



Engineering Software

WAGO Device Manager

WAGO Device Sphere

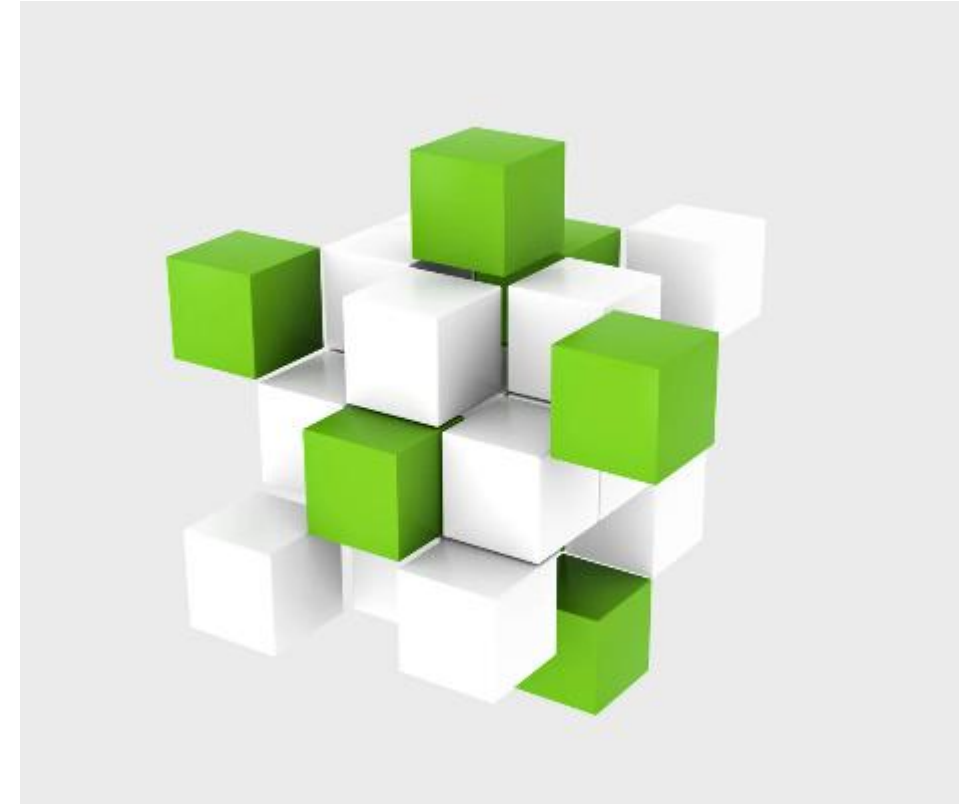
Overview



The right tool for each task



- WAGO's engineering landscape offers comfortable and efficient support for creation of the applications.
- There are different and optimal-fitting tools for each functionality and each part of the life-cycle.
- We use standards wherever possible.
- Leaving monolithic architecture: we are much more flexible in introducing new tools for new technology



Central key features



- Provisioning: **WAGO Download Center** as
 - central source for all types of software
 - central source for additional learning materials
 - central source for relevant system documentation

<https://downloadcenter.wago.com/>

- Navigation: **WAGO Navigator** as
 - central overview of installed engineering software
 - central access point for starting software
 - central information point about updates including notifications

Available from: <https://downloadcenter.wago.com>



Special tools for special tasks



- Native Parametrization and Configuration:

 - **WAGO Web Based Management**

- Parametrization and Configuration :

 - **WAGO Device Manager**



- Multi-Controller Device management:

 - **WAGO Device Sphere**

- Multi-Controller Project management:

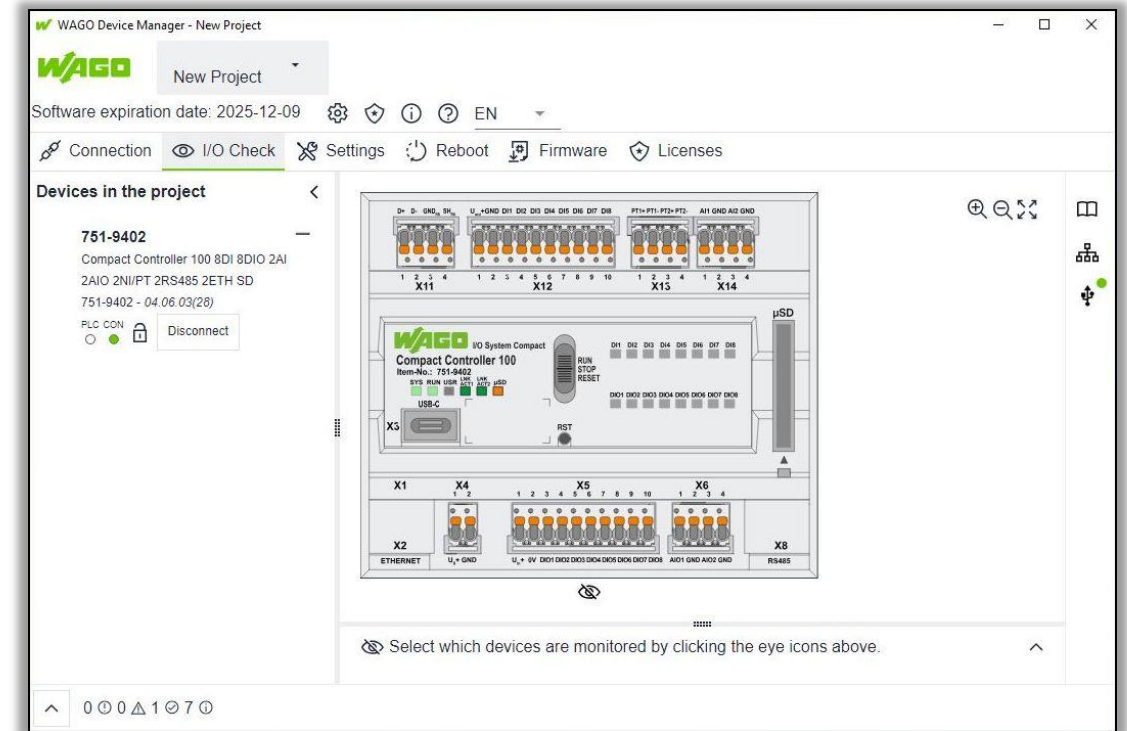
 - **WAGO Solution Builder**

- Programming in IEC61131 languages:

 - **CODESYS**

- Connecting tool functionality

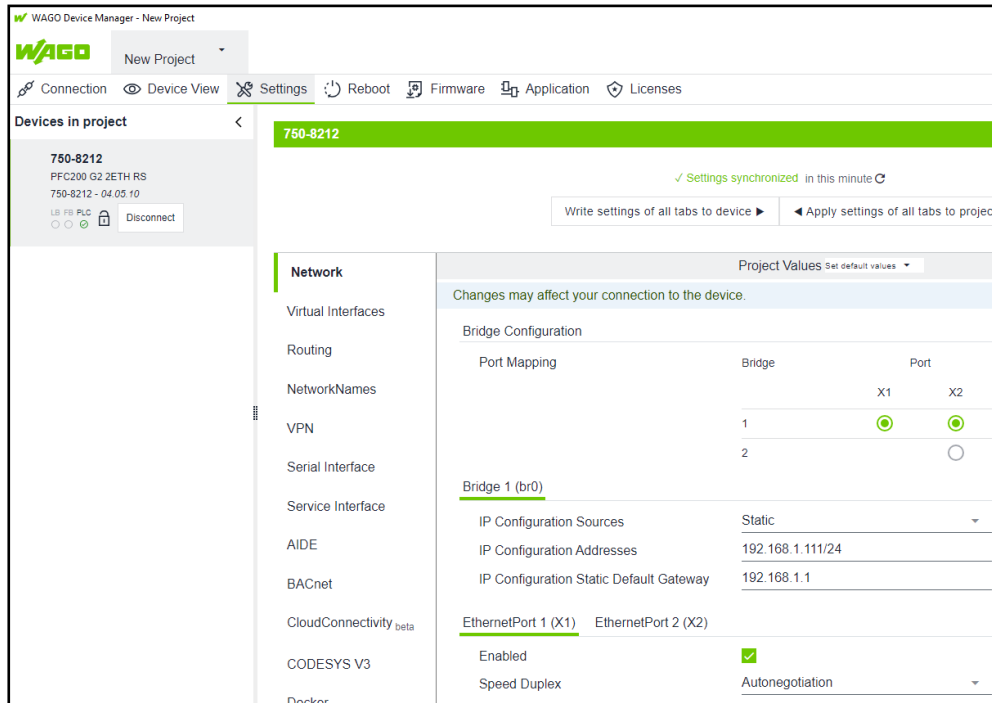
 - Different **Add-ons for CODESYS**



WAGO Device Manager



WAGO Device Manager – Main Functionality



- Combines functionality formally known from IO-Check, EthernetSettings and partly WAGOupload:
 - Configuration and Parameterization of single devices
 - Error Analysis
 - Firmware-Update
 - License-Handling
 - Wiring Test (depending on device firmware)
- Offline- and Online configuration with data comparison
- Connection via Ethernet or USB C by using a secure protocol
- Supported Device families in Version 1.3:
 - CC100, PFC200, TP600, EC



WAGO Device Manager: IO-Check

- Wiring Test Option
- Monitor mode enables watching actual I/O value
 - Raw values
 - Calculated values
- Control mode enables controlling actual IO values
- Graphical representation of device

The screenshot displays the WAGO Device Manager interface for a project named 'my-test-project'. The 'I/O Check' tab is selected, showing a graphical representation of the device and its I/O status.

Devices in the project:

- 751-9402/000-001
Compact Controller 100 8DI 8DO 2AI
2NI/PT 2RS485 2ETH SD
751-9402/000-001 - 04.06.03(28)
PLC CON Disconnect

Control mode: Control mode

Monitoring active (Latency: < 1s)

1: 751-9402/000-001

AI Channel	AI Value	DI Channel	DI Value	DO Channel	DO Value
X13 AI1 (RTD)	850 °C	X12 DI1	ON	X5 DO1	ON
X13 AI2 (RTD)	850 °C	X12 DI2	ON	X5 DO2	ON
X14 AI1	10 V	X12 DI3	OFF	X5 DO3	OFF
X14 AI2	0.007 V	X12 DI4	OFF	X5 DO4	OFF
		X12 DI5	OFF	X5 DO5	OFF
		X12 DI6	OFF	X5 DO6	OFF
		X12 DI7	OFF		

WAGO Device Manager: Network Settings

- Configuration of Bridge

- Switched

- Separated

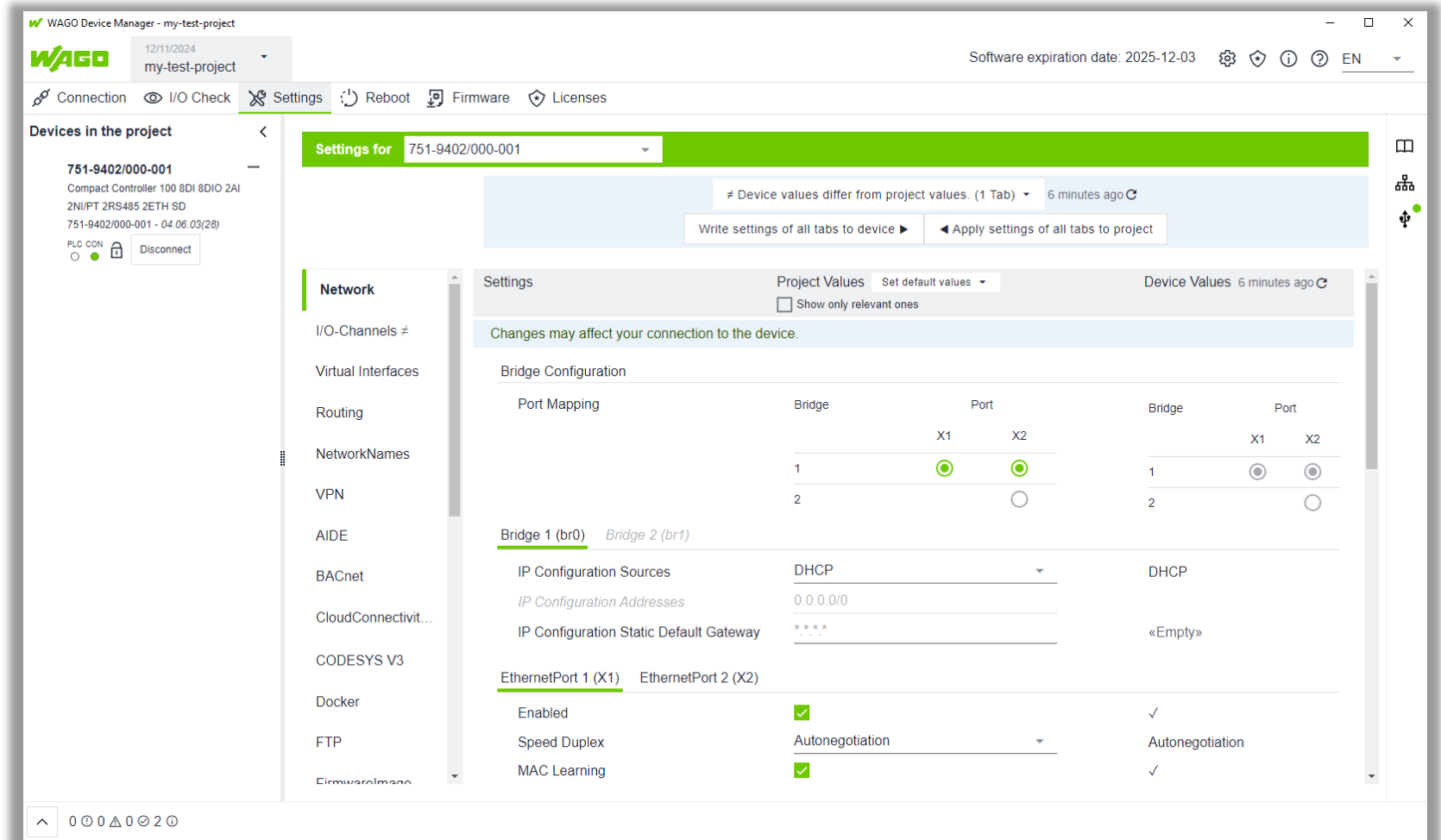
- IP settings

- Static

- DHCP

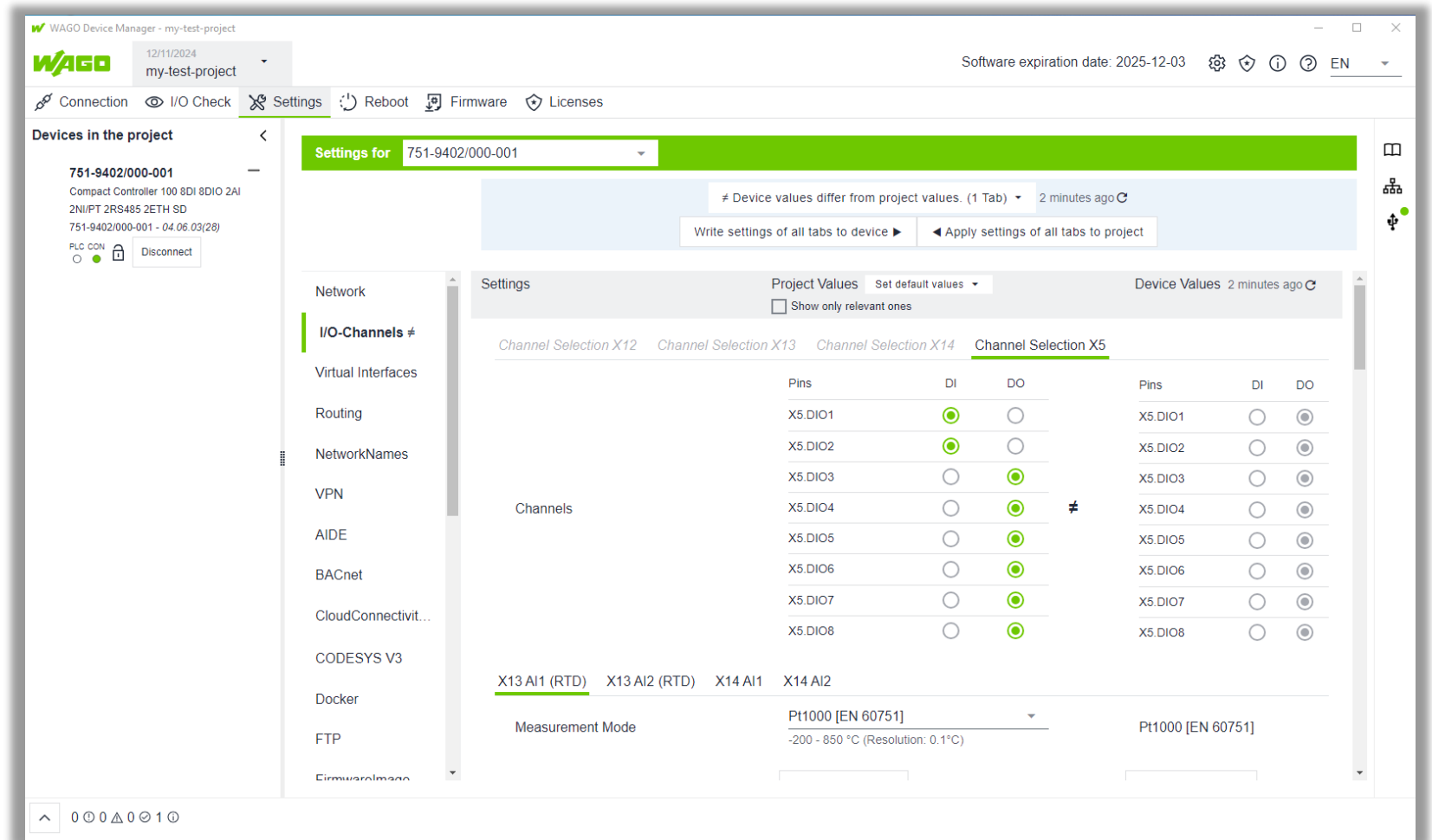
- Gateway settings

- ...



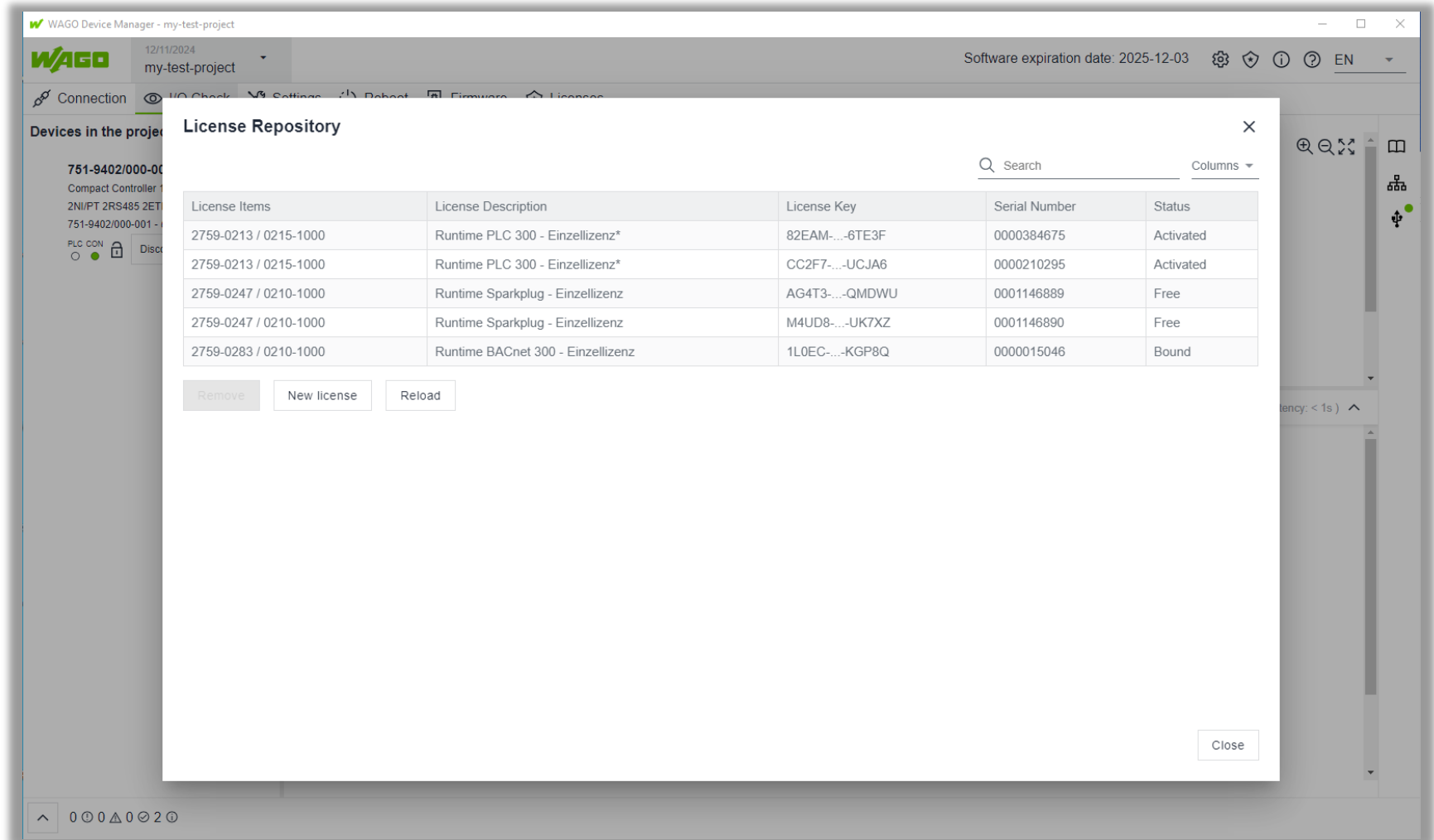
WAGO Device Manager: IO Configuration

- Configuration of flexible I/O clamps
- Example DIO:
 - Configuration as digital input
 - Configuration as digital output
- Example AI:
 - Configuration of sensor type



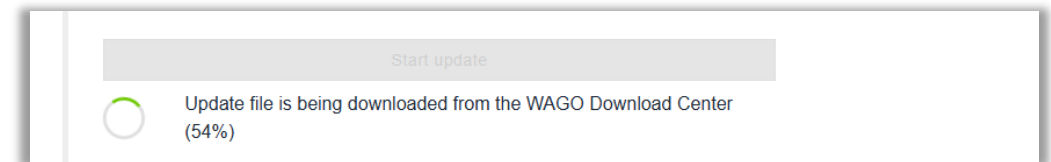
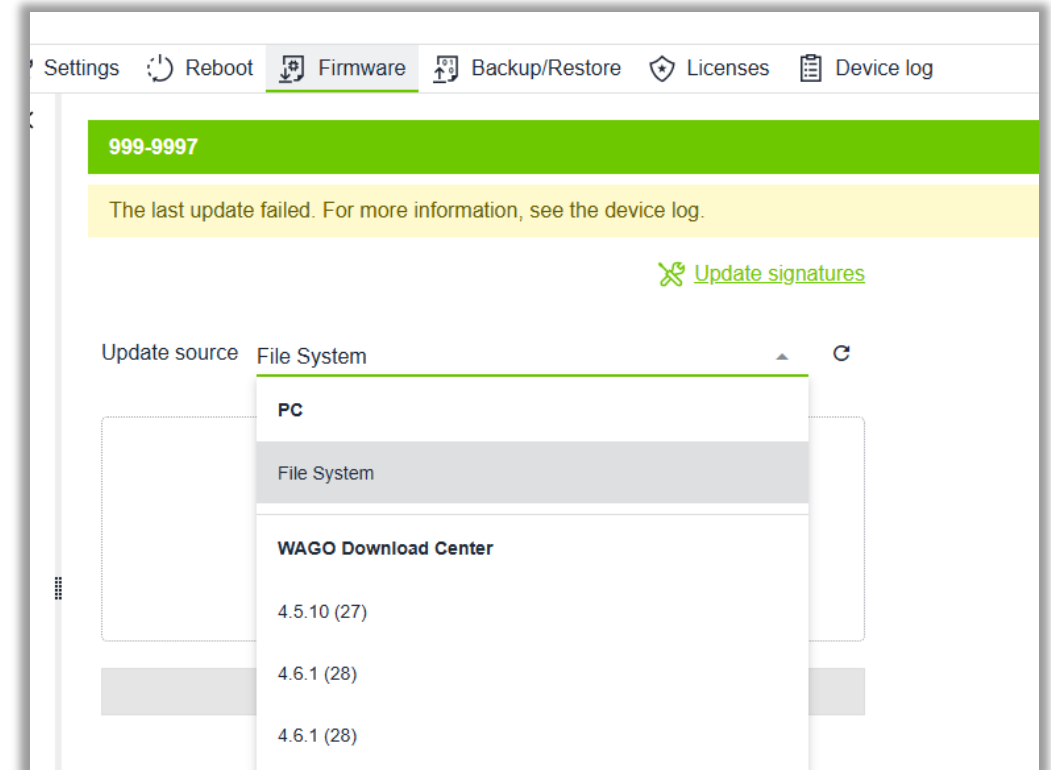
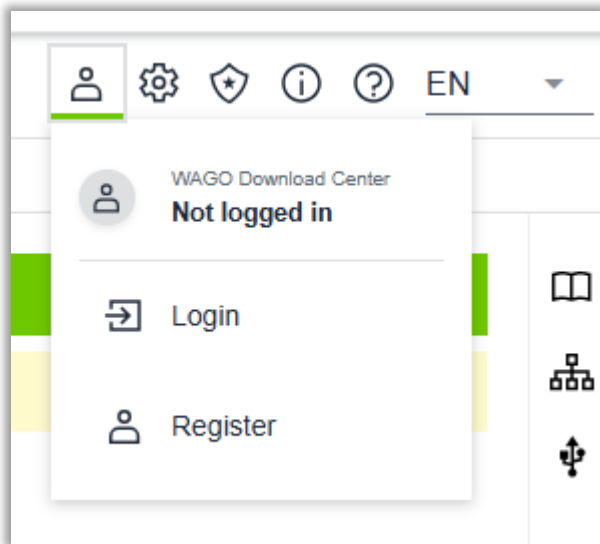
WAGO Device Manager: License Handling

- Managing of licenses for Controllers
 - See actual state
 - Add licenses
 - Delete license



WAGO Device Manager: Online Upgrade

- Direct access to Download Center
- Allows firmware upgrades of devices to newest versions from the moment of availability



WAGO Device Sphere





What is it good for?

The WAGO Device Sphere

Device management for WAGO Controllers offering...

- Secure access
- Single point of contact
- Offline configuration by design (digital twin)
- Open for other device integration
- Fast retrieval of the latest device status
- Single CPU load on the device for multiple clients

Target market: Potentially any customer...

- who has a large number of controllers in use
- who wants to reach all controllers via one access point (single point of contact)
- who wants to be put the controllers into operation with minimal effort
- who doesn't want to install software tools to use controllers
- who wants to integrate established container management systems (Docker, Portainer, ...)

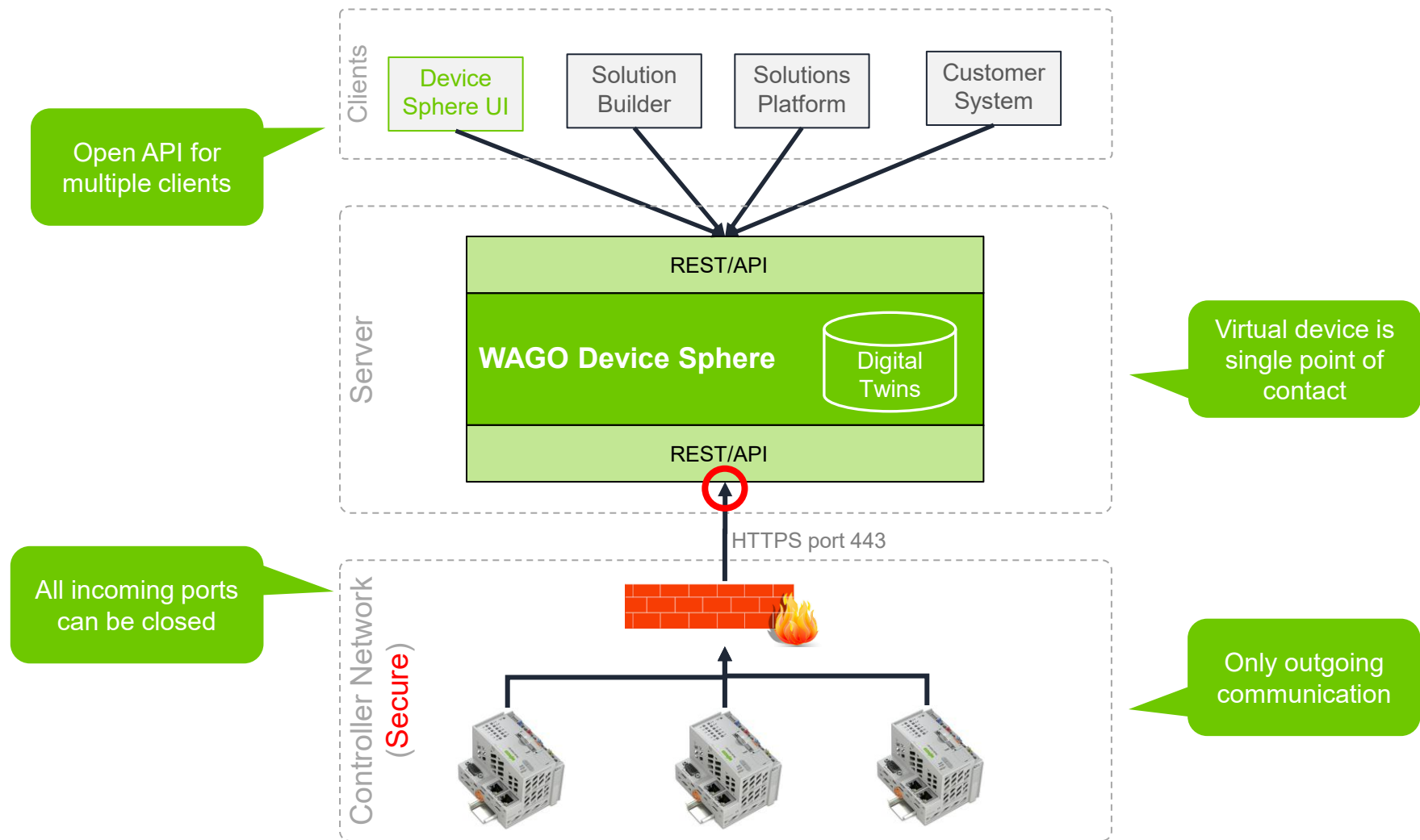
It is like the WAGO Device Manager – for many devices.
Both make use of WDA (WAGO Device Access).

Functionality: Main Use Cases



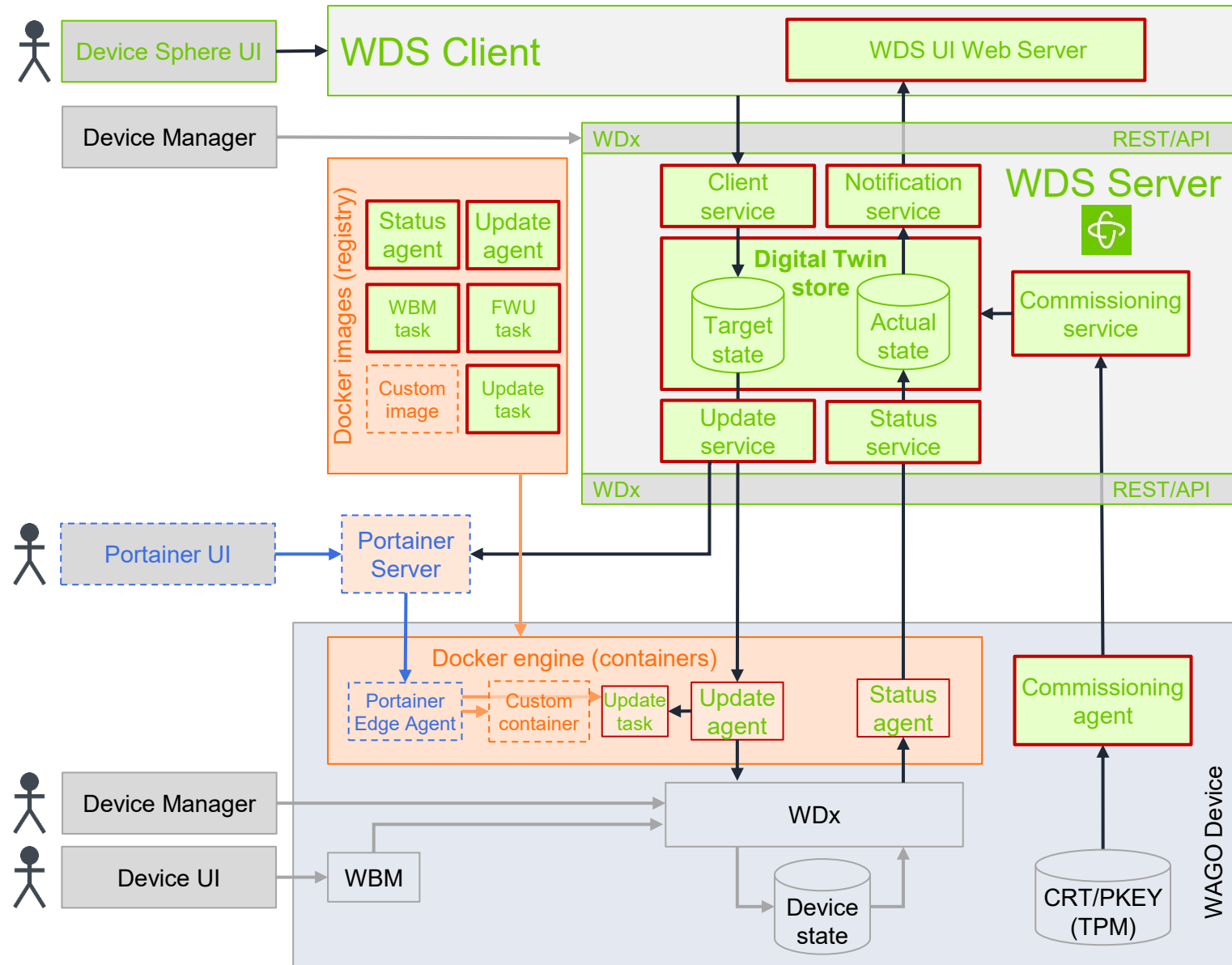
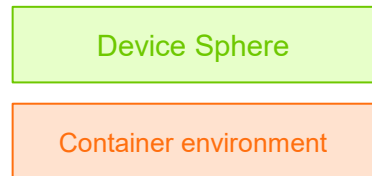
-
- **Easy commissioning** Put brand-new controllers into operation directly from the original packaging without having to pre-configure them. The controllers receive their software status and configuration directly from the Device Sphere.
-
- **Secure communication** Access to and communication with the controllers is secured against unauthorized access. The communication participants are mutually authenticated and authorized. **No incoming ports needed!**
-
- **Status monitoring** Monitor the status of all controllers and be informed about changes or error situations - via push notification (Email).
-
- **Asset management** Manage all controllers centrally and decentral at any time - from a PC, tablet or smartphone.
-
- **Software update** Roll out updates to controllers that are distributed worldwide in a centrally controlled manner.
-

Outbound Communication

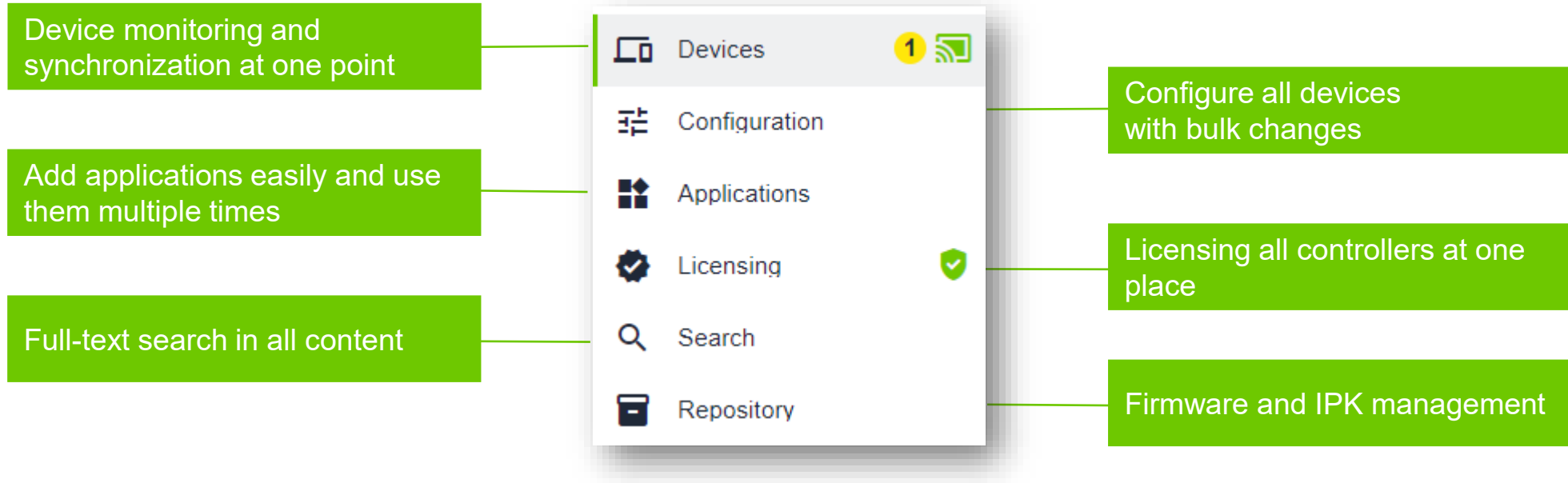


Device Sphere Architecture

- Native Mode
- Docker Mode
- Portainer Mode



Main Menu / Functions



Enable pairing mode to connect new devices



The screenshot displays the WAGO Device Manager interface. On the left, a sidebar contains navigation options: Devices, Configuration, Applications, Licensing, Search, and Repository. The main area is divided into 'Managed Devices' and 'New Devices (1)'. The 'New Devices' section features a 'Get devices' button and a search bar. Below this is a table with the following data:

	Hostname	Device address	MAC address	Serial number	State	Firmware version	Item number	
☒	CC100V1	3.3.3.14	00:30:DE:49:44...	37SUN31564010260470190+000000000	4426	Requested	04.06.03(28)	0751-9301

A context menu is open over the first row of the table, showing options: 'Accept device (Native mode)', 'Accept device (Dock mode)', 'Accept device (Portainer mode)', and 'Reject device'. A green callout bubble points to the 'Get devices' button and the table, containing the text: 'Pairing enabled: Wait for new devices to connect in this view'. Another green callout bubble points to the 'Bluetooth' settings on a smartphone, containing the text: 'Like in Bluetooth pairing'. The smartphone screen shows the 'Bluetooth' settings with the toggle switch turned on, and a list of devices including 'John's Apple Watch' (Connected) and 'Headphones' (Not Connected).

WAGO Device Sphere Version: 1.0.0

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For controller already in use



WAGO

Information Configuration Security Diagnostic

Reboot Logout

Networking

Clock

Administration

Package Server

Mass Storage

Software Uploads

Ports and Services

SNMP

Browser Settings

Commissioning

Docker

Commissioning Settings

Deactivating the Commissioning Service will reset its configuration and unlink any active connection to a server.

Commissioning Service	
Enabled	☐
State	Inactive
Server	-

Submit

Reboot controller or...

Activate commissioning

Is enabled by factory default ... to auto-connect when unpacked

Device / Asset Management



WAGO

☰

Devices

2

Configuration

Applications

Licensing

1

Search

Repository

🔍 Search...

☑ Devices

☐ PFC200-11

☐ CC100V1

☐ PFC200-12

> ☑ TP600

☐ PFC200V3-250-x1

☐ WP400-636F40

> ☐ PFC100cdr

Managed Devices (2)

New Devices

Synchronize

2 selected

	Synchronization state	Operational state	LED state	Hostname	Status reported at	Device address	MAC address	Controller item number	Controller firmware version
☐	🟢	▶	SYS RUN IO	PFC200-11	2025-02-28 13:59:03	3.3.3.11	00:30:DE:60:C2:BD	0750-8212/0000-0100	04.06.01(28)
☐	🟢	▶	SYS RUN IO	PFC200-12	2025-02-28 14:02:07	3.3.3.12	00:30:DE:46:30:B8	0750-8212/0000-0100	04.06.01(28)
☐	🟢	▶	SYS RUN U1	CC100-494448	2025-02-28 13:46:34	3.3.3.14	00:30:DE:49:44:48	0751-9301	04.06.03(28)
☑	🔴 🟡	▶	SYS H11 H12	TP600	2025-02-28 14:00:33	3.3.3.15	00:30:DE:44:7E:3F	0762-4301/8000-0002	04.06.01(28)
☑	🔴 🟡	▶	SYS RUN IO	PFC100cdr	2025-02-28 14:00:39	3.3.3.21	00:30:DE:66:E0:83	0750-8112	04.06.01(28)
☐	🟢	▶	SYS RUN IO	PFC200-SG250	2025-02-28 14:01:03	192.168.2.250	00:30:DE:46:94:66	0750-8212	04.06.01(28)
☐	🟢	▶	SYS	WP400-SG13	2025-02-28 13:46:34	192.168.3.13	00:30:DE:63:6F:40	0762-3403	04.06.03(28)

...and structured along your organization

All devices can be managed, filtered and organized in a customizable table

WAGO Device Sphere Version: 1.0.0

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Notifications by Email



WAGO

☰

Devices

Configuration

Applications

Licensing

Search

Repository

1

📶

🔍 Search...

📁 Devices

☐ PFC200-11

☐ PFC200-12

☐ PFC200V3-250-x1

☒ PFC100cdr

☐ Demo 1: Tem...

☐ TP600

Managed Devices

New Devices (1)

1 selected

🔄

📄

⋮

📶

Get devices

🔍 Search...

☒	Hostname	Device address	MAC address	Serial number	State	Firmware version	Item number	
☒	CC100V1	3.3.3.14	00:30:DE:49:44:...	37SUN31564010260470190+0000000002344426	Connected	04.06.03(28)	0751-9301	+ 🗑

Add this device to the selected tree entity or update the device in the tree.

Enrollment status has changed to Accepted.

WS

wds-service@mm-software.com

To Christian Dannegger

📧

🔄 Reply

🔄 Reply All

➡ Forward

📧

⋮

Mo 03.03.2025 17:52

Enrollment status has changed to Accepted.

This is a notification from the WAGO Device Sphere subscription service. You are configured to be notified by Email.

Type: EnrollmentStatusChangeNotification

Date: 03.03.2025 Time: 17:52

Summary:

Enrollment status for device with DeviceId 37SUN31564010260470190+0000000002344426 has changed to Accepted.

Details:

```
{
  "id": "309576e7-54b6-4f58-aa49-2d7599989926",
  "status": 3,
  "deviceId": "37SUN31564010260470190+0000000002344426",
  "ipAddress": "3.3.3.14",
  "deviceType": "ptxdist",
  "timeCreated": "2025-03-03T16:51:51.544Z",
  "timeUpdated": "2025-03-03T16:52:05.246Z",
  "operationMode": "NativeAgent",
  "deviceIdentInfos": {
    "bacnetId": "",
    "firmwareVersion": "04.06.03(28)",
    "hostname": "CC100V1",
    "macAddress": "00:30:de:49:44:48",
    "orderNumber": "0751-9301",
    "uii": "37SUN31564010260470190+0000000002344426"
  }
}
```

WAGO Device Sphere Version: 1.0.0

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Optionally receive Email notifications



Advantages: **secure** and **efficient**



For all your controllers WAGO Device Sphere provides:

- Secure communication (no incoming ports!)
- Easy commissioning
- Status monitoring
- Asset management
- Software update
- Single point of contact for all clients to all devices
- Offline configuration by design
- Developed according to CRA - IEC 62443

Supported Hardware



Supported controllers starting with **Firmware 28** are:

PFC100 Controllers, All Derivatives	0750-811*
PFC200 Controllers 2. Generation, All Derivatives	0750-821*
PFC300 Controller (not yet, because of FW problems)	0750-83**
TP600 Control Panel	0762-****/8000-0002
Edge Controller	0752-****
Compact Controller 100	0751-93**
Compact Controller 100 V2	0751-94**
Web Panel 400	0762-34xx

