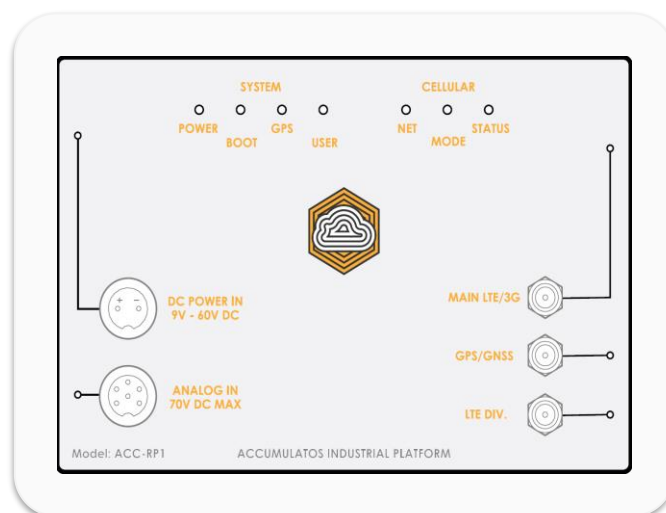


Product Datasheet

Accumulatos Industrial Platform ACC-RP1



Overview



The Accumulatos Industrial Platform, ACC-RP1 is a secure IP67 rated Linux powered IoT gateway with on-board low-power 4G/3G modem and GPS sub-system, design to deliver robust connectivity for a range of industrial monitoring applications.

ACC-RP1 comes equipped with an onboard Arduino microcontroller that is connected to the Linux host compute platform via high-speed USB bus. The platform contains a range of IO and integrated sensors including a 9-axis IMU chip with temperature sensing and wide-range isolated ADC inputs. The device can measure 3 inputs (-60V to 60V) and 4 isolated (5V) digital inputs. The device also includes an isolated I2C interface that can be configured to acquire data from multiple external sensors.

Features

- Linux powered IoT Platform
- Cellular connectivity via CAT-1 LTE/3G modem
- Cloud agnostic solution
- GNSS/GPS enabled
- 9-axis IMU sensor with temperature sensor.
- Up to 4 isolated Digital Inputs
- Up to 3 isolated (-60V to +60V) 18-bit Analog inputs.
- On-board Arduino microcontroller
- 7 Indication LEDs for self-diagnostics
- I2C interface for external sensor data acquisition
- Fanless design
- Optimised for wall or pole mounting
- IP67 Rated Waterproof enclosure
- Single sealed IO connector with multiple standard configurations

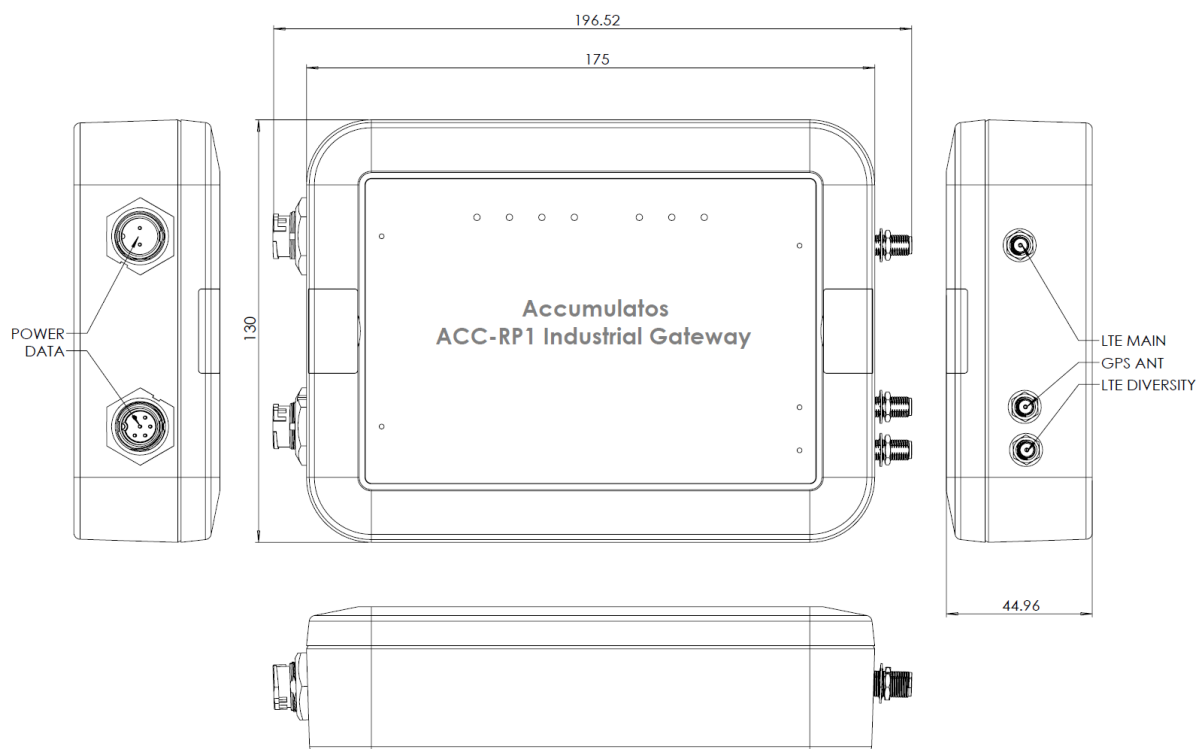
Technical Specifications

Application Processor	Raspberry Pi Compute Module 3, BCM2837B0, 1.2GHz System Clock
Operating System	Raspbian OS (kernel 4.19)
Memory	1Gbyte LP-DDR2 RAM
Storage	eMMC Flash (8GB,16GB and 32GB Option) SD card (if CM3 Lite Option)
Cellular Module	LTE/3G (Quectel EC21)
Antenna Type	2 External SMA cellular antenna and 1 SMA GPS active antenna
GNSS	Via Active antenna
Arduino	SAMD21G18A (Adafruit Metro M0 Express compatible)
ADC	18-bit, 3 channel, 10,000 samples per second, (-60 to +60V range)
GPIOs	4 Digital isolated inputs, (0 to +24V range)
LEDs	7 indication LEDs including 1 user configurable LED
IMU	9-axis (BNO055) with temperature sensor
USB	1 x internal USB(HOST) Type A Female (for configuration only)
SIM	Micro sim (internal)
SD Card	Micro-SD (booting purpose only for CM3 lite)
Ethernet	1 x internal RJ45 Port (for debugging/diagnostics only)
Video	1 x internal HDMI V-1.3a (for configuration only)
RTC	1 x RTC with Battery Backup
Power Input	12 – 60 Volts DC at 1A Max., Nominal 24V DC
Isolated Power Supply	5V @>200mA (for isolated digital input measurement)
Dimension	196.5 mm x 130 mm x 44.96 mm (W x D x H)
Weight	480 grams
Ingress Protection	IP67 (Water-proof, Dust-proof)
Mounting Screws	2 x Philips mounting screws

Network Support

QUECTEL EC21-AU	
TRANSFER RATE	10 / 5 Mbps (DOWN/UP)
REGION	Latin America, Australia, New Zealand, Taiwan
LTE-FDD	B1/B2/B3/B4/B5/B7/B8/B28
WCDMA	B1/B2/B5/B8
LTE-TDD	B40
GSM/EDGE	Quad-band
GNSS	YES
CERTIFICATION	Carrier: Telstra Regulatory: FCC/ Anatel/ NCC/ JATE/ TELEC/ RCM Others: WHQL

Mechanical Drawing



SKU Ordering Detail

Order Code Format: ACC-RP1 – [CM3] – [ANALOG] – [DIGITAL] – [IO]

SKU EXAMPLE	COMPUTE MODULE	COUNTRY	3G/4G MODEM	GNSS/ GPS	ANALOG IN	DIGITAL IN	DATA-LINK IO	IO PIN COUNT
ACC-RP1-8-A3-D0-NA	CM3 (8GB)	Australia/Malaysia	EC21-AU	Y	3	0	NA	6
ACC-RP1-8-A2-D2-NA	CM3 (8GB)	Australia/Malaysia	EC21-AU	Y	2	2	NA	8
ACC-RP1-8-A1-D2-I2C	CM3 (8GB)	Australia	EC21-AU	Y	1	2	I2C	8
ACC-RP1-16-A0-D4-NA	CM3 (16GB)	Australia	EC21-AU	Y	0	4	NA	8

Note: Additional configurations available upon request as each IO connector and compute module is customised to suit client requirements. Additional IO options may also be available upon request.

Accessories

SKU	DESCRIPTION	QUANTITY IN KIT
ACC-A1-ANT-LTE	3G/LTE SMA Antenna	2
ACC-A2-ANT-GPS	GPS active antenna – Magnetic Mount, SMA, 3 Metre Cable	1
ACC-A3-CABLE	6-pin Switchcraft EN3 Cable, 2 Metre, Pre-terminated	PER SKU IO COUNT
ACC-A4-CABLE	8-pin Switchcraft EN3 Cable, 2 Metre, Pre-terminated	PER SKU IO COUNT
ACC-A5-MOUNT	Pole Mounting Kit	OPTIONAL EXTRA

Note: Additional antenna options can be supplied upon request to meet your specific cabling and installation requirements.