



Aurelio

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The Aurelio Power and Communication Module (PCM) is a globally certified, solar-powered telemetry unit that powers and connects most types of sensors to the cloud via the cellular or LoRaWAN networks.

Bi-directional communication and computing on the edge allow for low latency output control while wake-up inputs allow for low power latency monitoring of sensors.

Built-in tilt detection, location via GNSS, and external magnetic triggered reporting allow for secure global deployment.

Aurelio owns and controls all intellectual property, therefore customization of hardware and software is part of the services we offer for clients that require customization for specialized sensors and platforms.

The PCM is designed to withstand the elements. The low power operation allows it to operate effectively in low light conditions, making it suitable for a wide range of uses, including the Agri-tech market, the security market, monitoring of renewable energy sources, industrial control, and more.





The PCM comes pre-integrated into multiple cloud visualization and AI platforms. The use of industry-standard cloud protocols allows for seamless integration into customer systems.

Communication	Sensors (integrated)	Extension interface
Cellular: • 2G, NB-IoT, CAT-M1 (Single SKU) • 3G, 4G, CAT1 (Single SKU) LP-WAN • LoRaWAN • LoraMac v1.0.3 • LoraMac regional RP001-1.0.3 • 868/915MHz	• GNSS with embedded LNA • Three axis accelerometer • Temperature	Interface for custom extension boards • 2x ADC • 1x CAN-FD • 1x GPIO • 1x I2C • 1x SPI • 1x UART
Configuration port	Sensor connector (optional)	Connectors
USB Type-C	1x SD112 (10V) 5x analogue inputs 2x digital inputs 2x digital outputs 3x pulse count inputs (up to 3 pps) 1x protected 3.3V PSU out	SIM card: SIM chip & optional 3FF (Micro SIM) card
Power supply	Environment	Temperature
Custom solar panel: HX147-107P	• Indoor or outdoor use • Altitude <= 2000m • IP66 rated polycarbonate enclosure	Operating temperature: • Charge: 0-60C (JEITA compliant) • Discharge: -20-60C
Cloud/Connectivity	Certification	Pollution degree
• Global SIM • CloudSwitch integrated	• CE • UKCA • FCC • Anatel • GITEKI • KC	• PD2
Humidity		
Relative humidity: 0% to 95% (non-condensing) at 25%		

Cellular module	LoRaWAN module
Hardware: u-blox SARA R422M10S • LTE-M (Cat M1, 3GPP Rel. 14) • NB-IoT (Cat-NB1/NB2): • 2G LTE FDD bands • Band 1 (2100 MHz) • Band 2 (1900 MHz) • Band 3 (1800 MHz) • Band 4 (1700 MHz) • Band 5 (850 MHz) • Band 8 (900 MHz) • Band 12 (700 MHz) • Band 13 (750 MHz) • Band 20 (800 MHz) • Band 25 (1900 MHz) • Band 26 (850 MHz) • Band 28 (700 MHz) • Band 66 (1700 MHz) • Band 85 (700 MHz) 2G bands • GSM 850 MHz • E-GSM 900 MHz • DCS 1800 MHz • PCS 1900 MHz	Hardware: Seong Ji LSM100A Sensitivity: -136dBm@LoRa (BW=125KHz, SF=12) RC1 Output power: up to 15dBm
GNSS module	Battery
Hardware: u-blox M10 GNSS receiver Constellations • GPS • Galileo • GLONASS • BeiDou • SBAS	18650 Li-ion battery included Battery type: Rechargeable
Weight	Dimensions
700g	160x120x90mm
Mounting bracket	Housing
Aluminium	IP66 polycarbonate