ReliaGATE 10-14

Multi-service IoT Edge Gateway - NXP i.MX 8M, LTE Cat 1

- **Quad Core, 64bit ARM**
- **For Global Cellular Deployments**
- **Best in Class Cybersecurity**
- **Industrial Grade**
- **Expandable**
- **Easy to Program**
- **Open, No Lock-in**
- **Customizable**

Features

ARM Powered - Powered by NXP i.MX 8M Mini CPU: quad core Cortex A53 performance for intensive workloads
For Global Cellular Deployments - Carrier certified LTE and ready to deploy in most countries, Wi-Fi, BLE, Gigabit Ethernet and Fieldbus interfaces, supporting Modbus, S7, OPC UA, and many more protocols
Best in Class Cybersecurity - IEC 62443-4-1/-4-2 and PSA Level 1 certified, California SB-327 compliant, always on and power independent antitamper monitor and logger, TPM 2.0 and full hardware hardening
Industrial Grade - Extended operating temperature, wide range power supply with transient protection, optoisolated analog in and digital I/Os, protected USB, protected and isolated serial ports, DIN bar and wall mount
Expandable - Add LoRa, more DI/O, analog inputs, and custom peripherals with side expansion modules
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
Open, No lock-in - Based on open standards and Cloud agnostic, it can be integrated with all major platform and service provides
Customizable - Can be personalized and even fully customized, with options ranging from branding ("skins" and color) to deep HW/SW changes

Description

The ReliaGATE 10-14 is an industrial, highly secure Edge Gateway that is easy to program: it supports classic and visual programming and comes with a rich and expandable IoT programming Framework. It is open and supports all major Cloud providers and services. It is suitable for immediate deployment in most countries, thanks to carrier certified LTE with 2G/3G backup connectivity, with options to expand the geographic coverage to a truly global scale.

The ReliaGATE 10-14 offers best in class Cybersecurity: it leads the market with IEC 62443-4-1/-4-2 and PSA Level 1 certification; it is also compliant with California SB-327 password law. 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 Mini Cortex-A53 quad core processor, with up to 4GB of RAM, up to 32GB of eMMC and a user-accessible microSD slot, the ReliaGATE 10-14 is a low power gateway suitable for lightly rugged use cases: it supports a 9 to 30VDC power supply with transient protection, Display Port video output, two protected and isolated RS-232/RS-422/RS-485 serial ports, two noise and surge protected USB ports, six optoisolated digital and two isolated analog interfaces.

The ReliaGATE 10-14 features a wide range of connectivity capabilities: it integrates a carrier certified LTE Cat 1 cellular modem with dual SIM support, Wi-Fi, Bluetooth 5/BLE, and two Gigabit Ethernet ports; an internal GNSS provides precise geolocation capabilities. Expansion options allow 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 10-14 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 management.

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Ordering code: REGATE-10-14-xx					
XX		-32	-35	-36	-37
PROCESSOR	CPU	i.MX 8M Mini Quad Cortex-A53 1.6 GHz			
	GPU	2D and 3D Acceleration			
MEMORY	RAM	2GB (Up to 4GB LPDDR4)			
STORAGE	Embedded	16GB (Up to 32GB eMMC)			
	Additional	Micro SD Slot (User Accessible)			
I/O INTERFACES	Ethernet	2x 10/100/1000 - RJ45			
	USB 2.0	2x Host 2.0 (Noise and Surge Protected) - Type A			
	Serial	2x RS-232/RS422/RS-485 protected and isolated (5 wires), 1x Serial Console TTL			
	Digital I/O	4x Digital Inputs Optoisolated, 2x Digital Outputs Optoisolated			
	Analog I/O	2x Analog Inputs Isolated (11-bit, 0-36VDC)			
	Video Out	1x Video Output (Display Port)			
RADIO INTERFACES	Internal Cellular	No	LTE Cat 1 (NA)	LTE Cat 1 (EU)	LTE Cat 1 (AP)
	GNSS	No	GPS, Glonass, Beidou, Galileo, QZSS		
	Wi-Fi/BT	802.11 a/b/g/n/ac (2.4GHz, 5GHz) - BLE5 (2.4GHz)			
	Ext. Antennas	1x RP-SMA Wi-Fi/BT	2x SMA Cellular, 1x RP-SMA Wi-Fi/Bluetooth, 1x SMA GNSS		
OTHER	RTC	Yes (SuperCAP Backup)			
	Ext. Watchdog	Yes			
	EEPROM	256 Kbit			
	TPM	TPM 2.0			
	Anti-Tamper	Yes (2x Switches: Product Enclosure and Service Panel, Event Logging with Time Stamping)			
	Temp. Sensor	Yes			
	Accelerometer	3D Accelerometer / 3D Gyroscope			
	LED	1x Power Blue, 1x Cellular activity Green, 4x User Configurable (2x Green, 2x Amber)			
	Buttons	1x Reset Button and 1x Programmable Button			
	SIM Slot	No	2x miniSIM (User Accessible)		
EXPANSIONS	Connector	Expansion Connector compatible with ReliaIO 10-12 and ReliaWAN 10-12			
POWER	Input	Nominal: 12 or 24 VDC; Range: 9 to 30 VDC with Transient Protection, Ignition Key Sense			
	Consumption	2.5W Idle (5W Typ.)			
ENVIRONMENT	Operating Temp.	-30 to +70 °C			
	Storage Temp.	-40 to +85 °C			
	Humidity	RH 5...95% Operating Non Condensing (40°C)			
CERTIFICATIONS	Cybersecurity	Secure Boot, TrustZone Architecture, PSA Level 1, California SB-327, Always-on Antitamper Monitor, TPM 2.0, IEC 62443-4-1/-4-2 - Hardened Production-only Images			
	IoT Platform	Azure IoT Certified, AWS Certified, Eurotech Everyware Cloud Native			
	Regulatory	CE, FCC, ISED	FCC, ISED	CE	JATE, TELEC
	Safety	EN 62368, UL 60950 (§)			
	Vertical	E-Mark, IEC 60601-1-2			
	Environmental	ROHS3, REACH			
	Wi-Fi/BLE Radio	RED, FCC, ISED	FCC, ISED	RED	JATE, TELEC
	Cellular Radio	No	PTCRB, AT&T, Verizon	RED	JATE, TELEC
	Ingress	IP40			
MECHANICAL	Enclosure	Material: Aluminium/Magnesium Alloy - Color: Aluminium			
	Dimensions	107x85x46mm (LxWxH) - Excluding Connectors, DIN Bar Mounting Bracket			

§ UL, NRTL listing Factory Option.

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

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