



GATEWAY

Model Number: CE-IMX8-01



Operational description

The gateway is used for connecting cargo and load handling solutions to cloud services. Rugged low power gateway is designed for installation operating in worldwide environmental conditions.

www.cargotec.com

TECHNICAL SPECIFICATIONS

PERFORMANCE

NXP i.MX 8M Nano, 1200 MHZ

1GB RAM

8GB eMMC

INTERFACES

1 x 10/100 Mbit Ethernet

1 x CAN 2.0b, (split termination and selectable 120Ω termination. Support listen only mode)

1 x 1-wire

1 x LC Interface, Isolated

ANALOG

2 x analog inputs, selectable as 0...10V or 4-20mA.

DIGITAL

3 x GPI

4 x GPO, non-regulated 500mA

POWER

1 x DC in, 12/24V (8-32VDCwide range)

SENSOR

Accelerometer and Gyro

WAKE-UP

Always: Ignition

Configurable : Accelerometer, RTC, GPI1

CONNECTORS

Main Connector : 1 x 35Pin AMPSEAL

LTE : 2 x FAKRA D coding

GPS: 1 x FAKRA C coding

WIFI/BT: 1 x FAKRA I coding

TEMPERATURE

Operating : -40C to + 80C

INGRESS PROTECTION

HIAB submerge test compliant

HIAB clean water test compliant

HIAB aggressive water test compliant

VIBRATION

HIAB random vibration test compliant

Bromma random vibration test compliant

HIAB shock test compliant

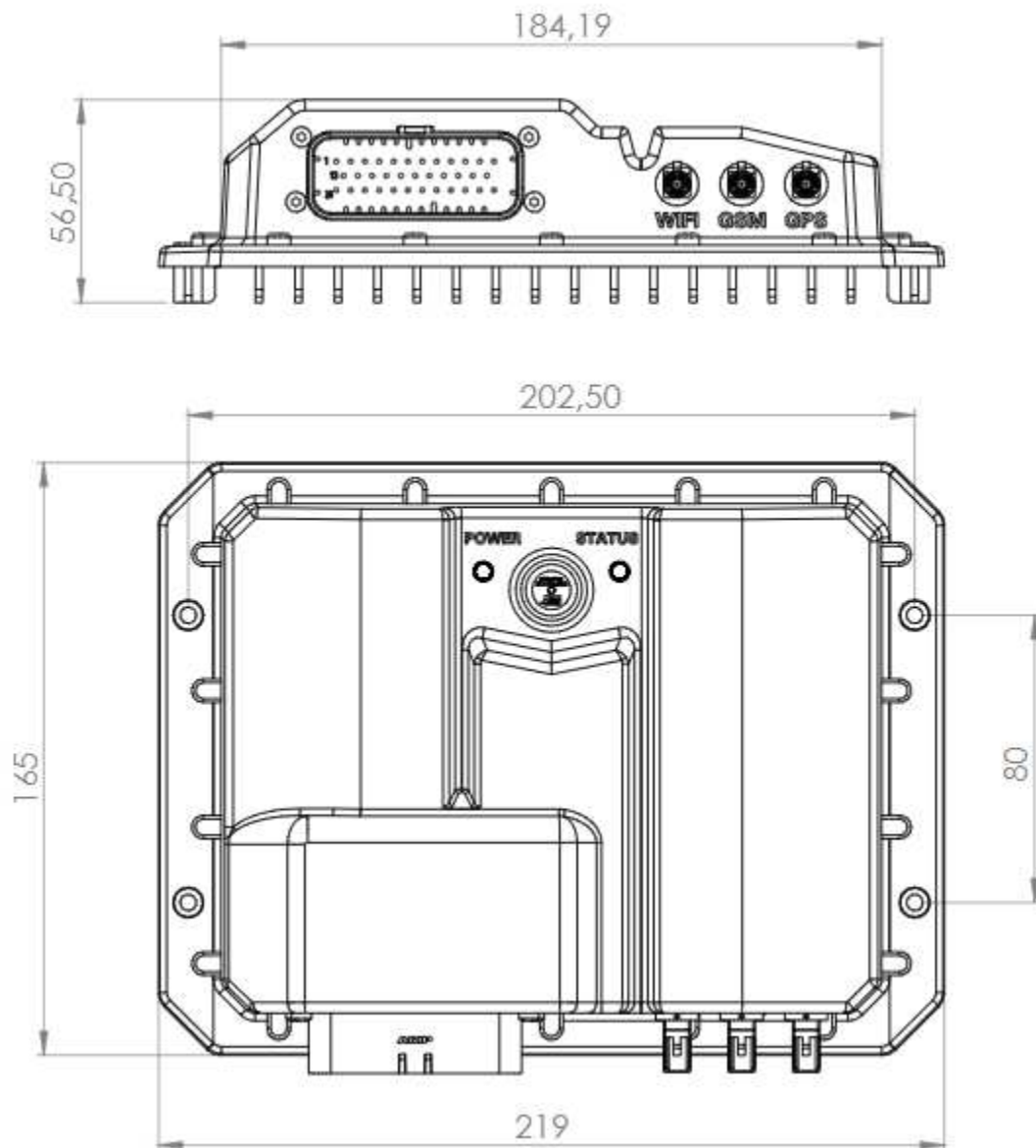
ELECTRICAL PROTECTION

All IO, except USB, withstand fault condition to GND or system input voltage

ISO 7637-2

Pulse 1, 2a, 2b, 3a, 3b, 4, 5a

MECHANICAL DIMENSIONS



Weight: 1000g

MOUNTING:

- Use 4 pieces M4 screws and washers for installation
- The connectors must be facing downwards

RADIO TECHNOLOGIES AND OUTPUT POWER

Code G

Modules used:

WLAN/Bluetooth: Murata LBEE5CJ1XK-687

<https://www.murata.com/products/productdata/8813653590046/type1xk.pdf>

Note: 5GHz WLAN not used, see table below.

Cellular: Quectel EG21-G

<https://fcc.report/FCC-ID/XMR201906EG21G/4310708.pdf>

Radio	Frequency (GHz)	Max output power (dBm)	Antenna* Gain (dBi)	EIRP (dBm)	Note
WLAN	2400	19,0	2,15	21,15	
Bluetooth 5.2	2400	6,3	2,15	8,45	
GSM	850	33,0	4,50	37,50	+/-2dB
GSM	900	33,0	4,50	37,50	+/-2dB
GSM	1800	30,0	5,00	35,00	+/-2dB
GSM	1900	30,0	5,00	35,00	+/-2dB
	Band				
WCDMA	B1	24,0	4,50	28,50	+1/-3dB
WCDMA	B2	24,0	5,00	29,00	+1/-3dB
WCDMA	B4	24,0	4,00	28,00	+1/-3dB
WCDMA	B5	24,0	4,50	28,50	+1/-3dB
WCDMA	B6	24,0	4,50	28,50	+1/-3dB
WCDMA	B8	24,0	4,50	28,50	+1/-3dB
WCDMA	B19	24,0	4,50	28,50	+1/-3dB
LTE-FDD	B1	23,0	4,50	27,50	+/-2dB
LTE-FDD	B2	23,0	5,00	28,00	+/-2dB
LTE-FDD	B3	23,0	5,00	28,00	+/-2dB
LTE-FDD	B4	23,0	5,00	28,00	+/-2dB
LTE-FDD	B5	23,0	4,50	27,50	+/-2dB
LTE-FDD	B7	23,0	3,50	26,50	+/-2dB
LTE-FDD	B8	23,0	4,50	27,50	+/-2dB
LTE-FDD	B12	23,0	4,50	27,50	+/-2dB
LTE-FDD	B13	23,0	4,50	27,50	+/-2dB

LTE-FDD	B18	23,0	4,50	27,50	+/-2dB
LTE-FDD	B19	23,0	4,50	27,50	+/-2dB
LTE-FDD	B20	23,0	4,50	27,50	+/-2dB
LTE-FDD	B25	23,0	5,00	28,00	+/-2dB
LTE-FDD	B26	23,0	4,50	27,50	+/-2dB
LTE-FDD	B28	23,0	4,50	27,50	+/-2dB
LTE-TDD	B38	23,0	3,00	26,00	+/-2dB
LTE-TDD	B39	23,0	4,00	27,00	+/-2dB
LTE-TDD	B40	23,0	3,00	26,00	+/-2dB
LTE-TDD	B41	23,0	3,00	26,00	+/-2dB
	Technology				
GNSS	GPS				
GNSS	GLONASS				
GNSS	BeiDou				
GNSS	Galileo				
GNSS	QZSS				

. * Smarteq: AllDisc Combi GNSS WiFi



WARNING
HOT SURFACE
DO NOT TOUCH



Safety Warning: This equipment is intended for installation in a Restricted Access Location only.

FCC & IC notice

1. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
2. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
3. The FCC part 15.19 statement:
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.
4. The ISSED RSS-Gen statement:
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
 1. *This device may not cause interference.*
 2. *This device must accept any interference, including interference that may cause undesired operation of the device.*

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

 1. *L'appareil ne doit pas produire de brouillage;*
 2. *L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

CE Marking

For the Cargotec Gateway, the CE mark is affixed to the equipment and its packaging



WEEE compliance



- ④ Natural resources were used in the production of this equipment.
- ④ This equipment may contain hazardous substances that could impact the health of the environment.
- ④ In order to avoid harm to the environment and consumption of natural resources, we encourage you to use appropriate take-back systems when disposing of this equipment.
- ④ The appropriate take-back systems will reuse or recycle most of the materials of this equipment in a way that will not harm the environment.
- ④ The crossed-out wheeled bin symbol (in accordance with European Standard EN 50419) invites you to use those take-back systems and advises you not to combine the material with refuse destined for a land fill.
- ④ If you need more information on collection, re-use and recycling systems, please contact your local or regional waste administration.
- ④ Please contact Cargotec for specific information on the environmental performance of our products.

Cargotec Oyj

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