



- **Embeddable SBC**
- **ARM® Powered**
- **IoT Ready**
- **Industrial Grade**
- **LTE Cat 1 (NA, EU, JP)**
- **Open Platform**
- **Customizable**

Features

Embeddable SBC - Single Board Computer version of the ReliaGATE 10-12: the same HW and SW features in an easy to integrate compact board

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

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

Customizable - Personalization and full customization options are available, ranging from custom SW image pre-installation to deep HW/SW configurations

Description

The CPU-310-12 is a Single Board Computer that implements an IoT Edge Gateway with LTE connectivity (and 3G fallback). It is designed to be deeply embedded in industrial and lightly rugged applications.

Based on the TI AM335X Cortex-A8 (Sitara) processor family, with 1GB of RAM, 8GB of eMMC and user-accessible MicroSD slot and dual Micro-SIM slots, the CPU-310-12 is a low power embeddable SBC suitable for demanding use cases: it supports a 9 to 36V power supply with transient protection and ignition sense, two protected RS-232/RS-485 serial ports, two CAN bus interfaces, three noise and surge protected USB ports, and four isolated digital interfaces.

The CPU-310-12 features a wide range of connectivity capabilities: it integrates an on-board LTE Cat 1 cellular modem with dual Micro-SIM support, Wi-Fi, Bluetooth Low Energy, and two Fast Ethernet ports and three Sensors: Temperature, 3-axis Gyroscope and a 3-axis Accelerometer; an optional on-board GPS provides precise geolocation capabilities.

The CPU-310-12 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 CPU-310-12 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.

Used stand-alone, or in conjunction with EC, the CPU-310-12 provides a fast go-to-market solution for IoT projects of any size.

Ordering code: CPU-310-12-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						
I/O INTERFACES	Ethernet	2x 10/100Mbps - RJ45						
	USB	3x Host 2.0 (Noise and Surge Protected) - Type A						
	Serial	1x RS-485 protected and isolated, 1x RS-232/RS-485 (Surge Protected, RS-485 Termination and Fail-safe Resistors), 1x Serial Console TTL						
	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	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)	
	GPS	Factory Option: Internal (72 channels GPS, Galileo, GLONASS, BeiDou)						
	Wi-Fi / BT	a/b/g/n, BLE 4.2	No			a/b/g/n, BLE 4.2		
	Antennas (Internal)	2x U.FL (M) Wi-Fi/BT	2x U.FL (M) Cellular		2x U.FL (M) Cellular, 2x U.FL (M) Wi-Fi/BT			
	OTHER	RTC	Yes					
	Ext. Watchdog	Yes						
	EEPROM	256kbit						
	TPM	TPM 2.0						
	Sensors	Temperature, Accelerometer						
	LEDs	Temperature, 3-axis digital Accelerometer, 3-axis digital Gyroscope						
	Buttons	1x Reset, 1x Programmable						
	SIM Slot	No	2x microSIM					
POWER	Input	6-36VDC, with Transient Protection, Ignition Sense						
	Consumption	2W Idle (15W Max)						
ENVIRONMENT	Operating Temp	- 30 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	
	Safety (§)	EN 62368, UL 60950						
	Environmental	RoHS2, 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, NTT DoCoMo	
	IoT Platform	Microsoft Azure Certified						
MECHANICAL	Dimensions	138x85x24mm (LxWxH)						

§: Designed to meet.

Software

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