

Arduino Edge Control Reseller Sales Brief

PRO Business Unit

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Product Overview

The Arduino Edge Control is a **remote monitoring** and **control** solution, optimized for **outdoor environments.** It can be positioned anywhere and is suitable for precision farming, smart agriculture, and other applications requiring intelligent control in remote locations. Power can be either supplied via solar panel or DC input.

The Arduino Edge Control can be used to **deploy AI on the edge**. It can be expanded with 2G/3G/CatM1/NB-IoT modems, Lora, Sigfox, and WiFi/Bluetooth connectivity and managed remotely via the Arduino or third parties clouds.



Benefits

The Arduino Edge Control is capable of **connecting sensors** and **drive actuators** like latching valves (common in agriculture). Moreover, it has the capability to provide **real-time monitoring** over the entire process, which translates in a reduction in production-related risks.

Real time data collected by smart agriculture sensors include weather conditions, soil quality, crop's growth, among others; once sent to the **Arduino IoT cloud**, data value chain become valuable analytics that support business processes at various levels, including plant growth, equipment efficiency, staff performance, and much more. Arduino Edge Control has the capability to **increase crop quality** and **reducing human error** by automating processes like irrigation, fertilization, or pest control.



Target Customers

Customer need	Industries	Value	Use Cases
Increase production/ROI and reduce inventory losses	FarmingAgriculture	 Optimizing consumption of water, fertilizer, and pesticide Reducing need for human labor Preventing water-borne diseases, rot, and root pressure Complying with regulatory and environmental requirements Monitoring real-time weather information Sharing real-time insights with decision makers worldwide Supporting tensiometry Providing I/O flexibility Improved plant and landscape health 	 Outdoor cultivated fields Automated greenhouses Hydroponics Aquaponics Smart irrigation systems Wine production
Control solutions in remote and harsh environment	EnergyFarmingAgricultureForestry	 Monitoring energy consumption (e.g. solar power source) Controlling water pumps remotely in real-time Reducing maintenance expenses Preventing catastrophic events with constant flow monitoring Sharing real-time insights with stakeholders all over the world 	Power PlantsAutomated greenhousesHydroponicsAquaponics
Monitor access locally at various locations	Construction	 Monitoring who is on-site Access control - automated barriers 	Construction sitesParking lots
Ensure swimming pool water treatment	• Real estate	 Monitor useful parameters (water temperature, chlorine level Perform water treatment corrections in real-time 	Swimming pools

Technical Specs

Processor	• 64 MHz Arm® Cortex-M4F (with FPU)	Weight	67g
I/O	 6x edge sensitive wake up pins 16x bydrostatic watermark sensor input 	Dimensions	86 mm x 104 mm
	 Fox hydrostatic watermark sensor input 8x 0-5V analog inputs 4x 4-20mA inputs 8x latching relay command outputs with drivers 8x latching relay command outputs without drivers 4x 60V/2.5A galvanically isolated solid state relays 6x 18 pin plug in terminal block connectors 	Battery	Lithium battery backupSolar panel battery Charger
		Connectivity * Requires Arduino MKR board	 Bluetooth Wi-Fi * 3G * NB-IoT * LoRaWAN[®] *
Memory	 1 MB onboard Flash memory 2 MB onboard QSPI Flash memory SD Card slot 	Power	 Low power (up to 34 months on a 12V/5Ah battery) 12V Acid/lead SLA Battery Supply (recharged via solar panels)
Operating Temperatures	-40° C to +85° C (-40° F to 185°F)		

Arduino Edge Control Enclosure Kit

The perfect companion for the Edge Control.

With a **IP40** and **Din Rail mounting system**, it can be easily fit in any compatible cabinet.

The integrated **2-row display** and **user button** can be highly customized to visualize sensor data real-time, such as weather conditions and soil parameters.



Edge Control Enclosure Kit - Tech Specs

Interfaces	 LCD display (NDS1602A): 2 lines (16 characters) with white backlight User programmable push button 		
Dimensions	• 110x90x60 mm		
Weight	• 165 g		
Ingress Protection	• IP40		
Operating Temperatures	-40° C to +85° C (-40° F to 185°F)		
Included components	 LCD display with cover Top plastic cover Bottom plastic cover Flat cable 		





Applications Examples

• Automated Greenhouses

Automatically manage the humidity and temperature to ensure the best environment for crop growth, minimising carbon emissions and increasing economic yield. The inclusion of an Arduino MKR GPS Shield allows for optimum crop rotation planning and acquisition of geospatial data.

• Hydroponics/Aquaponics

Since hydroponics involves the growth of plants without soil, delicate care must be taken to maintain the conditions required for optimum growth. The Arduino Edge Control can be set-up to control these conditions with minimal manual labour. The Arduino Edge Control can help match the even higher requirements of Aquaponics, by providing automated control over the internal process and reducing production risks.

• Mushroom Cultivation

Mushrooms are notorious for requiring the perfect temperature and humidity conditions to sustain spore growth, while also preventing competing fungi from growing. Thanks to the numerous watermark sensors, output ports and connectivity options available on the Arduino Edge Control, this precision farming can be achieved on an unprecedented level.

Pricing



Product Name	Edge Control	Edge Control Enclosure Kit
Brand	Arduino PRO	Arduino PRO
SKU	AKX00034	AKX00031
BARCODE	7630049202436	7630049202948
MSRP	€169 or \$199	€45 or \$54
Availability	April 2021	July 2022

Related Products



MKR Family boards



Support



DOCUMENTATION

Getting started, Datasheets libraries and user manuals <u>docs.arduino.cc</u>



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That's a wrap, Thank you!

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