

ComBox.M - IoT Edge Gateway



ComBox.M - IoT Edge Gateway is innovative solution for today's energy management market. It incorporates the energy data concentrator with data logging functionalities used for supervision, and control solutions. IoT Edge Hardware Platform has been designed to comply with global certification requirements for industrial and lightly rugged applications. Its main applications are in Energy management information systems, Smart metering, and Smart grids systems.



Connectivity

IP based protocols over Ethernet and 3G are used for connection with energy management software. The device has built-in data loggers and schedulers, which make sure that all relevant data are stored and transmitted securely. Modbus-TCP can be used to connect a device to a SCADA process automation system.

Reliability

Quality components, good fabrication, appropriate housings as well as acquired certificates are a guarantee of highly reliable performance. The devices are constructed to enable simple installation on DIN rail. Connecting signals and power supply as well as installation of the devices on the spot are simple and fast.

Technical information

Software support

- Modbus, Modbus TCP drivers
- M-bus driver (via ADFweb HD67029M-232-20)
- Gas volume corrector drivers
- Data logger module (from 1 minute)
- Scheduling module
- Diagnostics module
- Time synchronisation (via NTP)
- Remote parameterization

Supported protocols/ devices

- Modbus
- Itron Corus
- Instromet Model 555
- Tritschler K879
- Tritschler G951/VC3
- Tritschler K902/VC2
- Elster Instromet EK280
- Elster Instromet Model 2000
- Elster Instromet Encore FC1
- Socomec Countis E23
- Socomec Diris A10
- Senseor HTR01_6AWS
- Sontex Supercal531 via ADFweb HD67029M-232-20
- Siemens Sentron PAC3100
- Siemens UH50-70-00 via ADFweb HD67029M-232-20
- Lovato DMK22
- Kaeser SAM 4.0 16
- Iskra MC350, Iskra MC330
- Termometer THD-RS
- Inepro PRO380-Mod
- VPFlowScope probe
- Schneider Electric iEM3150
- Ecosonic X12
- ABB M2M
- Adria Electronic AE-PM31-G
- Circuitir: CVM-C10



- **ARM® Powered**
- **IoT Ready**
- **Industrial and Automotive 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: 3G cellular modem, GPS, Wi-Fi, BLE, Fast Ethernet and Fieldbus interfaces, including CAN bus ports, optoisolated digital I/Os, protected USB and serial ports

Industrial and Automotive Grade - Wide operating temperature, wide range power supply with transient protection, and E-Mark certification

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, Amazon Web Services IoT 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 10-11 is an IoT Edge Gateway that has been designed to comply with global certification requirements for industrial and lightly rugged applications.

Based on the TI AM335X Cortex-A8 processor family, with 512MB of RAM and 4GB of eMMC, the ReliaGATE 10-11 is a low power gateway suitable for industrial and automotive applications: it supports a 9 to 36V power supply with transient protection and vehicle ignition sense, two protected RS-232/RS-485 serial ports, two CAN bus interfaces, and much more.

The ReliaGATE 10-11 features a wide range of connectivity capabilities: it integrates a global cellular modem with GPS, Wi-Fi, Bluetooth, and two Fast Ethernet ports. A dedicated internal GPS is also available as a factory option.

The ReliaGATE 10-11 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.

The ReliaGATE 10-11 is Microsoft Azure certified and can also be integrated with 3rd party cloud services such as Amazon Web Services IoT.

Ordering code: REGATE-10-11-XX

XX		- 31	- 32	- 33	- 36	- 37
PROCESSOR	CPU	TI AM3352 800MHz, 1 Core				
MEMORY	RAM	512MB DDR3				
STORAGE	Embedded	4GB eMMC				
	Other	1x microSD Slot (User Accessible)				
I/O INTERFACES	Ethernet	1x 10/100Mbps - RJ45		2x 10/100Mbps - RJ45		
	USB	3x Host 2.0 (Noise and Surge Protected) - Type A	2x Host 2.0 (Noise and Surge Protected) - Type A	3x Host 2.0 (Noise and Surge Protected) - Type A		2x Host 2.0 (Noise and Surge Protected) - Type A
	Serial	2x RS-232/RS-485 (Surge Protected, RS-485 Termination and Fail-safe Resistors), 1x Serial Console TTL				
	CAN 2.0B	No	2x CAN bus with 5V (100mA) Power Out			
	Digital I/O	2x Digital Input 5V (TTL), 1KV Optoisolated – 2x Digital Output (40VDC), 30mA Sink				
RADIO INTERFACES	Cellular	No	3G Global		ReliaCELL Option	3G Japan Only
	GPS	No	Integrated		ReliaCELL Option	Integrated
	Wi-Fi / BT	No		b/g/n, BLE		
	Antennas (External)	No	2x SMA Cell/GPS	2x SMA Cell/GPS, 1x RSMA Wi-Fi/BT	1x RP-SMA Wi-Fi/BT	2x SMA Cell/GPS, 1x RP-SMA Wi-Fi/BT
OTHER	RTC	Yes (User Accessible Battery)				
	Ext. Watchdog	Yes				
	EEPROM	256kbit				
	Sensors	Temperature		Temperature, Accelerometer		
	LEDs	1x Power, 4x Progr.	1x Power, 1x Cellular, 4x Programmable			
	Buttons	1x Reset, 1x Programmable				
	SIM Slot	No	1x microSIM (User Accessible)			
POWER	Input	9-36VDC, with Transient Protection, Vehicle Ignition Sense				
	Consumption	2W Idle (15W Max)				
ENVIRONMENT	Operating Temp	- 20 to +70°C				
	Storage Temp	- 40 to +85°C				
CERTIFICATIONS (*)	Regulatory	CE, FCC, ISED, JATE, TELEC, E-Mark				
	Safety	EN 62368, UL 60950 (§)				
	Environmental	RoHS2, REACH				
	Wi-Fi / BT Radio	No		RED, FCC, JATE, TELEC		
	Cellular Radio	No	RED, FCC, PTCRB, AT&T		ReliaCELL Cert.	JATE, TELEC
	IoT Platform	Microsoft Azure Certified				
	Ingress	IP40				
MECHANICAL	Enclosure	Material: ABS - Color: Aluminum				
	Dimensions	140x95x45mm (LxWxH) - with SMA Connectors				

Software

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

(*) Additional Country Certifications for REGATE-10-11-33 are: NOM and IFETEL (Mexico), RCM (Australia / New Zealand), CCC (China), NCC (Taiwan), KC (South Korea).

(§) UL, NRTL listing Factory Option.