Item no.: 358639
AKX00032 - Portenta Machine Control

from **316,78 EUR**

Item no.: 358639
shipping weight: 0.10 kg
Manufacturer: Arduino

📄 Product Description

The Portenta Machine Control is a fully-centralized, low-power, industrial control unit able to drive equipment and machinery. It can be programmed using the Arduino framework or other embedded development platforms.

Thanks to its computing power, the Portenta Machine Control enables a wide range of predictive maintenance and AI use cases. It enables the collection of real-time data from the factory floor and supports the remote control of equipment, even from the cloud, when desired.

Key benefits include:

- Shorter Time-To-Market
- Give new life to existing products
- Add connectivity for monitoring and control
- Tailor it to your need, each I/O pin can be configured
- Make equipment smarter to be ready for the AI revolution
- Provide security and robustness from the ground up
- Open new business model opportunity (e.g. servitization)
- Interact with your equipment with advanced HMI
- Modular Design for adaptation & upgrades

The Portenta Machine Control allows companies to enable new business-as-a-service models by monitoring customer usage of equipment for predictive maintenance and providing valuable production data.

The Portenta Machine Control enables industry standard soft-PLC control and is able to connect to a range of external sensors and actuators with isolated digital I/O, 4-20 mA compatible analog I/O, 3 configurable temperature channels, and a dedicated I2C connector. Multiple choices are available for network connectivity, including USB, Ethernet, and WiFi/Bluetooth® Low Energy in addition to industry specific protocols such as RS485. All I/O are protected by resettable fuses and onboard power management has been engineered to ensure maximum reliability in harsh environments.

The Portenta Machine Control core runs a Portenta H7 microcontroller board (included), a highly reliable design operating at industrial temperature ranges (-40°C to +85°C) with a dual-core architecture that doesn't require any external cooling. The main processor offers the possibility of connecting external Human Machine Interfaces like displays, touch panels, keyboards, joysticks, and mice to enable on-site reconfiguration of state machines and direct manipulation of processes.

The Portenta Machine Control's design addresses a large variety of use scenarios. It is possible to configure a selection of the I/O pins via software. The Portenta Machine Control stands out as a powerful computer to unify and optimize production where one single type of hardware can serve all of your needs. Among other outstanding features are the following:

- Industrial performance leveraging the power of Portenta boards
- DIN bar compatible housing
- Push-in terminals for fast connection
- Compact device (170 x 90x 50 mm)
- Reliable design, operating at industrial temperature rates (-40°C to +85°C) with a dual-core architecture that doesn't require any external cooling
- Embedded RTC (Real Time Clock) to ensure perfect synchronization of processes
- Leverage the embedded connectivity without any external parts
- CE, FCC, and RoHS certified

The Portenta Machine Control can be used in multiple industries, across a wide range of machine types, including: labelling machine, form & seal machine, cartoning machine, gluing machine, electric oven, industrial washer & dryers, mixers, etc.

Add the Portenta Machine Control to your existing processes effortlessly and become the owner of your solutions in the market of machines.

- Processor: STM32H747XI dual Cortex®-M7+M4 32 bit low power Arm® MCU (Portenta H7)
- Input: 8x digital 24 Vdc; 2x channels encoder readings; 3x analog for PT100/J/K temperature probes (3-wire cable with compensation); 3x analog input (4-20 mA/0-10V/NTC 10K)
- Output: 8x digital 24 Vdc up to 0,5 A (short circuit protection); 4x analog 0-10 V (up to 20 mA output per channel)
- Other I/O: 12x programmable digital I/O (24 V logic)
- Communication protocols: CAN-BUS; Programmable serial port 232/422/485
- Connectivity: Ethernet, USB programming port, Wi-Fi, Bluetooth® Low Energy
- Memory: 16 MB onboard Flash memory, 8 MB SDRAM
- Dimensions: 170 x 90 x 50 mm
- Weight: 186 gr
- Power: 24 V DC +/- 20%
- Connector type: Push-in terminals for fast connection
- Operating Temperature: -40°C to +85°C (-40° F to 185°F)

📄 Specifications

Scan this QR code to view the product
All details, up-to-date prices and availability