



- **ARM® Powered, AI Acceleration**
- **Robust cybersecurity: hardware + software hardening**
- **Rolling Stock & Automotive, Maritime Applications**
- **Global cellular for worldwide connectivity**
- **Isolated Power Supply**
- **Easy to install, configure and program**
- **Cloud Certified**



Features

AI ACCELERATION : AI workload acceleration: i.MX 8M Plus providing a 2.3TOPS AI accelerator and quad core Cortex A53 performance for general purpose AI, image processing and computer vision

BEST IN CLASS CYBERSECURITY : Designed to meet ISA/IEC 62443-4-1/-4-2 SL2 (Hardware plus Software), always on and power independent antitampering monitor and logger, TPM 2.0 and full hardware hardening

RUGGED APPLICATIONS : Certified for Rolling Stock (EN5055 and EN45545) and Maritime (EN60945). Designed for Automotive, with a high level of robustness: IP67, wide operating temperature, wide range power supply and isolated & protected interfaces

IOT READY : Breadth of connectivity options: carrier certified LTE Cat 4 global cellular modem for multiple geographies, featuring automotive grade UDR GNSS. Includes: Wi-Fi/BT, Bluetooth, GbE Ethernet, CANBus ports and protected serial ports.

EASY TO PROGRAM : Full support for classic and visual programming, plus Everyware Software Framework (ESF), the IoT Java/OSGi based-middleware for IoT gateways that accelerates user application development

CLOUD CERTIFIED : Seamless integration with Eurotech Everyware Cloud, AWS IoT Core and other Cloud services

CUSTOMIZABLE : Personalization and full customization options are available, ranging from branding ("skins" and color) to deep HW/SW configurations

Description

The BoltGATE 10-14 is a Multi-service AIoT Edge Gateway designed to Rolling Stock, Maritime, Automotive and rugged applications.

The BoltGATE 10-14 offers best in class Cybersecurity: it can be certified according to ISA/IEC 62443-4-1/-4-2 SL2 as a factory option. Protection starts at the hardware level, with full support for TPM 2.0, Secure Boot and an always-on physical antitampering monitor/logger that is active even when the system is removed from power. For most demanding customers, special production-only images can be configured with full hardware hardening (interface disabling) to further reduce the attack surface.

Based on the NXP i.MX 8M Plus quad core processor, with 4GB of RAM, 32GB of eMMC, the BoltGATE 10-14 is a low power gateway suitable for very rugged use cases: it supports a isolated 9 to 35 VDC power supply with transient protection and vehicle ignition sense, two protected and isolated RS-232/422/485 serial ports, two protected and isolated CAN-FD Bus and two noise. Under the service panel, surge protected USB ports and a HDMI interface are provided for service and development. The BoltGATE 10-14 features a wide range of connectivity capabilities: it integrates a carrier certified LTE Cat 4 cellular modem, Wi-Fi, Bluetooth 5/BLE, and two Gigabit Ethernet ports. A dedicated UDR GNSS provides precise geolocation capabilities.

The BoltGATE 10-14 comes with [Everyware Software Framework \(ESF\)](#), a commercial, enterprise-ready edition of Eclipse Kura, the open source Java/OSGi middleware for IoT Edge Gateways. 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 IoT Integration Platform (separately available), enabling advanced diagnostics, provisioning, and full remote device access and

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RUGGED GATEWAY - i.MX 8M Plus - LTE - Wi-Fi/BT - IEC 62443-4-2 - IP67/IK8 - UDR GNSS - OT4 Temp management.

RUGGED GATEWAY - i.MX 8M Plus - LTE - Wi-Fi/BT - IEC 62443-4-2 - IP67/IK8 - UDR GNSS - OT4 Temp

Hardware Ordering Code: BTGATE-10-14-03-yy		
PROCESSOR	CPU	NXP i.MX 8M Plus, 4 Core ARM Cortex A53 1.6GHz + 1 Core ARM Cortex M7 800MHz
ACCELERATORS	Neural Processor	Integrated, 2.3 TOPS
MEMORY	RAM	4GB LPDDR4 (Factory Option: 8GB)
STORAGE	Embedded	32GB eMMC (Factory Option: Up to 128GB)
	Other	1x microSD Slot (Service Panel)
I/O INTERFACES	Ethernet	2x 10/100/1000 Mbps, M12 X-Coded
	USB 3.0	2x Host 3.0 (Noise and Surge Protected) Type A (Service Panel)
	Console	1x USB 2.0 Type-C receptacle (Service Panel)
	Serial	2x RS-232/422/485; Isolated, Surge Protected; DB9 Connectors
	CAN	2x CAN-FD bus, Protected and Isolated with Termination Resistors; M12 Connectors
	Digital IN	2x Digital Input 36V, 1KV Optoisolated; DB9 Connector Isolated
	Digital OUT	2x Digital Output (40VAC/DC), 500mA Sink, 1KHz Max Switching; DB9 Connector Isolated
	Video	1x HDMI (Service Panel)
RADIO INTERFACES	Internal Cellular	1x LTE Cat 4 (Global)
	SIM Slot	1x microSIM (User Accessible, behind service panel)
	GNSS	GPS, Galileo, GLONASS, BeiDou, QZSS
	GNSS Type	Untethered Dead Reckoning (UDR); Factory Option: Real Time Kinematics (RTK) sub-meter
	Wi-Fi	802.11 a/b/g/n/ac (2.4GHz, 5GHz)
	Bluetooth	BT/BLE5.0 (2.4GHz)
	Ext. Antennas	2x SMA Cellular, 1x RP-SMA Wi-Fi/Bluetooth, 1x SMA GNSS
CYBERSECURITY (HARDWARE)	TPM	TPM 2.0
	Anti-Tamper	Yes (Enclosure and Service Panel - Always-on Monitoring and Event Logging with Time Stamping)
OTHER	RTC	Yes (SuperCAP Backup)
	Watchdog	Yes - Dedicated Chip
	EEPROM	256 Kbit
	Temp. Sensor	Yes
	Accelerometer	3D Accelerometer / 3D Gyroscope
COOLING	Technology	Compact and fanless
POWER	Input	Nominal: 12 and 24 V DC; Range: 9 to 35 V DC with Transient Protection and Vehicle Ignition Sense. M12 Connector; Isolated Power Supply
ENVIRONMENT	Operating Temp.	-40 to +70°C
	Storage Temp.	-40 to +85 °C
	Humidity	RH 5...95% Operating Non Condensing (40°C)
CERTIFICATIONS	Regulatory	CE (EU), FCC (US), ISED (CA), JATE/ TELEC (JP); Other Geography: Factory Option
	Safety	IEC 62368-1; Factory Option: UL 62368-1 (UL Mark)
	Cybersecurity	EN 18031-1 (RED-DA) - Off-the-shelf Compliance
	Vertical	EN 50155, EN 45545 (Rolling Stock), EN 60945 (Maritime); Designed for E-Mark (Road Vehicle)
	Radio	RED; Factory Option: PTCRB (US)
	Cybersecurity	IEC 62443-4-1 Certified; Factory Option: IEC 62443-4-2 SL2 Host
	Carrier	Factory Option: AT&T, Verizon
	Environmental	RoHS3, REACH
	Ingress	IP67 (IEC 60529)
	Impact Protection	IK8 (IEC 62262)
MECHANICAL	Dimensions	270 x 200 x 51 mm (WxDxH) - Excluding Connectors

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RUGGED GATEWAY - i.MX 8M Plus - LTE - Wi-Fi/BT - IEC 62443-4-2 - IP67/IK8 - UDR GNSS - OT4 Temp

Ordering Code: BTGATE-10-14-03-yy			
Software Configuration (-yy)		-02	-03-09
OS	Eurotech Everyware Linux	Yes	
IOT FRAMEWORK	Everyware Software Framework (Java/OSGi)	-	Yes
SOFTWARE HARDENING	Hardening	-	Yes (\$)

\$ Factory Option: Contact Eurotech