Edge Gateway 600 Series

Version:
v1.0

Date:
14.11.2024

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 62368-1 :2014+A11:2017
- BS EN 62368-1:2014+A11:2017

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

- EN 55032:2015+A11:2020
- EN 55032:2015+A1:2020
- EN 55035:2017+A11:2020
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN IEC 61000-3-2:2019+A1:2021
- EN 61000-4-2:2009
- EN 61000-4-3:2006+A1:2008+A2:2010
- EN 61000-4-4:2012
- EN 61000-4-5:2014+A1:2017
- EN 61000-4-6:2014+AC:2015
- EN 61000-4-8:2010
- EN 61000-4-11:2004+A1:2017
- BS EN 55032:2015+A11:2020
- BS EN 55032:2015+A1:2020 Class A
- BS EN 55035:2017+A11:2020
- BS EN 61000-3-3:2013+A2:2021+AC:2022
- BS EN IEC 61000-3-2:2019+A1:2021
- BS EN 61000-4-2:2009
- BS EN 61000-4-3:2006+A2:2010
- BS EN 61000-4-4:2012
- BS EN 61000-4-5:2014+A1:2017
- BS EN 61000-4-6:2014
- BS EN 61000-4-8:2010
- BS EN 61000-4-11:2004+A1:2017

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

RoHS 2 Directive 2011/65/EU & 2015/863/EU

Exemption(s) used:

6a, 6b, 6c

RoHS 2 Directive 2020 No. 1647

Exemption(s) used:

No. 12, 15, 18

UK CA CE

2.2 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

2.3 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 keep them for future reference.

1. **Disconnect Before Cleaning**
   Unplug this equipment from the power outlet before cleaning. Do not use liquid or sprayed detergent. Use a moist cloth or sheet.
2. **Avoid Humidity**
   Keep this equipment away from humidity.
3. **Proper Power Cord Handling**
   Ensure the power cord is arranged to prevent people from stepping on it. Do not place anything over the power cord.
4. **Follow Equipment Cautions**
   Note all cautions and warnings marked on the equipment.
5. **Long Periods of Inactivity**
   If the equipment is unused for a long period, disconnect it from the main power to avoid damage from transient overvoltage.
6. **Voltage Requirements**
   Prolonged usage with less than 9V may damage the PSU or destroy the mainboard.
7. **Prevent Liquid Entry**
   Never pour any liquid into the openings of the equipment, as this could cause fire or electrical shock.
8. **Service Personnel Assistance**
   If any of the following situations occur, have the equipment checked by qualified service personnel:
   - The power cord or plug is damaged.
   - Liquid has entered the equipment.
   - The equipment has been exposed to moisture or condensation.
   - The equipment is not functioning properly or fails to operate according to the user manual.
   - The equipment has been dropped or physically damaged.
9. **Storage Temperature**
   Do not leave this equipment in an unconditioned environment. Prolonged exposure to temperatures below -20°C or above 60°C may damage the equipment.
10. **Unplug for Servicing**
    Unplug the power cord when performing any service or when adding optional kits.
11. **Lithium Battery Caution**
    - Danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.
    - Do not remove the cover; there are no user-serviceable components inside. Take the unit to an authorized service center for service and repairs.

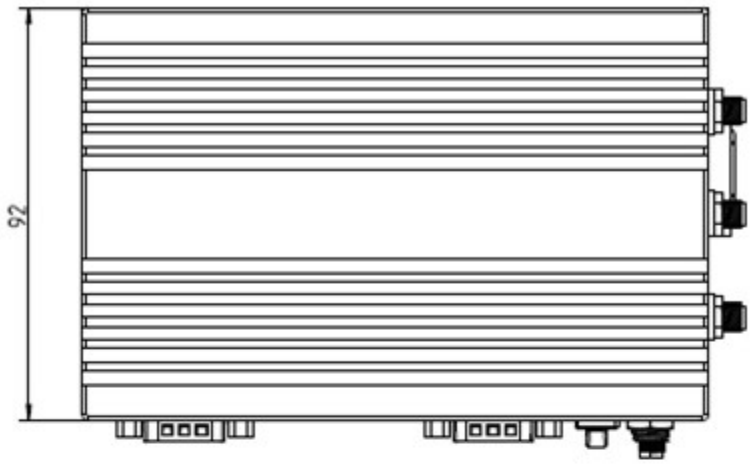
4 Product Specifications

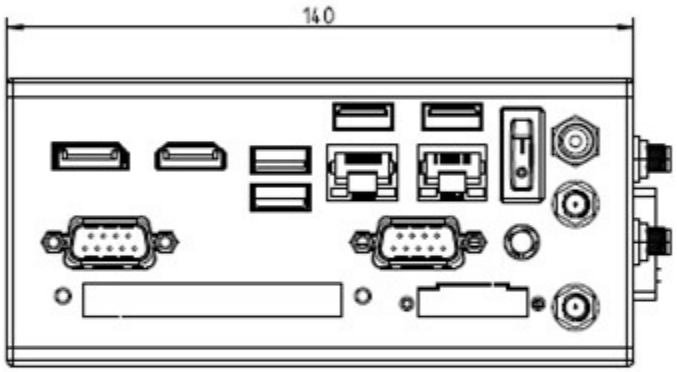
4.1 Technical Details

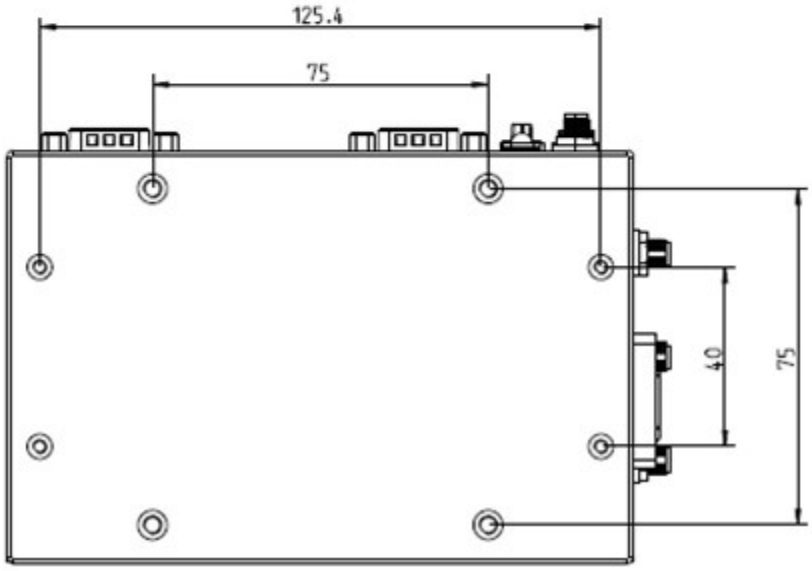
Feature	Specification	EG602W	EG602L
Processor	CPU	Intel Quad Core Atom x7-E3950	Intel Quad Core Atom x7-E3950
Memory	RAM	8GB DDR3L SoDIMM	8GB DDR3L SoDIMM
Storage Options	Free Storage	45 GB	45 GB
Security	TPM	TPM 2.0 with TrEE 1.1	TPM 2.0 with TrEE 1.1
I/O Ports	HDMI	1	1
	DisplayPort	1	1
	Gigabit Ethernet	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	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)
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
	Ingress Protection	IP20	IP20
	Dimensions	64 x 140 x 92 mm	64 x 140 x 92 mm
	Weight	800 g	800 g

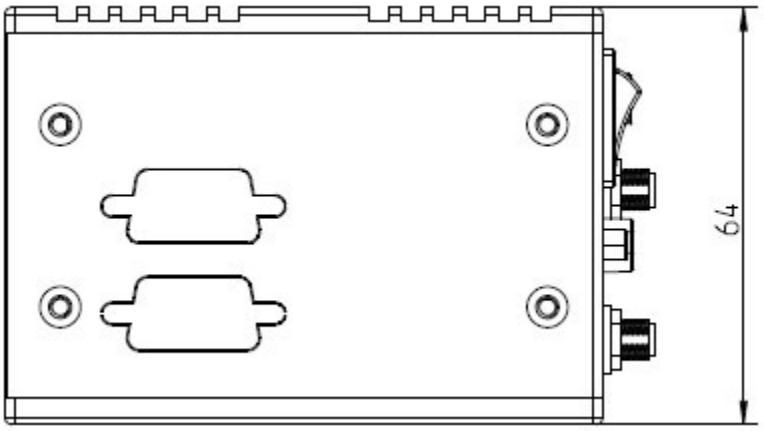
5 Dimensions

5.1 System Drawings

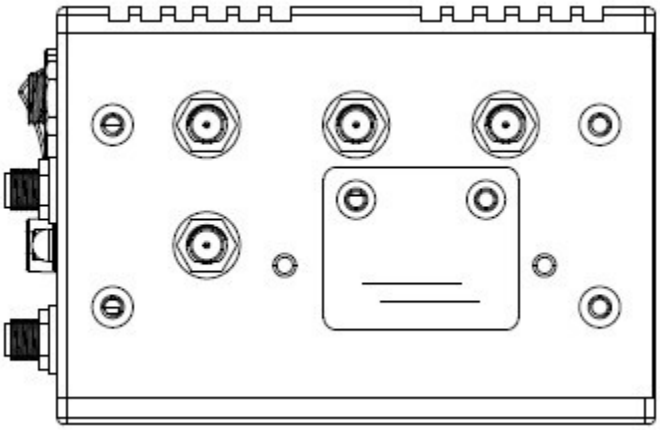




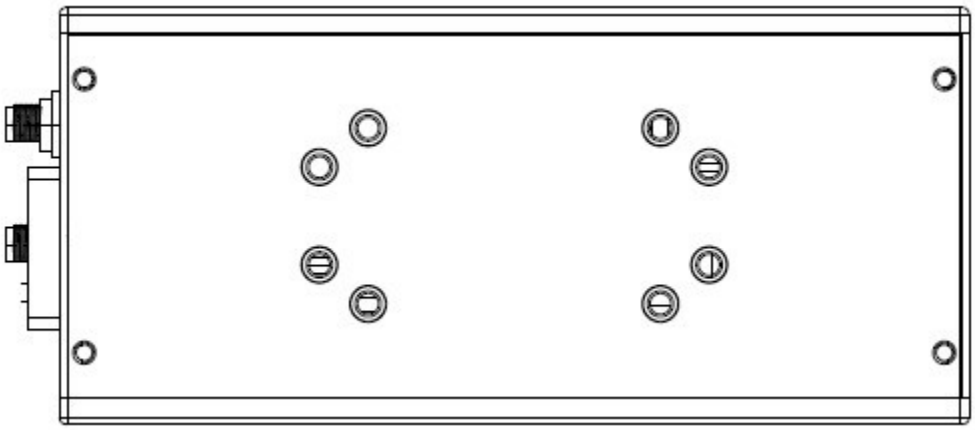




Bottom side



Top side



Rear side

6 Power Supply

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

7 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.

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.