Edge Gateway 800 Series

Version:
v1.0

Date:
15.05.2025

Contents

1 Copyright

2 Regulatory Compliances

2.1 CE and UKCA Notice

This device complies with the requirements of the CE directive and UKCA regulations.

Low Voltage Directive 2014/35/EU + Electrical Equipment Safety Regulations 2016 (SI 2016 No 1101)

- EN IEC 62368-1:2020+A11:2020
- BS EN IEC 62368-1:2020+A11:2020

EMC Directive 2014/30/EU + Electromagnetic Compatibility Regulations 2016

- EN 55032:2015+A11:2020
- BS EN 55032:2015+A11:2020
- EN 55032:2015+A11:2020
- BS EN 55032:2015+A11:2020
- EN IEC 61000-3-2:2019
- BS EN IEC 61000-3-2:2019+A1:2021
- EN 61000-3-3:2013+A1:2019
- BS EN 61000-3-3:2013+A1:2019+A2:2021
- EN 55035:2017+A11:2020
- BS EN 55035:2017+A11:2020
- EN 61000-4-2:2009
- BS EN 61000-4-2:2009
- EN 55035:2017+A11:2020
- BS EN 55035:2017+A11:2020
- EN 61000-4-3:2009
- BS EN 61000-4-3:2009
- EN 61000-4-3:2006+A1:2008+A2:2010
- BS EN IEC 61000-4-3:2020
- EN 61000-4-4:2012
- BS EN 61000-4-4:2012
- EN 61000-4-5:2014+A1:2017
- BS EN 61000-4-5:2014+A1:2017
- EN 61000-4-6:2014
- BS EN 61000-4-6:2014
- EN 61000-4-8:2010
- BS EN 61000-4-8:2010
- EN 61000-4-11:2004

- BS EN 61000-4-11:2004

RoHS 2 Directive 2011/65/EU & 2015/863/EU + RoHS 2 Directive 2020 No. 1647

- Exemption(s) used:
- 6c,7a,7c-I

2.2 FCC PART 15 VERIFICATION STATEMENT

WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Notice: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.3 ICED-003 ISSUE 7 VERIFICATION STATEMENT

CAN ICES3(B)/NMB3(B)

This device complies with CAN ICES-003 Issue 7 Class B. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

3 Safety Instructions

Please read these instructions carefully and retain them for future reference.

1. Disconnect this equipment from the power outlet before cleaning. Do not use liquid or sprayed detergent for cleaning. Use a moist cloth or sheet.
2. Keep this equipment away from humidity.
3. Ensure the power cord is positioned to prevent tripping hazards and do not place anything on top of it.
4. Pay attention to all cautions and warnings on the equipment.
5. If the equipment is not used for an extended period, disconnect it from the main power to avoid damage from transient over-voltage.
6. **Prolonged usage with less than 8V may damage the PSU or destroy the mainboard.**
7. Never pour any liquid into openings as this could cause fire or electrical shock.
8. Have the equipment checked by service personnel if:
    - The power cord or plug is damaged.
    - Liquid has penetrated the equipment.
    - The equipment has been exposed to moisture in a condensation environment.
    - The equipment does not function properly, or you cannot get it to work by following the user manual.
    - The equipment has been dropped and damaged.
9. Do not leave this equipment in an unconditioned environment, with storage temperatures below -20 degrees or above 60 degrees Celsius for extended periods, as this may damage the equipment.
10. Unplug the power cord when performing any service or adding optional kits.
11. Lithium Battery Caution:
    - Risk of explosion if the battery is replaced incorrectly. Replace only with the original or an equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.
    - Do not remove the cover, and ensure no user-serviceable components are inside. Take the unit to a service center for service and repair.

⚠ Warning!
Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

⚠ Caution!
Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

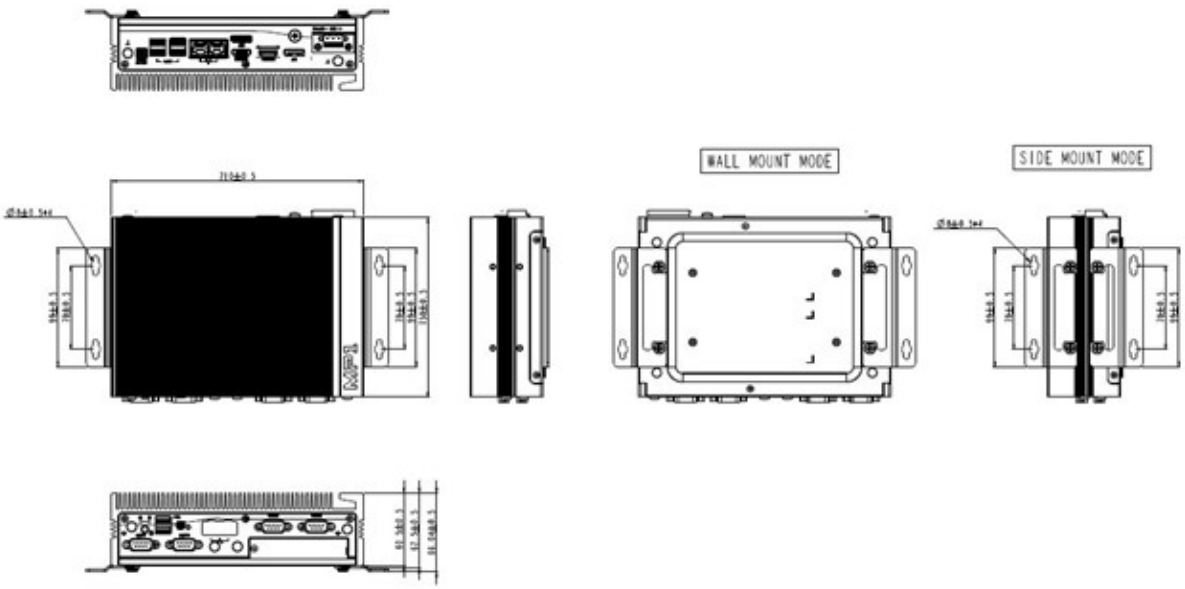
4 Product Specifications

4.1 Technical Details

Feature	Specification	Details
Processor	CPU	11th Gen Intel® Tiger Lake-UP3 Core™ i5-1145G7E – Quad Core, 8MB Cache, up to 4.10 GHz
Security	TPM	TPM 2.0 (Integrated Trusted Platform Module for secure device provisioning and authentication)
Memory	System Memory	16 GB RAM
Graphics	GPU	Intel® Iris Xe Graphics
Display	Display Interfaces	2 × HDMI, 2 × DisplayPort
Storage	Storage Capacity	240 GB free storage for container and data; optional: expandable up to 1 TB
Networking	Ethernet	2x (1x Gigabit LAN & 1x 2.5 Gigabit LAN) or 4x (3x Gigabit LAN & 1x 2.5 Gigabit LAN)
Expansion	USB Ports	4 × USB 3.1, 2 × USB 2.0
	Serial Ports	3 × RS-232, 1 × RS-485
Operating System	OS Support	Welotec egOS: hardened Linux operating system based on Yocto with no root access for users. Optional with HMI functionality
Software Features	Application Deployment	Docker CLI, Docker Compose, Moby Engine, Azure Edge Runtime
	Cloud Compatibility	Azure IoT Edge 1.4 and higher (native in OS), Azure IoT Hub, Azure DPS, AWS Greengrass 2.0 (via Container)
	Security Features	Integrated firewall, TPM 2.0, no root access for users, signed firmware images (with egOS 1.5 and higher)
	Network Features	Routing, NAT, 4G LTE Cellular Management, Wi-Fi Client support, Interface Management
Configuration	Remote Configuration	SMART EMS for configuration management, OTA firmware upgrade, certificate management
	Remote Access	VPN Security Suite for remote access and maintenance for the device and connected endpoint devices like PLC, HMI, IPC, and more
	Local Access	CLI via serial or SSH, local web interface for configuration (device onboarding in restricted company networks)
Power	Power Input	8–24V DC (+/- 10%) via 3-pin terminal block
	Power Supply (EU)	WIPC05000361
Mechanical	Mounting	Wall mount; DIN Rail mount (option WIPC09002890)
	Dimensions	210 mm (H) × 150 mm (D) × 63 mm (W); with DIN rail: 210 mm (H) × 150 mm (D) × 77 mm (W)
	Weight	2200 g
	Housing Material	Steel / Aluminum
	Ingress Protection	IP20
Environmental	Operating Temperature	-40°C to +60°C
	Storage Temperature	-40°C to +85°C

4.2 Dimensions

4.2.1 System Drawings



5 Power Supply

Use the terminal block to connect the Edge Gateway to a 8-24V DC power source.

Pin	Signal
1	DC IN +8~24VIN (EG800)
2	NC
3	GND

6 Power Consumption

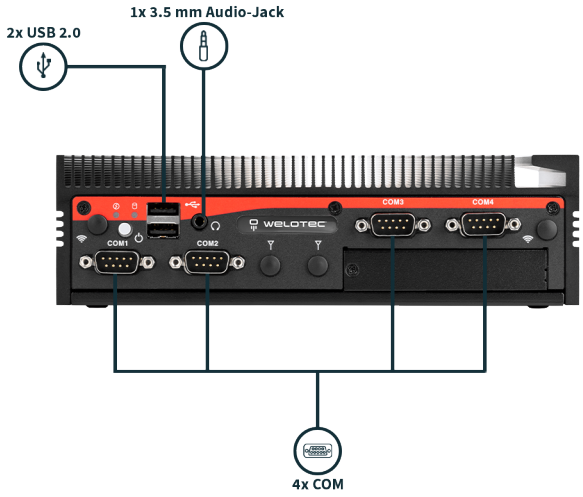
Item	Specification
CPU	11th Gen Intel® Tiger Lake-UP3 Core™ i5-1145G7E – Quad Core, 8MB Cache, up to 4.10 GHz
RAM	16 GB RAM
Operating System	Windows 10 64-bit
Test Program	Burn-in test 9.0 pro, CPU 100%, RAM 40%, Storage 10%
Storage	2.5” 32GB SSD SATA 6Gb/s

Maximum Power Consumption: 39W

Note: Power consumption varies based on configuration and software usage.

7 Interfaces and Connections

7.1 Front I/O



7.2 Rear I/O