Product data sheet: QBM IoT Gateway for HubSense®

QBM gateway for remote access to qualified Bluetooth mesh networks

Product description

The Inventronics QBM IoT Gateway facilitates remote access to qualified Bluetooth networks through an Ethernet connection. It is suitable for applications such as diagnostics, energy monitoring, lighting control, and the collection of emergency lighting test reports.

The QBM IoT Gateway establishes a qualified Bluetooth connection supporting up **to 200 nodes and 50 zones in 1 area**, enabling bidirectional data exchange with LED drivers and sensors within the Bluetooth mesh network. System scalability is achieved by connecting multiple QBM IoT Gateways.

In the event of a power outage, the QBM IoT Gateway automatically restores network control settings and synchronizes the time for the mesh network.

Product features and benefits

Connection up to 200 nodes and 50 zones
Only 1 gateway per Area, one area per Gateway
Remote data collection and lighting control
Secure Bluetooth communication
Powered by USB-C (power adapter not included)
2 LEDs indicator for info about connectivity, and communication
White enclosure, with mounting brackets
In case of failure the mesh network remains operational
Collect EL-T test report (functional and duration)
Web server for configuration

Areas of application

Offices / Schools
Warehouse / Factories / Sports Hall
Retails / shops

Approbations & Certifications

CE, Bluetooth,

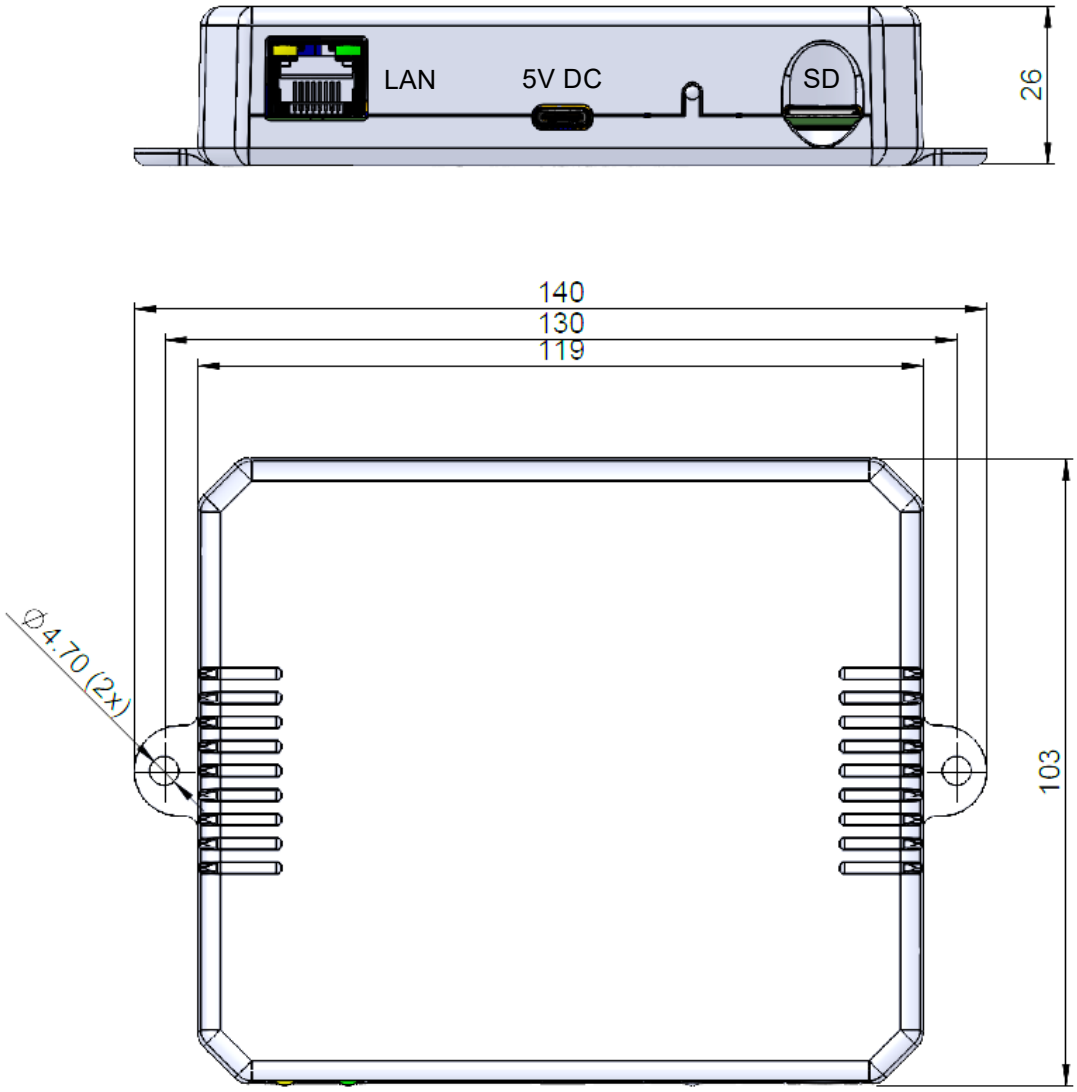
Housing material: plastic

- Qualified Bluetooth mesh
- Secured communication over MQTT by using TLS v1.2 protocol
- Rest API for energy monitoring, presence data download
- Configuration by webserver
- Energy monitoring and maintenance
- Connection to AWS
- Firmware remote update possible
- 2 LED indicators for feedback on connectivity, and communication

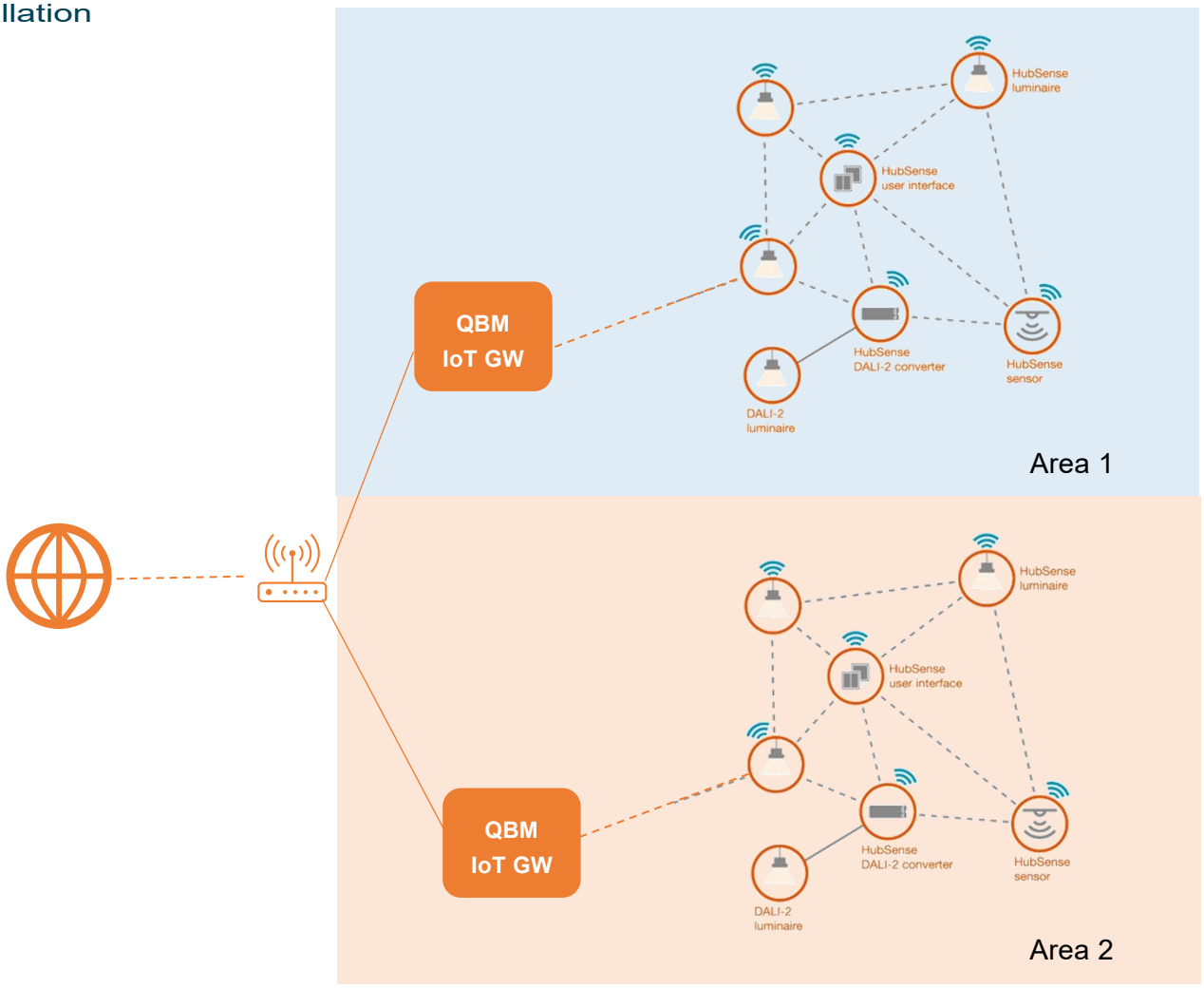
Product Features

Electrical Specifications

	Item	Value	Unit	Remarks
INPUT/ OUTPUT	Rated voltage	5	Vdc	Min 2 A
	Supply in	USB-C		Power Supply not included. N.B. double insulated conformal to IEC62368
	Power consumption	1.7 <4	W W	Typical Max
	Radio frequency	2.4	GHz	
	Max Tx Power	+8dB	dBm	
	Wireless protocol			Qualified Bluetooth mesh
	Range	15	m	Line of sight
	Connector type ethernet	RJ45		
	Ethernet length cable	30	m	Max length indoor
CAPABILITIES	Control interface			Qualified Bluetooth mesh
	Number of QBM connected nodes	200	max	1 gateway per area max
	Number of zones	50	max	
	Internal memory	64	Mb	Store up one week of data for 200 nodes
	External memory	8	Gb	By SD card (not included)
	Backup time (clock function)	72	hours	In case of mains power off (device must be tuned on first for 24h)
	Reset			Manual by button
	LEDs indicator			Mesh status and IP connection
ENVIRONMENT	Ambient temperature range t_a	-0 …+40	°C	
	Storage temperature range	-20 …+70	°C	
	Operating humidity	0 …85	%	
	Storage humidity	0 ... 95	%	Not condensing
	Environment rating	Indoor		
	IP rating	IP 20		
	Expected lifetime	50’000	h	Ta=40°C
DIMENSIONS AND WEIGHT	Color	white		RAL 9010
	Material	ABS		
	Length	140	mm	
	SD card holder			
	Width	103	mm	
	Height	26	mm	
	Product weight	140	g	
	Mounting holes	4.70	mm	M5 screws recommended
	Mounting brackets	130	mm	Axial distance
STANDRDS	**CE** **RoHS & REACH compliance**			
	EN 55032: 2015-07 EN 55032/AC: 2016-07 CISPR 32 Amd.I: 2019-10 EN 55032/A1+A11: 2020			Electromagnetic compatibility of multimedia equipment – Emission requirements
	EN 55035: 2017-07 EN 55035/A11: 2020-05			Electromagnetic compatibility of multimedia equipment – Immunity requirements
	ETSI EN 301 489-1 V2.2.3: 2019			ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonized Standard for ElectroMagnetic Compatibility
	ETSI EN 301 489-17 V3.2.5: 2022			ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband and Wideband Data Transmission Systems; Harmonized Standard for ElectroMagnetic Compatibility


LAN
5V DC
SD
26
140
130
119
Ø4.70 (2x)
103

Installation



1 gateway per area; max 200 nodes organized in max 50 zones per area

Additional product information

- By integrating the device into a casing, the wireless range could be affected by metal surfaces. Therefore, the wireless range needs to be verified after integration.
-The device could be reset to factory default by pressing the button (cfr User Instruction)
-The status LED of the device indicates following Network status

Green LED Indicator:
•Success connection: LED indicator flashes 2s at once
•No connections: LED indicator flashes 0.3s at once
Reset to factory settings:
LED indicator flashes 1s at once, then quickly flashes and disappears.

-The device has passed successfully the SILVAIR Testing process.
-The device can be put into operation using the Inventronics HubSense Commissioning Tool (https://platform.hubsense.eu), subject to prior acceptance of the Terms of Use and the Privacy Policy.
-Inventronics may terminate or suspend the use of the HubSense Commissioning Tool at any time and for any or no reason in its sole discretion, even if access and use is continued to be allowed to others.
-The device complies with Bluetooth mesh Standard v1.0. It can also be used in 3rd party Bluetooth mesh network, that complies with this standard and that supports the mesh models of this device, and with certain 3rd party commissioning tools, that support the mesh models of this device. In order to ensure correct interoperability a verification with the 3rd party network components and the 3rd party commissioning tool is necessary in advance. Please contact Inventronics (support@inventronicsglobal.com) to receive the actual list of supported models for this device.
- Inventronics shall have no liability for any 3rd party commissioning tool and does not make any representations, express or implied, about the availability and/or performance of such commissioning tool.
- Inventronics shall have no liability for and does not make any representations, express or implied, about the connectivity of Inventronics qualified Bluetooth mesh products with any other products, that have passed the SILVAIR Testing process

Ordering Information

Product type	**EAN10**
QBM IoT Gateway	6977078990820

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