Intelligate Edge Gateway

User Manual

NEXAIRA

the digital ecosystem of **ebmpapst**

Disclaimer Contents of the User manual

This user manual is an integral part of the IntelliGate EDGE system and should always be kept at hand. Observance of the instructions given within this manual is required for proper performance and correct operation of IntelliGate EDGE.

The IntelliGate EDGE and its accessories must not be used for any other purpose than described in the accompanying documentation (intended use). Violation will result in loss of warranty.

ebm-papst does not accept liability for injury to personnel or damage to equipment that may result from misuse of this equipment, failure to observe the hazard notices contained in this manual, or failure to observe local health and safety regulations.

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Some products from other manufacturers are mentioned in this application manual. In most cases, the product designations and manufacturer names mentioned are trademarks and/or registered trademarks.

Contents

Revision history

Date	Version	Change
2025-07-10	1.0	Release

1. Introduction

1.1. The purpose of the manual

This manual provides essential information for the safe installation, configuration, and operation of the IntelliGate EDGE, a 24V DC controller equipped with LTE, Wi-Fi, BLE and Ethernet connectivity.

It is intended for installers, system integrators, and technical users who are responsible for deploying, maintaining, or commissioning the device. The manual outlines necessary steps to ensure correct electrical connection, reliable network setup, and stable system performance.

⚠ **NOTICE**

Configuration and communication setup are carried out using the ebm-papst Service App, a dedicated mobile application that provides access to device settings, diagnostics, and status monitoring. The use of the app is required during commissioning and may also be needed for firmware updates or future adjustments.

By following this manual and using the ebm-papst Service App, users can ensure proper functionality and maintain compliance with safety and performance standards.

1.2. User Groups

This User manual is intended for personnel with the following expertise:

Area	Expertise
Installation	Experts
Start-up, operation and shutdown	Experts Trained personnel
Maintenance	Experts
Troubleshooting	Experts

Trained personnel (DIN EN 60204-1):

Any person who has been trained by experts in the tasks they need to perform, the risks associated with improper use, and the necessary safety equipment and safety precautions.

Experts (DIN EN 60204-1):

Any person who has the necessary specialist training, experience, and knowledge of the relevant standards needed to appraise their work and to recognize the possible dangers.

⚠ **NOTICE**

The device cannot be sold via retail to the general public or by mail order; it is sold to authorized dealers or installers only.

1.3. Product overview

The IntelliGate EDGE aggregates and processes data, controls connected devices and reads sensor inputs—making it well-suited for edge computing applications. The hardware is designed to be robust and reliable for use in industrial environments. Further functionality and improvements will be possible over time by OTA upgrade. This makes the product suitable and future proof.

The IntelliGate EDGE supports multiple connectivity options, including **LTE (mobile data), Wi-Fi, Ethernet, and Bluetooth.**

The device is easy to configure using a dedicated mobile application via Bluetooth, enabling quick setup and parameter adjustment directly on-site without the need for a wired connection or a laptop.

The IntelliGate EDGE is intended to serve as:

- **A communication and control device** that integrates the necessary algorithms for regulating connected fans. It is designed for use with **ebm-papst fans** and can interface with additional **sensors** such as those for air quality, pressure, and temperature.

- **An enabler of NEXAIRA digital services**, providing a range of functionality that supports **energy efficiency, optimized fan operation**, and **advanced status reporting**

1.4. Number and codes for identification

- For the identification and commissioning of the product, the code with the **UUID** (A.) on the front and the **Data Matrix code** (B.) can be used.

- **The UUID code is used for setup and commissioning with the ebm-papst Service App**. This number/identifier is unique to the particular Intelligate EDGE.

- The Data matrix code on the type label contains the serial number of the product and other relevant information regarding production.

- The article number (C.) of the product can also be found on the type label.

2. Safety regulations

Before installing and using the IntelliGate EDGE system, please read the following safety and handling instructions carefully. Every owner / user of the IntelliGate EDGE should have understood the complete content and be aware of potential direct or indirect hazards of operators, other parties, stationary / mobile equipment, environmental and facilities by disregarding of warnings. This device must be professionally installed.

2.1. Terms used

⚠ **NOTICE**

Throughout this User manual, hazardous situations or operations are identified by WARNING, CAUTION and NOTICE, where:

Sign	Meaning
⚠ **NOTICE**	is used whenever you or somebody else could be injured if you do not observe the accompanying safety regulation.
⚠ **CAUTION**	is used to address issues related to possible hardware damage.
⚠ **WARNING**	is used to address operational issues not related to personal injury or hardware damages.

2.2. Product safety

This appliance is a technically advanced product, built from high-quality materials and thoroughly tested at the factory. It incorporates the latest technology and meets recognized safety standards.

However, even when used as intended, it may still involve certain risks.

2.3. Responsibility of the owner

The owner of the appliance is responsible for the following:

- Ensuring the appliance is in proper working condition and used according to its intended purpose.
- Making sure that anyone who operates or services the appliance is qualified, properly instructed, and familiar with the relevant user manuals.
- Being aware of applicable guidelines, safety regulations, and requirements—and ensure that staff are trained accordingly.
- Preventing unauthorized access to the appliance.
- Making sure the maintenance schedule is followed, and that all maintenance work is performed correctly.
- Keeping the appliance and its surroundings clean and orderly, for example by issuing appropriate instructions and conducting inspections.

2.4. Intended use

The IntelliGate EDGE is suitable for indoor use and for outdoor installations **when housed in a protective enclosure with a minimum rating of IP65 or equivalent**. It can also be mounted inside electrical cabinets or control panels. The enclosure must provide adequate protection against dust, moisture, UV radiation, and temperature variations, in accordance with applicable environmental and safety standards.

The device is designed for industrial and HVAC applications such as:

- Monitoring of fans, sensors, and other equipment with communication capabilities, including integration with machinery systems.
- Access management through integration with identity and electronic access systems.
- Remote supervision of equipment at customer sites.
- Transmitting data from machines or facility control cabinets to cloud-based systems.

⚠ **NOTICE**

If the equipment is used in a manner not specified by ebm-papst, the protection afforded by the equipment may be compromised.

⚠ **WARNING**

The IntelliGate EDGE is not designed / intended to be used within explosive or hazardous environments.

2.5. No unauthorized modifications may be made to the appliance

Only components and accessories approved by the manufacturer may be added or installed. Any unauthorized changes or alterations will void the CE Declaration of Conformity, and the appliance must no longer be used.

The manufacturer accepts no liability for damage, hazards, or personal injury resulting from unauthorized modifications or from failure to follow the instructions and safety regulations provided in this manual.

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

2.6. General Safety Regulations

⚠ CAUTION

Safety - The Intelligate Edge is only suitable for a safety extra low voltage supply of 24 VDC up to 57 VDC or 24 VAC. An isolated voltage supply is recommended to be used.

⚠ CAUTION

Electro-Static Discharge - Many modern electronic components are susceptible to damage from Electro-Static Discharge (Static Electricity). During programming and commissioning, avoid unnecessary contact with electronic

components on PCB's. PCB's are sensitive to static discharges so should be stored and transported in anti-static packaging until they are required to be used.

⚠ WARNING

Do not operate in an explosive atmosphere!

⚠ WARNING

The fans may start during connection and programming. If there is a residual risk of contact with a fan, then contact shall be prevented by suitable control methods to prevent accidental contact.

⚠ CAUTION

Moisture - Devices on which moisture has developed due to temperature changes must not be used unless they have been completely dry.

⚠ CAUTION

Modifications and repair - Assembly, extension, modification or replacement in the Intelligate Edge shall be carried out only by ebm-papst or by experts who are authorized by ebm-papst. Violation of this prescription will result in loss of warranty.

ebm-papst cannot be held liable for any damage resulting from the use of accessories or consumables, which are not provided or approved by the manufacturer.

2.7. Certification / Compliance

The IntelliGate EDGE is CE certified. The CE marking indicates that the product complies with relevant standards for products sold within the European Union (EU).
This marking may also appear on products sold outside the EU if they are manufactured in, or intended for, the European market. Note that the CE mark does not apply to products sold in the United States.
For access to the certification report, please contact ebm-papst.

- All circuit boards and components comply with REACH and RoHS regulations in accordance with applicable EU directives.

2.8. Warranty

For details on the ebm-papst warranty policy, please visit our website:
https://www.ebmpapst.com

2.9. Disposal of IntelliGate EDGE – Save the Environment

The IntelliGate EDGE does not contain hazardous materials and does not require special handling at the end of its service life.

Many of its components are recyclable and should be disposed of in accordance with local regulations.

You are welcome to return the unit to ebm-papst—please submit a request first (contact details are provided in the last page).

This product is marked with the symbol of the cross-out wheeled bin.

It indicates that the product should not be disposed of with household waste but must be collected separately for the proper treatment and recycling of electrical and electronic equipment.

By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health.

2.10. Behaviour in Case of Malfunctions and Irregularities

The appliance must only be operated in proper working condition.

If any irregularities, malfunctions, or visible damage are detected, the appliance must be taken out of service immediately, and a supervisor (if applicable) must be informed.

The user or owner of the IntelliGate EDGE and its associated accessories is responsible for reporting any issues or complaints about the system to an authorized representative of ebm-papst, or directly to:

support@epneo.com

3. Construction and Description

3.1. Design and Dimensions

The design is based on usage for DIN rail installations and does have the following characteristics:

Parameter	Value
Dimensions with cable glands (H x W x D)	90 mm x 160 mm x 32,3 mm
Weight	165 gr
Mounting	DIN rail

3.2. Specification and environmental requirements

3.2.1. General specification

Requirement	Definition
Supply Voltage (Reverse Polarity Protected)	24 VDC nominal (12 to 57VDC) from an external PSU or 24 VAC nominal (20 to 28VAC) from an external transformer
Supply Current	Max 200 mA
Temperature	-20°C to +60°C
Temperature storage	-30°C to +60°C
Moisture	90%RH at 40°C max.
Enclosure	IP20
EMC Compliance	EN61000-6-3 (emissions) EN61000-6-1 (immunity)

Safety Compliance	EN62368-1

3.2.2. LTE-M / NB-IoT Modem

Requirement	Definition
Frequency range	700-2200 MHz
LTE Bands	B1-B5, B8, B12-B14, B17-B20, B25-B26, B28 and B66
Cat-M1	B1-B5, B8, B12, B13, B18, B19, B20, B25, B26, B28, B66
Cat-NB1/NB2	B1-B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B66
Throughput	LTE-M: 300/375 kbps (DL/UL) NB-IoT: 30/60 kbps (DL/UL)
RX sensitivity	LTE-M: -108 dBm NB-IoT: -114 dBm

3.2.3. Wi-Fi

Requirement	Definition
Wireless standard	IEEE 802.11b/g/n
Centre frequency range	2412 - 2484 MHz
Bit rate	802.11n up to 150 Mbps

3.2.4. Bluetooth

Requirement	Definition
Bluetooth LE	Bluetooth 5
Centre frequency range	2402 – 2480 MHz
Speed	125 Kbps, 500 Kbps, 1 Mbps, 2 Mbps

3.2.5. Ethernet

Requirement	Definition
Ethernet	10BaseT/100BaseTX Ethernet PHY

4. Installation

4.1. Delivery and Unpacking

The IntelliGate EDGE is delivered in a carton enclosure together with a quick start manual that includes instructions for the retrieval of the ebm-papst Service App and the first steps.

Packaging and Delivery Inspection:

Please inspect the packaging and contents immediately upon receipt for any damage or missing items.

Do not dispose of the packaging—it may be needed for storage or for returning the device to ebm-papst in case service is required.

Devices that have been exposed to moisture due to temperature changes must not be used until they are **completely dry**.

⚠ **CAUTION**

The IntelliGate EDGE and its accessories must not be used if **any visible damage or technical defects** are present or suspected.

4.2. Installation Considerations

Before installation, please consider the following warnings and cautions:

⚠ **WARNING**

The IntelliGate EDGE is not designed / intended to be used within explosive areas or hazardous environments.

⚠ **CAUTION**

The IntelliGate EDGE shall not be installed on a place where it might be impacted by mechanical stress.

⚠ **CAUTION**

Ensure that the location where the device is placed meets the specified environmental conditions concerning temperature and humidity.

⚠ **CAUTION**

- Do not place the device close to high power / high frequency cable tacks that might have an influence on the device – minimum distance 50cm (20inch).
- Do not place the device inside metal cabinets (Faraday cage effect) or close to metal walls / housings – minimum distance 50cm (20inch).
- Do not install the device close to switched power supplies, frequency converters, servo / motor drives or other high-power electronics.
- Do not place the device below ground level or inside rooms with concrete walls (bunker like environments).

⚠ **CAUTION**

To avoid bad signal quality by EMC effects, sensors or bus cable should be shielded (like Profibus-cables). The cable shielding should be connected to station ground by usage of e.g. a shielding clamp (see figure 3.2.2). Use one grounding point for each cable (bus line) only to avoid grounding loops. Ideally, every shielding is connected to the same station ground.

4.3.   Placing the Intelligate Edge

For optimal radio performance, it is recommended to install the device at a minimum height of 100 cm (approx. 40 inches). It can also be placed inside an electrical switch cabinet (without metal housing).

In case of using the Wi-Fi operation mode, a rating of the Wi-Fi quality prior placing the IntelliGate EDGE is recommended. Proper placement is important to avoid bad signal qualities and transmission issues.

4.4.   Mechanical Installation

4.4.1.   Preparation

- Ensure that the controller is undamaged and that the correct model is being used for the application.
- Verify that the DIN rail (35 mm according to EN 60715) is properly installed and that there is enough space around the controller for ventilation and cable connections.

4.4.2.   Mounting Instructions

Positioning

- Choose a vertical or horizontal position on the DIN rail where the controller is not exposed to direct sunlight, moisture, or excessive vibration.

Attaching to the Rail

- Hook the top edge of the controller onto the upper part of the DIN rail.
- Gently press down until the mounting clip locks into place on the lower edge of the rail.
- Check that the controller is firmly and securely attached.

Removing the Controller

- Use a screwdriver to release the bottom mounting clip.
- Carefully tilt and lift the controller upwards off the rail.

Important Considerations

- Leave sufficient clearance (at least 20 mm) above and below the controller for cooling and easy access to terminals.
- Do not mount the controller near components that generate significant heat unless proper shielding is provided.
- Avoid installation in areas with high humidity or risk of condensation unless housed in a suitably rated enclosure (e.g., IP54 or higher).
- Ensure that cables do not apply mechanical stress to the controller's terminals after installation.

4.5. Interfaces on the Intelligate Edge

4.5.1. I/O descriptions

The IntelliGate EDGE contains easily accessible and removable terminals on the front. The following figure of the front plate shows the layout and available connectors.
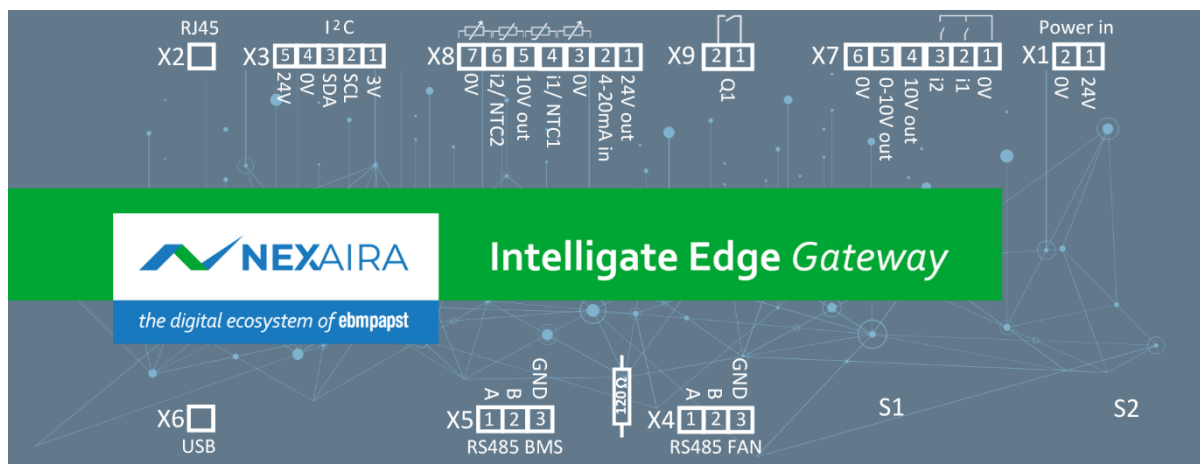
Connection	Pin	Description	Function
X1	[1] 24V DC in	Or 24VAC~	Power in [2] 0V (GND)
	[2] 0V (GND)		
X2	[-] RJ45	Ethernet	LAN - alternative to Wi-Fi connection
X3	[1] 3V	I²C BUS	NOT USED (future expansion)
	[2] SCL		
	[3] SDA		

	[4] 0V		
	[5] 24V		
X4	[1] A	RS485 'A' pin	RS485 connection to Fans
	[2] B	RS485 'B' pin	
	[3] GND	Common 0V (GND)	
(120 ohm)	Link	Removable link	Removing internal termination resistor when IntelliGate Edge is in the middle of a fan network. See 3.4
X5	[1] A	RS485 'A' pin	RS485 connection to BMS
	[2] B	RS485 'B' pin	
	[3] GND	Common 0V (GND)	
X6	[-] USB	Micro USB	Only used for programming
X7	[1] 0V	Common 0V GND	Ground reference for switch inputs
	[2] i1	Switch input 1	Active low Fan enable / Disable (pulled up internally)
	[3] i2	Switch input 2	Active low Setpoint toggle (pulled up internally)
	[4] 10V out	10VDC output (max 20mA)	Reference for control inputs
	[5] 0-10V out	0-10V control output	Follower output for external device control 50mA rating
	[6] 0V	Common 0V GND	Ground reference for switch inputs
X8	[1] 24V out	24V DC output (max 40 mA)	Reference for powering a sensor
	[2] 4-20mA in	4-20mA input	Current input from external sensor
	[3] 0V	Common 0V GND	Ground reference for control inputs

	[4] i1/NTC1	0-10V control input	Control input from external sensor or potentiometer
	[5] 10V out	10VDC output (max 20mA)	Reference for control inputs
	[6] i2/NTC2	0-10V control input	Control input from external sensor or potentiometer
	[7] 0V	Common 0V GND	Ground reference for control inputs
X9	[1]	COM	Configurable alarm output relay 60VDC max 0.1A rating
	[2]	NC	

(The greyed out connections will be supported with the next firmware releases)

4.5.2. Terminal wiring data

Terminal	X1	X2..X9
Wire cross section	24..12AWG (0,205..3,31mm^2)	28..16AWG (0,081..1,31mm^2)
Str. length	6..7mm	6..7mm
Torq.	0,2 Nm	0,2Nm

4.5.3. RS-485 Communication and wiring

The RS485 cables should be IEC 603-2-2 compliant or classified VW-1

For reliable communication with the fans, it is recommended to use shielded twisted pair cable with 120Ω impedance (RS485 standard cable), in a "Daisy Chain" wiring layout, run separate from mains supply wiring.

We recommend placing the controller at one end of the RS485 network and adding a 220Ω termination resistor at the other end of the network.

According to the RS-485 standard, up to 32 receivers can be connected to each channel which supports inexpensive local networks and multidrop communications links.

⚠ **NOTICE**

As a rule of thumb, the speed in bit/s multiplied by the length in meters should not exceed 108. It is generally accepted that RS-485 can be used with data rates up to 10 Mbit/s or, at lower speeds, distances up to 1200 m (4000 ft).

⚠ **NOTICE**

Star and ring topologies are not recommended because of signal reflections or excessively low or high termination impedance.

RS485 connections and termination
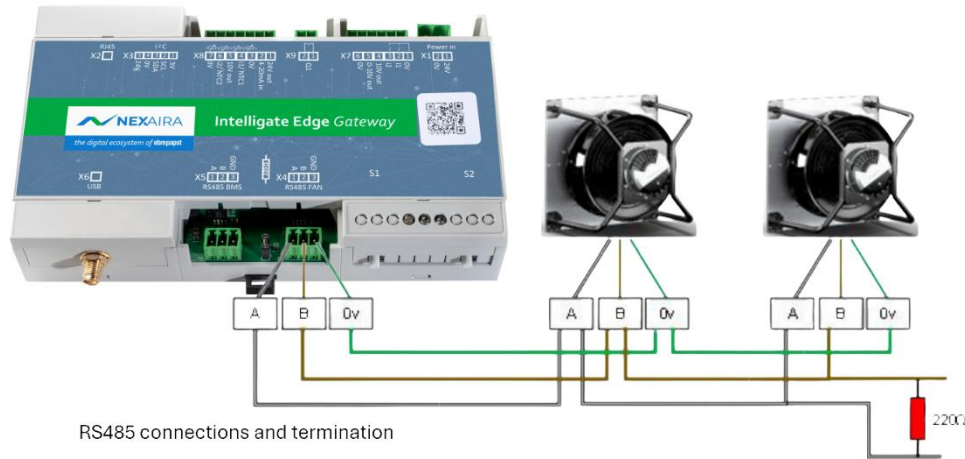
In case the controller is in the middle of the network, the built-in termination resistor must be taken out of the circuit by removing the 'Link bar' located on the PCB. Two resistors of the same value must be added at each end of the network.

4.5.4.   RJ45 Ethernet Interface

The IntelliGate EDGE device does have a 100 Mbit/s Ethernet port embedded on the printed circuit board (PCB), which supports standard LAN connections.

5.   Network Connection and Communication

Network setup and communication settings are managed through the ebm-papst Service App. Using the app, users can choose, configure and monitor the device's connectivity options, including LTE, Wi-Fi, and Ethernet. The app provides guided steps to ensure a secure and stable connection to local networks and cloud services.

⚠ **NOTICE**

Some communication features may be preconfigured or locked depending on the device model or deployment profile.

⚠ **NOTICE**

By default, the IntelliGate EDGE is supplied with pre-installed antennas that are fully integrated into the device housing. This design ensures optimal performance for both Wi-Fi and LTE connectivity, providing enhanced range and reliable communication without the need for external antennas. The integrated design also ensures compliance with relevant certification requirements, including CE and RED.

5.1.   Mobile data and LTE

The device is equipped with a built-in LTE module that provides mobile data connectivity for remote communication and cloud integration. No external SIM card or user configuration is required — the LTE functionality is preconfigured and activated at the factory.

Key Points:

- Integrated mobile connectivity — no SIM card installation needed.
- Automatic provisioning — the device connects to the cellular network automatically upon startup.
- No user setup — APN, authentication, and network settings are handled internally.
- Roaming is supported within the predefined service region (see Technical Specifications or contact your supplier for details).
- Signal strength is indicated via LED or available through the device interface.

⚠ NOTICE

Ensure that the installation location allows for adequate mobile signal strength. Avoid fully shielded enclosures or placing the device in areas with poor coverage.

5.2.   Wi-Fi

The IntelliGate EDGE connects to local Wi-Fi networks to enable cloud communication and remote data access. All Wi-Fi settings, including network selection, password entry, and connection status, are managed exclusively through the ebm-papst Service App.

Using the app, users can:

- Scan for available Wi-Fi networks
- Connect to a secured network
- View signal strength and connection status
- Reconfigure or reset the Wi-Fi connection if needed

⚠ NOTICE

No configuration is done directly on the device. All Wi-Fi setup and adjustments must be performed through the ebm-papst Service App, available for both iOS and Android.

For optimal performance, ensure the installation location offers strong and stable Wi-Fi signal coverage. A signal strength test is recommended prior to final installation.

5.3.   Ethernet

The IntelliGate EDGE can be connected to a network via Ethernet for secure and stable communication. By default, the device is set to use **Dynamic IP configuration** (DHCP), which means no user action is required — the network settings are automatically assigned by the local router or DHCP server.

If the network requires **Static IP configuration**, the settings must be entered manually using the **ebm-papst Service App**.

Static IP Configuration (example values):

- IP Address: 10.91.140.30
- Subnet Mask: 255.255.255.0
- Gateway: 10.91.140.1
- DNS Server: 8.8.8.8

⚠ **NOTICE**

All Ethernet configuration is performed through the ebm-papst Service App. No settings are available directly on the device.

Make sure that the chosen IP address is within the correct range of your local network and does not conflict with other devices.

5.4. Fallback between interfaces

⚠ **NOTICE**

Important on Interface Selection:

The IntelliGate EDGE does not support automatic fallback between network interfaces. Only one communication method — Ethernet, Wi-Fi, or LTE — can be active at a time. The selected interface is configured via the ebm-papst Service App, and switching between interfaces requires manual reconfiguration.

6. Operation and configuration

This chapter describes how to operate and configure the device after installation. Configuration is performed using the ebm-papst Service App, which provides access to the device's user interface via a secure Bluetooth connection. Through the app, users can adjust basic settings, review system status, and verify network connectivity. The goal is to ensure correct functionality according to the application requirements and to enable safe, efficient use of the device.

⚠ **NOTICE**

The ebm-papst Service App required for configuration and diagnostics is available for both iOS and Android devices. It can be downloaded from the Apple App Store or Google Play Store by searching for "ebm-papst Service App" or scanning the QR code provided on the product label or packaging:

6.1.　First Steps

After logging into the ebm-papst Service App, you automatically enter the main project dashboard with your Nexaira projects. In the bottom of the ebm-papst Service App you also can choose the alternatives Documents, Settings and Connect.

To start working with a new installation, you enter the Connect section. This is where you do all settings for communication and establish the BLE connection with the Intelligate Edge.

The ebm-papst Service App has four main sections with the possibility to easily access your Nexaira projects, retrieving documents for products, managing your settings and the commissioning and installation of products.

⚠ NOTICE

Detailed information about the structure tree in the ebm-papst Service App can be found in **Appendix A** of this document.

6.2.　Buttons and LED patterns

There are two buttons and three LEDs, where the user may interact with the Intelligate EDGE to initiate communication with the ServiceApp and get visual indication of the current status.

Green light	Yellow light	Red light	Status
	O Blink "slow"		Device is booting
	O		Commissioning state
O Blink "slow"	O		Commissioning state – BLE advertising
O			Normal operation - Connected
O Blink "fast"	O Blink "slow"		Normal operation – BLE advertising
O Blink "fast"			Normal operation – BLE advertising - Connected
O	O Blink "slow"		Normal operation - No Internet/MQTT Connection
O	O Blink "fast"		OTA Download in progress
	O Blink "fast"		Factory reset and rebooting
		O	Error State
O Blink "slow"		O	Error State - BLE advertising
O Blink "slow"	O Blink "slow"	O Blink "slow"	Emergency OTA

O Blink "fast"	O	O	Emergency OTA (Wifi selected)
O	O Blink "fast"	O	Emergency OTA (Ethernet selected)
O	O	O Blink "fast"	Emergency OTA (NB-IoT selected)
O	O	O	Factory reset ongoing
O Blink "fast"	O Blink "fast"	O Blink "fast"	Factory reset finished rebooting

Definition of blinking on/off times:

- blink "slow": 2 seconds on, 2 seconds off
- blink "fast": 300 ms on, 500 ms off
- short break: 2 seconds on, 500 ms off

6.3. Activating Bluetooth Low Energy (BLE)

To enable temporary Bluetooth Low Energy (BLE) connectivity on the IntelliGate Edge, press Button 2 on the device.

Upon pressing Button 2, the BLE interface will be activated, allowing nearby BLE-enabled devices to discover and connect to the gateway.

A visual indicator (e.g., LED) will turn on to confirm that BLE is active.

If no BLE device connects or no data traffic is detected within 5 minutes, the BLE interface will be automatically deactivated to save energy and maintain security.

When BLE is deactivated, the indicator will turn off or change state to signal that the interface is no longer active.

Visual LED patterns for indicating different states or modes can be found in the table in previous section.

⚠ **NOTICE**

BLE activation is designed for short-term usage scenarios such as configuration or diagnostics.

6.4. BLE (Bluetooth Low Energy interface) and factory reset process

⚠ **CAUTION**

Performing these steps will remove all previous stored application specific adoptions in the Intelligate Edge controller and restore the factory settings.

1. Turn off the power to the unit and wait for 10 seconds.

2. Press the right button when the unit still is on "power off" state.

3. Turn on power to the unit while still pressing the right button.

4. Wait 3 seconds and then release the right button.

5. The process is ready when the device boots again and the yellow LED blinks "slow".

6. When the yellow LED is constant, the new commissioning of the unit can start.

6.5.   IntelliGate EDGE Security

Cybersecurity Compliance (RED Directive 2014/53/EU)

To meet the extended cybersecurity requirements of the Radio Equipment Directive (RED), effective from August 1, 2025, this product integrates the following protective measures:

- **Network protection:** Prevents network misuse and preserves service availability using rate limiting, secure update channels, and authentication.
- **Data protection:** Ensures privacy through encrypted communication (TLS), secure data handling, and GDPR-compliant processing of personal and location-related data.

The device conforms to the harmonised standards:

- EN 18031-1: Requirements for network protection
- EN 18031-2: Privacy and personal data protection

These standards provide the basis for presumption of conformity under RED.

7.   Maintenance and Disconnection

7.1.   Disconnect mains power supply

⚠ **WARNING**

The Intelligate Edge is powered by a 24 V low-voltage supply. However, if a transformer is used to convert 230 V mains voltage to 24 V, there is a risk of electric shock from exposed high-voltage components on the primary side of the transformer.

All installation and maintenance work must be carried out by a qualified electrician. Unauthorized access to live parts may result in serious injury or death.

- Make sure that the cables are de-energized.
- Secure against renewed switch-on of the operating voltage.
- Never work on live parts.

Disconnect the mains power by unplugging the plug from the power socket.

Disconnect the mains power by switching of the circuit breaker prior to disconnecting the mains power supply cables from the mains power socket (see chapter 3.3.2 Connect mains power supply).

⚠ **CAUTION**

As a rule of thumb, never plug or unplug cables / connectors or other equipment onto the IntelliGate EDGE when the device is powered. Always switch power off prior any other activity on the IntelliGate EDGE to avoid damages / malfunctions on the electronic.

7.2.   Maintenance

The IntelliGate EDGE is maintenance free.

If necessary, only use a damp cloth for cleaning, no cleaning agents.
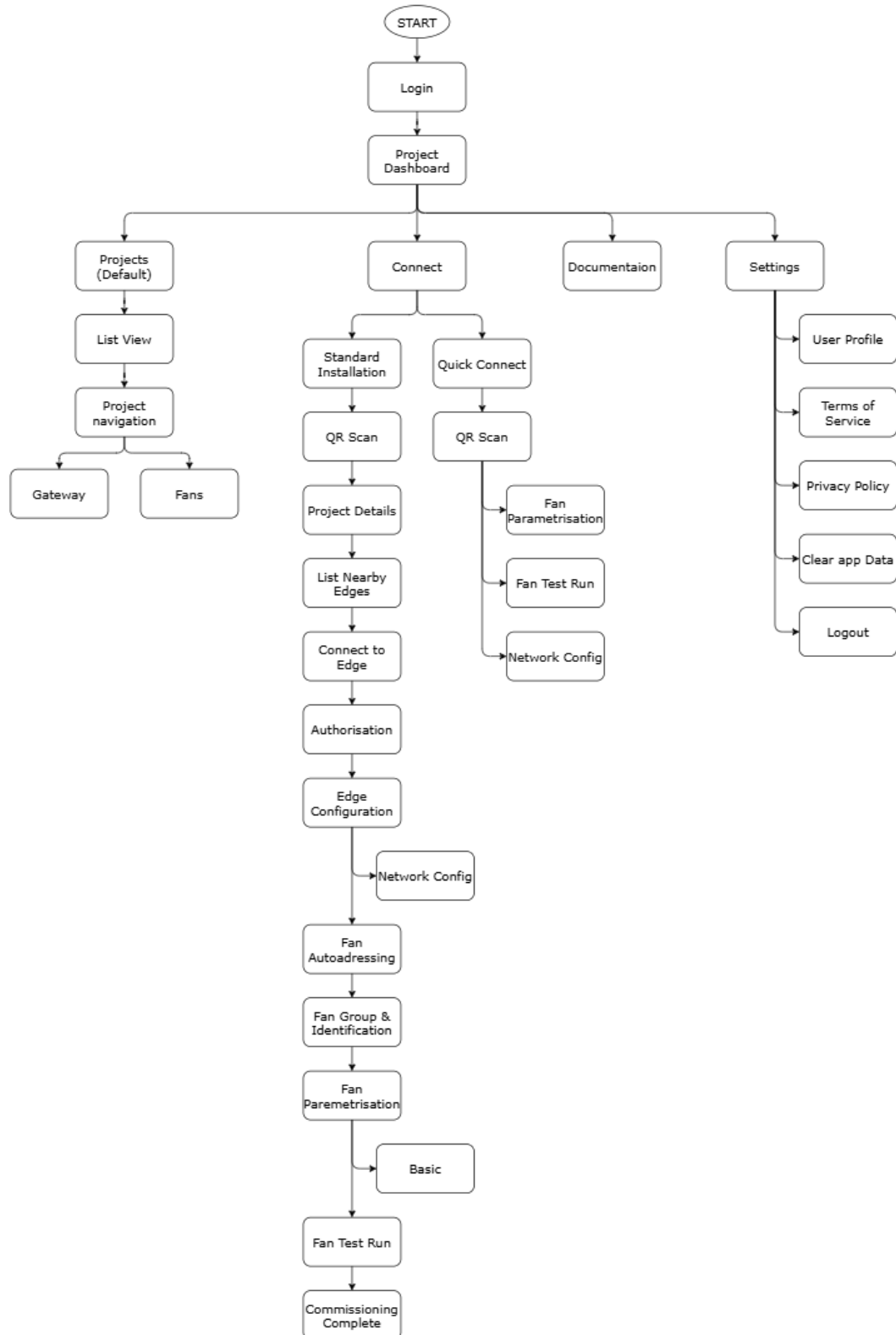
⚠ **CAUTION**

DAMAGE TO THE DEVICE DURING CLEANING

- Do not clean the device using a water jet or high-pressure cleaner.
- Do not use any acid, alkali or solvent-based cleaning agents.
- Do not use any pointed or sharp-edged objects for cleaning.

8. Appendix

8.1. Graphical tree-structure of the ebm-papst Service App

9. Memorandum