Edge Gateway 600 Series

Version:
v1.0.1

Date:
15.08.2025

Contents

1 Copyright

2 Regulatory Compliances

2.1 Complies with the following EU directives

Radio Equipment Directive (2014/53/EU) only applies to devices containing radio module EM05-G.

No	Short Name
2014/35/EU	Low Voltage Directive (LVD)
2014/53/EU	Radio Equipment Directive (RED)
2014/30/EU	Electromagnetic Compatibility (EMC)
2011/65/EU	Restriction of the use of certain hazardous substances in electrical and electronic equipment Directive (RoHS2)
2015/863/EU	Amendment to Annex II in Directive 2011/65/EU regards the list of restricted substances (RoHS3)

2.2 References of standards applied

Standard	Reference	Issue
EN 18031-1	Common security requirements for radio equipment - Part 1: Internet connected radio equipment	2024
EN 55032	Electromagnetic compatibility of multimedia equipment - Emission Requirements	2015+A11:2020+A1:2020
EN 55035	Electromagnetic compatibility of multimedia equipment - Immunity requirements	2017+A11:2020
EN IEC 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions	2019
EN 61000-3-3	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems	2013+A1:2019
EN 61000-4-2	Electromagnetic compatibility (EMC). Testing and measurement techniques. Electrostatic discharge immunity test	2009
EN 61000-4-3	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	2006+A1:2008+A2:2010
EN 61000-4-4	Electromagnetic compatibility (EMC) - Part 4-4 : Testing and measurement techniques - Electrical fast transient/burst immunity test	2012
EN 61000-4-5	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	2014+A1:2017
EN 61000-4-6	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	2014+AC:2015
EN 61000-4-8	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	2010
EN IEC 61000-4-11	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	2004+A1:2017
EN 50121-4	Railway applications - Electromagnetic compatibility - Part 4: Emission and immunity of the signalling and telecommunications apparatus	2016+A:2019
EN 61000-6-4	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments	2007+A1:2011
EN 301 489-1 (module)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility	V2.2.3
EN 301 489-52 (module)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication User Equipment (UE) radio and ancillary equipment; Harmonised Standard for ElectroMagnetic Compatibility	V1.2.1
Draft EN 301 489-19 (module)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 19: Specific conditions for Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications and GNSS receivers operating in the RNSS band (ROGNSS) providing positioning, navigation and timing data	V2.2.0

2.3 FCC PART 15 VERIFICATION STATEMENT

WARNING

This equipment has been tested and found to comply with the limits for a Class A 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.

May contain transmitter module:

- RYK-WPET236ACNBT

2.4 ICES-003 ISSUE 7 VERIFICATION STATEMENT

CAN ICES3(A)/NMB3(A)

This device complies with CAN ICES-003 Issue 7 Class A. 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. Cet appareil est conforme à la norme CAN ICES-003 Issue 7 Class A. Le fonctionnement est soumis auxdeux conditions suivantes : (1) cet appareil ne doit pas causer d'interférences nuisibles et (2) cet appareil doit accepter toute interférence reçue, y compris les interférences pouvant opération indésirable.

May contain transmitter module:

- 6158A-PET236ACNBT

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 9V 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.

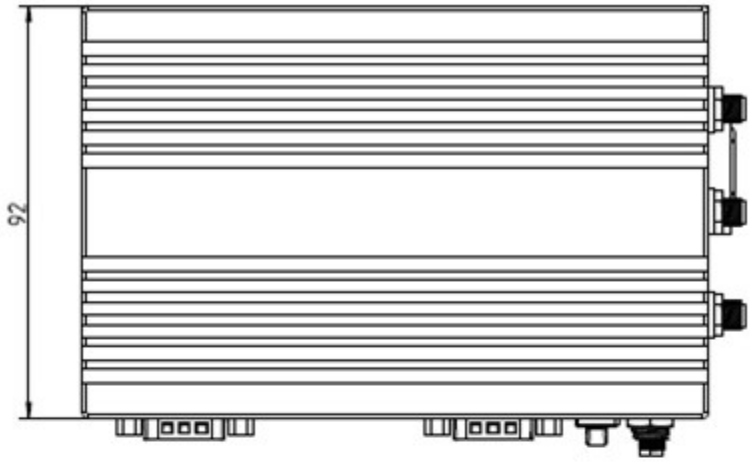
4 Product Specifications

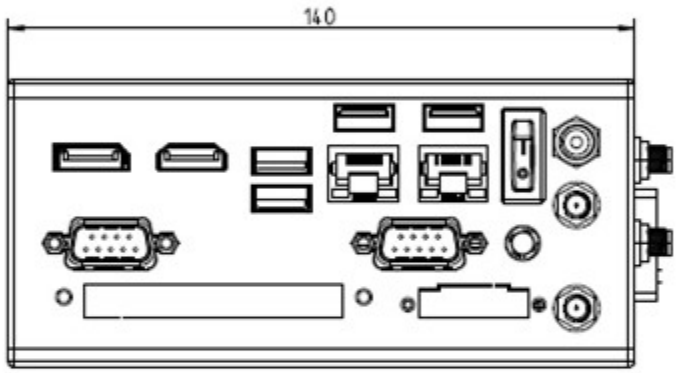
4.1 Technical Details

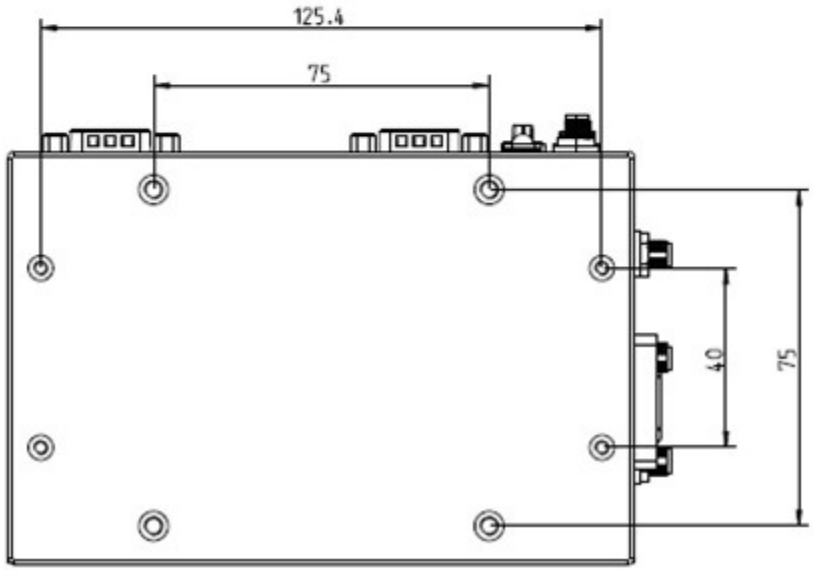
Feature	Specification	EG602W	EG602L
Processor	CPU	Intel Quad Core Atom x7-E3950	Intel Quad Core Atom x7-E3950
Memory	RAM	8GB DDR3L SoDIMM	8GB DDR3L SoDIMM
Storage	Free Storage	45 GB	45 GB
Security	TPM	TPM 2.0 with TrEE 1.1	TPM 2.0 with TrEE 1.1
I/O Ports	HDMI	1	1
	DisplayPort	1	1
	Gigabit Ethernet	2x RJ45	2x RJ45
	USB 3.0	4	4
	Serial Ports	2x RS-232/RS-485	2x RS-232/RS-485
Connectivity	LTE (EG602L only)	-	4G
Expansion	SIM Slot	1 push-push Type Nano-SIM Slot	1 push-push Type Nano-SIM Slot
Environmental	Operating Temperature	-20° to +70° C	-20° to +70° C
	Storage Temperature	-20° to 80° C	-20° to 80° C
	Humidity	5 – 95% (non-condensing)	5 – 95% (non-condensing)
	IP rating	IP20	IP20
Power	Supply	9 - 36 V DC (+/-10 % tolerance)	9 - 36 V DC (+/-10 % tolerance)
	Connector	Terminal Block or DC Jack	Terminal Block or DC Jack
Mounting	Options	DIN-Rail mounting kits available	DIN-Rail mounting kits available
Operating System	Compatibility	Welotec egOS	Welotec egOS
Physical Build	Material/Color	Steel / Aluminum	Steel / Aluminum
	Dimensions	64 x 140 x 92 mm	64 x 140 x 92 mm
	Weight	800 g	800 g

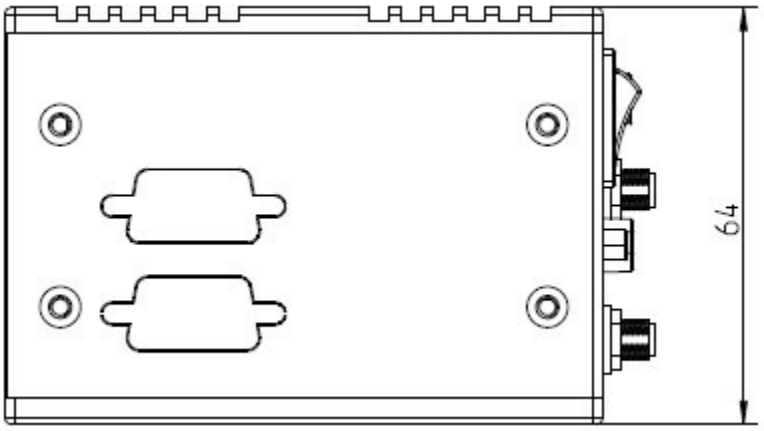
4.2 Dimensions

4.2.1 System Drawings

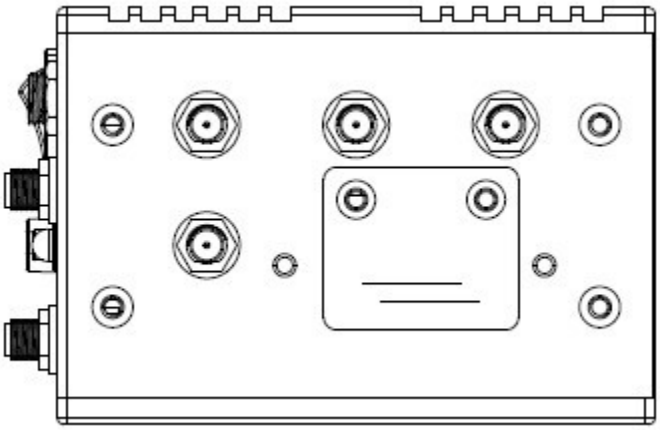




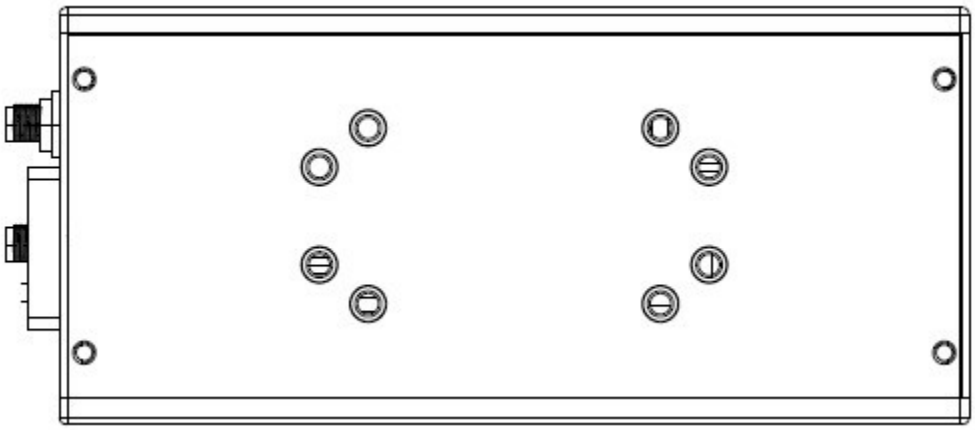




Bottom side



Top side



Rear side

5 Power Supply

⚠ Please ensure no external voltage is applied to PSW! This could cause damage.

To power the Edge Gateway, use either the terminal block or the DC jack with a 9-36V DC input.

Pin	Description
Pin 0 - VCC (left)	V+ (9-36V DC)
Pin 1 & 2 - PSW	External power switch
Pin 3 - GND (right)	Ground

6 Power Consumption

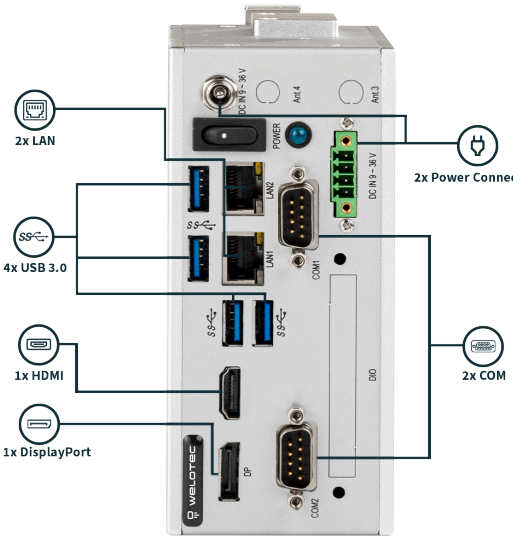
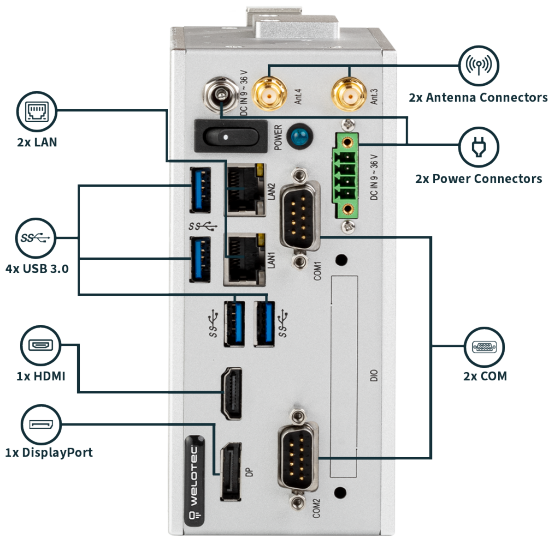
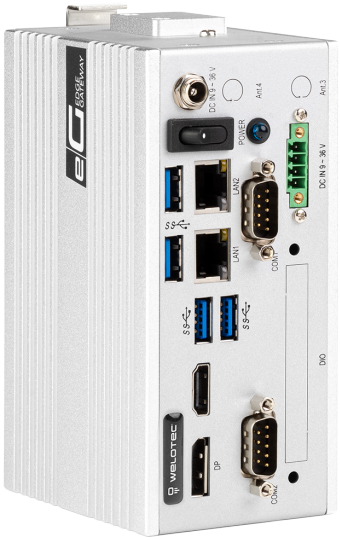
Results are for reference only!

Voltage	Power Off	Start up max.	Start up stable	Burn in Max	Shut Down
12V	0.14A	0.95A	0.62A	1.10A	0.82A
24V	0.09A	0.50A	0.32A	0.57A	0.42A

The Power Consumption depends on options and Software.

7 Interfaces and Connections

7.1 EG600 Series

EG602W	EG602L (with Radio Module)
	
	
	

8 Radio Modules (only relevant with optional LTE/WiFi Modules)

The EG600 may contain the following RF Modules:

- Telit Cinterion LEPCIC4EU08T080700
- SparkLAN WZ-WPET-236ACN(BT)

LTE:

Telit Cinterion LEPCIC4EU08T080700	Supported Bands
LTE	B1/ B3/ B7/B8/ B20/ B28A

WiFi

SparkLAN WZ-WPET-236ACN(BT)	
Operating Frequency	IEEE 802.11ac/a/b/g/nISM Band: 2.412GHz~2.484GHz, 5.150GHz~5.850GHz*Subject to local regulations

8.1 Radio Frequencies Telit

Band	Frequency Range Down	Frequency Range Up	Max Transmission Power
Band 1	2110 MHz - 2170 MHz	1920 MHz - 1980 MHz	199 mW
Band 3	1805 MHz - 1880 MHz	1710 MHz - 1785 MHz	199 mW
Band 7	2620 MHz - 2690 MHz	2500 MHz - 2570 MHz	199 mW
Band 8	925 MHz - 960 MHz	880 MHz - 915 MHz	199 mW
Band 20	791 MHz - 821 MHz	832 MHz - 862 MHz	199 mW
Band 28A	758 MHz - 803 MHz	703 MHz - 748 MHz	199 mW

8.2 Radio Frequencies SparkLAN

8.2.1 WiFi Output Power & Sensitivity

IEEE Standard	Data Rate	Tx ± 2dBm	Rx Sensitivity
802.11b	11Mbps	18dBm	⊠-85dBm
802.11g	54Mbps	14.5dBm	⊠-71dBm
802.11n / 2.4GHz (HT20)	MCS7	14dBm (1TX)17dBm (2TX)	⊠-67dBm
802.11n / 2.4GHz (HT40)	MCS7	13.5dBm (1TX)16.5dBm (2TX)	⊠-65dBm
802.11a	54Mbps	14dBm	⊠-75dBm
802.11n / 5GHz (HT20)	MCS7	13dBm (1TX)16dBm (2TX)	⊠-71dBm
802.11n / 5GHz (HT40)	MCS7	13dBm (1TX)16dBm (2TX)	⊠-67dBm
802.11ac (VHT80)	MCS9	11dBm (1TX)14dBm (2TX)	⊠-57dBm
Bluetooth	3Mbps	0 ⊠Output Power ⊠4 dBm	<0.1% BER at -70dBm

Notes

- **Down:** Refers to the downlink frequency range.
- **Up:** Refers to the uplink frequency range.
- **Max Transmission Power:** Maximum power at which the device transmits.