BoltGATE 20-25

RUGGED GATEWAY - Intel Atom - LTE - Wi-Fi/BT - IP66 - UDR GNSS - OT4 Temp

- EN50155 Class TX with IP66
- Fanless Performance
- LTE, Wi-Fi/BLE, GNSS and Video
- Isolated I/O, CAN bus, Optional MVB
- Open Platform
- Highly Customizable
- Long-term Availability
- Cloud Certified

Features

Rolling Stock Certified : Certified for EN50155 (TX Temperature Class, EN50155 Class S2 wide range power supply) and EN45545 (Fire and Smoke). Suitable for any heavy duty, rugged application where long-term availability and support is a must have requirement

Integrated Stack : Visually compose powerful data flows for bus data acquisition, edge analysis and cloud communication

Fanless Performance : Low power performance, with single, dual and quad core Intel Atom E3800 options in a fanless and ventless package

Highly Connected : Carrier pre-certified LTE cellular connectivity, 2.4/5.0GHz Wi-Fi, BLE, and Dead Reckoning GPS

Open Platform : Provides an integrated open IoT Edge Framework to free the developer from proprietary solutions

Highly Customizable : Modular design for application customizations, ranging from factory options to custom front panel connectors and software builds

Long-term Availability : Designed for markets and use cases where long-term availability and support is a must have requirement

Cloud Certified : Seamless integration with Eurotech Everyware Cloud, Microsoft Azure, AWS IoT Core and other Cloud services

Description

The BoltGATE 20-25 is a Multi-service IoT Edge Gateway, EN50155 certified, and designed to exceed the requirements of rolling stock in the TX temperature class. With IP66 rating, it is extremely rugged and suitable for any application where consistent performance and reliability are a must.

Based on the Intel Atom E3800 processor family, with up to 4GB of RAM and 8GB of eMMC, the BoltGATE 20-25 offers extra storage expansions through optional internal or removable 2.5” SATA SSD/HDD, mSATA, and a user-accessible microSD slot.

At 30W max, the BoltGATE 20-25 is a fanless, compact unit that provides a large number of communication and I/O interfaces: two Gbit Ethernet, protected USB 2.0, four isolated serial interfaces, eight isolated DI/O plus odometer and key signals, CAN bus, video, and optional MVB. It also features a wide range of connectivity capabilities including one cellular modem, Wi-Fi, Bluetooth Low Energy, and a dedicated internal GNSS with Untethered Dead Reckoning.

As a result of its modular design, the BoltGATE 20-25 can easily be customized for the requirements of the target application. With three full miniPCIe slots, it can accommodate additional connectivity or communication options and, through Eurotech Professional Services, it can offer custom front panel configuration and connectors or customized software images.

The BoltGATE 20-25 comes with Linux and Windows operating systems. It offers Everyware Software Framework (ESF), a commercial, enterprise-ready edition of Eclipse Kura, the open source Java/OSGi middleware for IoT EdgeGateways. Distributed and supported by Eurotech, ESF supports ready-to-use field protocols (including Modbus, OPC-UA, S7), MQTT connectivity, web-based visual data flow programming and deep configuration. ESF is also integrated with Everyware Cloud (EC), Eurotech’s IoT Edge Management Platform (separately available), enabling advanced diagnostics, provisioning, and full remote device access and management.

The BoltGATE 20-25 is AWS IoT Core Qualified and can be integrated with 3rd party cloud services.

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General Specifications		
PROCESSOR	CPU	E3845, 1.91GHz, Quad Core - E3827, 1.75GHz, Dual Core - E3815, 1.46GHz, Single Core
MEMORY	RAM	Up to 4GB 1333MHz (DDR3L-ECC)
STORAGE	Embedded	8GB eMMC – Optional mSATA Module
	Drive Bay	1x Removable Drive Bay for up to 2x 2.5” Drives (with Key Lock)
	Other	1x microSD Slot (Service Panel)
I/O INTERFACES	Ethernet	2x 10/100/1000Mbps, M12 X-coded Connector
	USB	2x USB 2.0 Noise and Surge Protected, 1x USB 2.0 (Service Panel)
	Serial	2x RS-232/422/485 (9-wire) Isolated, 2x RS-485/RS-422 (5-wire), 1x TTL Console (Service Panel)
	CAN 2.0B	2x CAN bus 100mA with 5V Power Out, Isolated
	Digital I/O	4x Digital Input, 4x Digital Output, 1x Odometer, 1x Ignition Key (All DI/O Isolated, EN50155), 24V
	Video	1x Micro HDMI (Service Panel) – Optional: 1x HDMI (Circular Connector)
	Audio	1x Line IN, 1x 2W Class D Stereo OUT – Factory Option: 1x Stereo Mic In, 1x Line OUT
EXPANSION	MiniPCIe Slots	3x Full/Half-Size Mini PCIe Slots (USB/mSATA, USB/PCIe, USB)
RADIO INTERFACES	Cellular	1x LTE Cat 4 Modem
	GPS	GPS/QZSS/GLONASS/BeiDou/Galileo with Dead Reckoning
	Wi-Fi / BT	802.11 a/b/g/n, BLE 4.0
	Antennas (External)	2x SMA Cellular, 2x RSMA Wi-Fi/BT, 1x SMA GPS
OTHER	RTC	Yes, with SuperCAP (up to 2 Months Retain)
	Ext. Watchdog	Yes
	EEPROM	32KB
	TPM	Factory Option: TPM 1.2/2.0
	Sensors	Temperature, Accelerometer
	LEDs	1x Power, 3x Activity (MiniPCIe Slots), 2x Programmable
	Buttons	1x Reset, 1x Programmable (Service Panel)
	SIM Slot	2x Single SIM, Switchable for Bandwidth Aggregation and Carrier/Cellular Backup (Service Panel)
POWER	Input	9 - 137.5VDC Wide Input Range, EN50155 Class S2 for 24VDC and 110VDC Nominal Voltage Inputs
	Consumption	15W Typ, 30W Max
ENVIRONMENT	Operating Temp.	TX according to EN50155 (-40 to +70°C, -40 to +85°C for 10 Minutes)
	Storage Temp.	- 40 to +85°C
CERTIFICATIONS	Regulatory	CE
	Safety	EN 62368
	Vertical	EN50155, EN45545 (Fire and Smoke)
	Environmental	RoHS3, REACH
	Wi-Fi / BT Radio	CE (RED)
	Cellular Radio	CE (RED)
	Ingress	IP66
MECHANICAL	Enclosure	Material: Aluminium - Color: Black Anodized
	Dimensions	268x141x85mm (LxWxH) – With Connectors
	Weight	3.7Kg
SOFTWARE	OS	Eurotech Everyware Linux or Windows 10 IoT Enterprise
	SDK	Yocto-based Eclipse Tooling, Azul Java
	IoT Framework	Everyware Software Framework (Java/OSGi)
	IoT Platform	AWS IoT Core Qualified, Everyware Cloud Native

§ UL, NRTL listing Factory Option

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Standard Variants

Ordering codes		CPU	RAM	Drive Bay	Included Drives	Cellular	Software
BTGATE-20-25-	01	E3815, Single Core	2GB 1067MHz ECC	Yes	No		Yocto
	02	E3827, Dual Core	2GB 1333MHz ECC	Yes	No		Yocto
	03	E3827, Dual Core	2GB 1333MHz ECC	Yes	1x 512GB SSD MLC High Reliability	No	Yocto
	04	E3845, Quad Core	4GB 1333MHz ECC	Yes	1x 512GB SSD MLC High Reliability	No	Yocto

Video-oriented Variants

Ordering codes		CPU	RAM	Drive Bay	Included Drives	Video on Rear Panel	Cellular	Software
BTGATE-20-25-	11	E3845, Quad Core	4GB 1333MHz ECC	Yes	1x 512GB SSD MLC High Reliability	1x HDMI (circular connector)	1x LTE Cat 4 (EU)	Yocto
	15	E3845, Quad Core	4GB 1333MHz ECC	Yes	1x 64GB mSATA – 1x 512GB SSD MLC High Reliability	1x HDMI (circular connector)	1x LTE Cat 4 (EU)	Windows 10 IoT ETP

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