



- **ARM Powered**
- **IoT Ready**
- **Internal UPS**
- **Rolling Stock and Automotive Certified**
- **Cloud Certified**
- **Open Platform**
- **Customizable**



## Features

**ARM Powered** - Powered by TI AM335x CPU: optimum performance for intensive workloads at just 2.6W

**IoT Ready** - Breadth of connectivity options: carrier certified LTE Cat 1 cellular modems for multiple geographies, Wi-Fi, BLE, Fast Ethernet, including CAN bus ports, optoisolated digital I/Os, protected serial ports

**Internal UPS** - An internal, extended temperature battery protects the device from unexpected power interruptions and allows a safe shutdown

**Rolling Stock and Automotive Certified** - Suitable for rugged Rolling Stock and Automotive applications is certified for EN50155, EN45545 (Fire and Smoke) and E-Mark

**Cloud Certified** - Seamless integration with Eurotech Everyware Cloud, Microsoft Azure, AWS IoT Core and other Cloud Services

**Open Platform** - Provides a Java/OSGi gateway middleware, to free the developer from proprietary solutions

**Customizable** - Flexible: personalization and full customization options are available, ranging from branding ("skin" and color) to deep HW/SW configurations

## Description

The BoltGATE 10-12 is a Multi-service IoT Edge Gateway designed to deliver LTE connectivity to Rolling Stock, Automotive and lightly rugged applications.

Based on the TI AM335x Cortex-A8 (Sitara) processor family, with 1GB of RAM, 8GB of eMMC and a user-accessible microSD slot, the BoltGATE 10-12 is a low power gateway suitable for demanding use cases: it supports a 9 to 36V power supply with transient protection and vehicle ignition sense, provides a UPS and protected serial ports, CAN bus and isolated digital interfaces.

The BoltGATE 10-12 features a wide range of connectivity capabilities: it integrates an internal LTE Cat 1 cellular modem with dual Micro-SIM support, Wi-Fi, Bluetooth Low energy, Fast Ethernet ports, and an internal GNSS with Untethered Dead Reckoning.

The BoltGATE 10-12 is equipped with a TPM 2.0 technology which provides cutting-edge security features that protect the system integrity and authenticity against unauthorized manipulations.

The BoltGATE 10-12 is enriched with [Everyware Software Framework \(ESF\)](#), Eurotech's IoT Edge Framework, that supports ready-to-use field protocols (including Modbus, OPC-UA, S7), MQTT connectivity, a web-based visual data flow programming (ESF Wires) and deep configuration. ESF is a commercial, enterprise-ready edition of Eclipse Kura. 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.

### Ordering Code: BTGATE-10-12-XX

XX		-66	-66U
PROCESSOR	CPU	TI AM3352 1GHz, 1 Core	
MEMORY	RAM	1GB DDR3	
STORAGE	Embedded	8GB eMMC	
	Other	1x microSD Slot (Service Panel)	
I/O INTERFACES	Ethernet	2x 10/100Mbps on M12 D-coded	
	USB	2x Host 2.0 (Noise and Surge Protected) - Type A (Service Panel)	
	Serial	1x RS-422/485 (Protected and Isolated); 1x RS-232/RS-485 (Surge Protected); RS-485 Termination and Fail-safe Resistors; 1x Serial Console TTL (Service Panel)	
	CAN 2.0B	2x CAN bus with 5V (100mA) Power Out	
	Digital I/O	2x Digital Input 36V, 1KV Optoisolated - 2x Digital Output (40VAC/DC), 500mA Sink, 1KHz Max Switching	
RADIO INTERFACES	Internal Cellular	LTE Cat 1 (EU) with 2G/3G Fallback	
	GNSS	Internal (72 channels GPS, Galileo, GLONASS, BeiDou) - Untethered Dead Reckoning	
	Wi-Fi / BT	802.11a/b/g/n, BLE 4.2	
	Antennas (External)	1x SMA GPS, up to 2x SMA Cellular, up to 2x RP-SMA Wi-Fi/BT	
OTHER	RTC	Yes (Supercap Backup)	
	Ext. Watchdog	Yes	
	TPM	TPM 2.0	
	Sensors	Temperature, 3-axis Digital Accelerometer, 3-axis Digital Gyroscope	
	LEDs	1x Power, 5x Programmable	
	Buttons	1x System Reset, 1x Programmable (Service Panel)	1x System Reset, 1x UPS Reset, 1x Programmable (Service Panel)
	SIM Slot	2x Micro-SIM (Service Panel)	
POWER	UPS Function	No	Integrated Ext. Temp. Li-Ion Battery (3.65V, 4000mAh), Enabling Safe Shutdown and Power State Restore
	Input	Nominal: 24VDC (Railways: EN50155 Class S1); Nominal: 12 or 24VDC (Automotive); Vehicle Ignition Sense; Range: 9 to 36VDC with Transient Protection; Vehicle Ignition Sense	Nominal: 24VDC (Railways: EN50155 Class S3); Nominal: 12 or 24VDC (Automotive); Vehicle Ignition Sense; Range: 9 to 36VDC with Transient Protection; Vehicle Ignition Sense
	Consumption	2.6W Idle, 15W Max	2.6W Idle, 30W Max
ENVIRONMENT	Operating Temp	EN 50155 OT4 (-40 to +70°C)	
	Storage Temp	-40 to +85°C	
CERTIFICATIONS	Regulatory	CE	
	Safety	EN 62368-1	
	Vertical	E-Mark, EN50155, EN45545 (Fire and Smoke)	
	Environmental	RoHS3, REACH	
	Wi-Fi / BT Radio	RED	
	Cellular Radio	RED	
	IoT Platform	Microsoft Azure Certified, AWS IoT Core Qualified, Everywhere Cloud Native	
	Ingress	IP67	
MECHANICAL	Enclosure	Material: Aluminium - Color: Black Anodized	
	Dimensions	150x224x62mm (LxWxH) - With SMA Connectors, Including Integrated Mounting Bracket	

### Software

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SOFTWARE	OS	Eurotech Everyware Linux
	SDK	Yocto-based Eclipse Tooling, Azul Java
	IoT Framework	Everyware Software Framework (Java/OSGi)