ReliaGATE 10-12

Multi-service IoT Edge Gateway - TI AM335x, LTE Cat 1

- **ARM® Powered**
- **Internal LTE Cat 1 (NA, EU, JP)**
- **Industrial Grade**
- **Field Protocol Support**
- **Cloud Certified**
- **Open Platform**
- **Customizable**

Features

ARM Powered - Powered by TI AM335x CPU: optimum performance for intensive workloads at just 2W
IoT Ready - Breadth of connectivity options: carrier certified LTE Cat 1 cellular modems for multiple geographies, Wi-Fi, BLE, Fast Ethernet and Fieldbus interfaces, including CAN bus ports, optoisolated digital I/Os, protected USB and serial ports
Industrial Grade - Wide operating temperature, wide range power supply with transient protection
Field Protocol Support - Native support for Modbus, S7 and OPC UA, the extensible, secure, and platform-independent industrial interoperability standard
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 ReliaGATE 10-12 is a Multi-service IoT Edge Gateway designed to deliver LTE connectivity (with 3G fallback) to industrial applications.

Based on the TI AM335x Cortex-A8 (Sitara) processor family, with 1GB of RAM, 8GB of eMMC and user-accessible MicroSD and dual Micro-SIM slots, the ReliaGATE 10-12 is a low power gateway suitable for demanding use cases: it supports a 9 to 30V power supply with transient protection and ignition sense, two protected serial ports: one RS-422/RS-485 and one RS-232/RS-485, two CAN bus interfaces, three noise and surge protected USB ports, and four isolated digital interfaces.

The ReliaGATE 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, two Fast Ethernet ports and three Sensors: Temperature, 3-axis Gyroscope and a 3-axis Accelerometer; an optional internal GPS provides precise geolocation capabilities.

Expansion options include the ReliaCELL 10-20 family, consisting of external, rugged cellular modules for global use that are certified by leading carriers. An expansion connector allows adding extra features with side modules, such as the ReliaWAN 10-12, a LoRa Gateway unit, or the ReliaIO 10-12, which provides analog input and more DI/O ports.

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

The ReliaGATE 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 IoT Integration Platform (separately available), enabling advanced diagnostics, provisioning, and full remote device access and management.

The ReliaGATE 10-12 is AWS IoT Core Qualified, Microsoft Azure Certified and can be integrated with 3rd party cloud services.

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Ordering code: REGATE-10-12-XX

XX		- 62	- 63	- 64	- 65	- 66	- 67
PROCESSOR	CPU	TI AM3352 1GHz, 1 Core					
MEMORY	RAM	1GB DDR3					
STORAGE	Embedded	8GB eMMC					
	Other	1x microSD Slot (User Accessible)					
I/O INTERFACES	Ethernet	2x 10/100Mbps - RJ45					
	USB	3x Host 2.0 (Noise and Surge Protected) - Type A					
	Serial	1x RS-422/RS-485 protected and isolated, 1x RS-232/RS-485 (Surge Protected, RS-485 Termination and Fail-safe Resistors), 1x TTL Serial Console					
	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					
	Exp. Connector	Yes, for Eurotech Side Expansion Modules (ReliaIO 10-12, ReliaWAN 10-12)					
RADIO INTERFACES	Internal Cellular	No	LTE Cat 1 (NA), 3G Fallback	LTE Cat 1 (EU), 2G/3G Fallback	LTE Cat 1 (NA), 3G Fallback	LTE Cat 1 (EU), 2G/3G Fallback	LTE Cat 1 (JP)
	External Cellular	Optional Accessory: ReliaCELL 10-20 (3G/4G)					
	GPS	Factory Option: Internal (72 channels GPS, Galileo, GLONASS, BeiDou) – Optional Accessory: ReliaCELL 10-20 3G					
	Wi-Fi / BT	a/b/g/n, BLE 4.2	No		a/b/g/n, BLE 4.2		
	Antennas (Ext.)	2x RSMA Wi-Fi/BT	2x SMA Cellular		2x SMA Cellular, 2x RSMA Wi-Fi/BT		
OTHER	RTC	Yes (User Accessible Battery)					
	Ext. Watchdog	Yes					
	TPM	TPM 2.0					
	Sensors	Temperature, 3-axis digital Accelerometer, 3-axis digital Gyroscope					
	LEDs	1x Power, 1x Cellular, 4x Programmable					
	Buttons	1x Reset, 1x Programmable					
	SIM Slot	No	2x microSIM (User Accessible)				
POWER	Input	Nominal: 12 or 24 VDC; Range: 9 to 30 VDC with transient protection					
	Consumption	2W Idle (15W Max)					
ENVIRONMENT	Operating Temp	- 40 to +70°C					
	Storage Temp	- 40 to +85°C					
	Humidity	5 to 95% Relative Humidity (non condensing) at +40°C					
CERTIFICATIONS	Regulatory	CE, FCC, ISED	FCC, ISED	CE	FCC, ISED	CE	JATE, TELEC
	Medical	Designed to be compliant with IEC60601-1-2					
	Safety	EN 62368-1, UL 60950 (§)					
	Environmental	RoHS3, REACH					
	Wi-Fi / BT Radio	RED, FCC, ISED	FCC, ISED	RED	FCC, ISED	RED	JATE, TELEC
	Cellular Radio	No	FCC, ISED, PTCRB, AT&T, Verizon	RED	FCC, ISED, PTCRB, AT&T, Verizon	RED	JATE, TELEC
	Ingress	IP40					
MECHANICAL	Enclosure	Material: ABS - Color: Aluminum					
	Dimensions	139x115x46 (LxWxH) - with SMA Connectors and Mounting Bracket					

Software

SOFTWARE	OS	Eurotech Everyware Linux
	SDK	Yocto-based Eclipse Tooling, Azul Java
	IoT Framework	Everyware Software Framework (Java/OSGi)
	IoT Platform	AWS IoT Core Qualified, Microsoft Azure Certified, Everyware Cloud Native

§ UL, NRTL listing Factory Option.