings

System settings in OS3 are either:

- Automatically set during app installation (see App System Requirements) or
- Manually set in OS3.

### NOTE

All settings that are currently configured manually are planned to be set automatically in future OS3 updates.

### System settings overview

Setting	Description	Automatically set during app installation	Manually set in OS3
<a href="#">Date &amp; Format</a>	Date, time, and regional settings.	No	Yes
<a href="#">Display</a>	Brightness and display timeout.	No	Yes
<a href="#">Firewall</a>	Reverse proxy and TCP/UDP ports for incoming traffic.	Yes	No
<a href="#">Network</a>	IP settings.	No	Yes
<a href="#">Serial Ports</a>	Serial port configuration.	Yes	No

### TIP

User access levels for system settings are described in User Roles and Permissions.

### 8.1. Date and Regional Settings

By default, the time is synchronized with [time.windows.com](https://time.windows.com).

When logged in as Administrator, you can manually change the time on the Date and



Format page.

To change the Regional format, tap the dropdown, start typing the region name. The dropdown will show available options.

Restart the HMI panel after changing time or region settings.

## **8.2. Display Settings**

To change display settings, log in as Administrator and go to the Display page.

### **Settings**

- Brightness – Use the slider to adjust the screen's brightness.
- Automatic turn off display – Select the time after which to automatically turn off the back-light.

This reduces the time the back-light is on, helping to extend the HMI panels lifespan.

## **8.3. Network Settings**

When logged in as Administrator, you can access the Network page to:

- Check cable connection status.
- Configure basic IP settings.

### **TIP**

For information about open network ports, see Network Ports in the iX Developer User Guide.

### **8.3.1. Firewall**

By default, OS3 system settings are configured for the highest security level. The firewall policy is set to block all incoming TCP/UDP communication to the HMI panel.

## **8.4. App System Requirements**

Some system settings are configured outside OS3, these system settings are called System Requirements and are defined by the installed app.

During installation, OS3 automatically checks and reserves the app's system requirements as system settings. If a required setting cannot be reserved, the installation will fail.

To see which settings are applied automatically or require manual configuration in OS3, refer to the table in System Settings.

### **TIP**

For instructions on how to define System Requirements in iX Developer, see System Requirements in the iX Developer User Guide.

#### 8.4.1. Serial Ports

When defining serial ports in the System Requirements, the following combinations are allowed:

	COM 1	COM 2	COM 3
Combination 1 (default)	RS232	RS422	—
Combination 2	RS232	RS485	—
Combination 3	RS232	RS485	RS485

- Selecting Any means the port remains available for other uses.
- If no serial port settings are applied, Combination 1 is used by default.

#### TIP

For instructions on how to configure serial ports, refer to the Beijer Electronics Driver List. Select your driver and navigate to Connecting to the Controller > Serial > Communication Ports.

### 8.5. View System Settings in OS3

Some system settings are visible in OS3, while others are not:

- Serial Ports settings and LAN A/B IP addresses are shown on the About page without login.
- Reverse proxy and TCP/UDP port settings are not visible in OS3. To check these, refer to the App System Requirements in the installed app.
- All settings that you can configure in OS3 are also visible there.
- If you change a setting from outside OS3, the new value may not appear until you switch pages and return.

### Reboot the HMI panel

There are two ways to reboot the HMI panel:

- Manually – Turn the power off and on.

### **IMPORTANT**

Avoid making any changes to settings or data immediately before a power cut. If changes were made recently, wait a moment to ensure they are fully saved before rebooting.

- From OS3 – Sign in as Administrator or App Manager (see User Roles and Permissions), go to the System page and select Reboot.

## **9.1. Recovery Mode**

If the HMI panel loses power five times in a row during startup, it will enter Recovery Mode. A blue screen with the message Choose your keyboard layout will appear. To exit Recovery Mode, Reboot the HMI panel and allow it to complete the boot sequence. This may take several minutes. When the startup is complete, the panel will display either the OS3 About Page or the running app.

## **System or Factory Reset**

If the Administrator password is lost or the application or HMI panel is not working properly, Perform a System Reset.

If the panel does not start at all, Perform a Factory Reset.

### **NOTE**

It is normal for the HMI panel to take several minutes to start, depending on the size of the application.

## **10.1. Perform a System Reset**

If the Administrator password is lost or the app or HMI panel is not functioning correctly, you can try a system reset to fix the issue.

A system reset removes all apps, users, and licenses. It restores OS3 to its default settings, but keeps the current OS3 version.

App data stored on external USB or SD cards will remain after the reset.

### **CAUTION**

A system reset cannot be undone!

You can perform a system reset in two ways:

#### **From OS3:**

1. Sign in as Administrator.

2. Go to the System page and select Reset.
3. Enter the serial number of the HMI panel.

Find the serial number:

- On the back of the HMI panel.
- In OS3, logged in as Administrator, go to About > Device Specifications.

### **During boot-up:**

1. Create an empty .txt file and name it bootinterrupt.txt.
2. Copy the file to a USB drive.
3. Connect the USB drive to the HMI panel.
4. Reboot the HMI panel.
5. Wait for the Device Reset window to appear.
6. Enter the serial number of the HMI panel, see above for location.
7. Select Reset to start the reset process.

## **10.2. Perform a Factory Reset**

If the panel does not start, you can perform a factory reset to fix the issue. This will delete all apps, users, and licenses and reset OS3 to its factory settings. The process may take up to one hour.

### **NOTE**

It is normal for the HMI panel to take several minutes to start, depending on the size of the application.

### **CAUTION**

Only use a factory reset as a last resort!

### **Instructions**

1. Download OS3 from SmartStore.
2. Unzip the package and ensure the folder name efi does not begin with an underscore.
3. Copy the unzipped files to an SD card.
4. Insert the SD card into the HMI panel and Reboot the HMI panel.
5. Wait for the installation to complete. This may take up to one hour. Do not turn off the panel or remove the SD card during the installation.
6. After the installation, the folder name efi is renamed to \_efi to prevent the panel from

updating again.

## **Update OS3**

To update OS3, do the following:

1. Download OS3 from SmartStore.
2. Unzip the package and copy the unzipped files to an SD card.
3. Insert the SD card into the HMI panel.
4. Sign in as Administrator.
5. Open the System page in OS3.
6. Tap Device Update > Update.
7. Tap Start Update to begin the process.

## **Optimize the HMI Panel's Lifespan**

To extend the HMI panel's lifespan, consider the following:

- Use the setting Automatic turn-off on the Display Settings page to automatically turn off the backlight. This reduces the amount of time the backlight is on, helping it last longer.
- In your app, minimize the number of writes to the internal flash memory. This reduces wear on the flash memory and extends its lifespan.

## **FAQ**

13.1. How can I enable users to navigate from my app to OS3 and then return to the app?

See [Open OS3 From an App](#).

13.2. I lost my password. How do I reset it?

See [Lost Username or Password](#).

13.3. Can I transfer my iX App using a USB flash drive?

Manual transfer via USB is currently not supported. This feature is planned for a future release.

13.4. Can I connect to the HMI panel using VNC?

VNC is not yet supported. Secure VNC will be introduced in a future update.

13.5. How do I open OS3 without launching any apps?

See Open OS3 From Reboot.

13.6. I'm having trouble scrolling using the scrollbar. What should I do?

TIP Do not tap the scrollbar itself. Instead, tap firmly on the content area and swipe up or down to scroll. For additional support, visit the Connected forum or contact Beijer Electronics support.

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## **Documents / Resources**



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## [Beijer ELECTRONICS OS3 Unveils Human Machine Interface \[pdf\]](#) User Guide

OS3, OS3 Unveils Human Machine Interface, Unveils Human Machine Interface, Machine Interface

## References

- [User Manual](#)

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