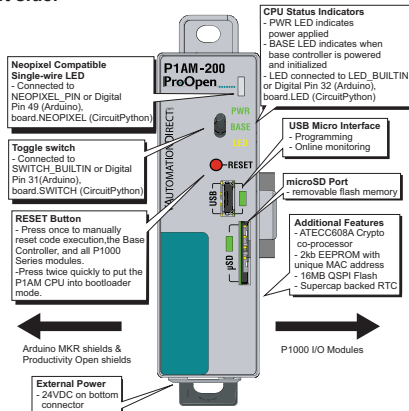


# P1AM-200 Arduino® MKR Compatible CPU

The P1AM-200 is an Arduino-compatible CPU. It uses the Atmel SAMD51P20 and can be programmed in C++ using the Arduino IDE or in CircuitPython using any text editor. It interfaces with all P1000 Series I/O modules connected to the right side and most Arduino MKR form factor shields connected to the left side.



General Specifications	
<b>Operating Temperature</b>	0° to 60°C (32° to 140°F)
<b>Storage Temperature</b>	-20° to 70°C (-4° to 158°F)
<b>Humidity</b>	5 to 95% (non-condensing)
<b>Environmental Air</b>	No corrosive gases permitted
<b>Vibration</b>	IEC60068-2-6 (Test Fc)
<b>Shock</b>	IEC60068-2-27 (Test Ea)
<b>Heat Dissipation</b>	4W
<b>Enclosure Type</b>	Open Equipment
<b>Module Location</b>	Productivity1000 I/O modules connect on the right side of module. Power supply, P1AM Shields and MKR Shields connect on the left side on the module.
<b>Number of Supported Modules</b>	15
<b>Weight</b>	82g (2.89 oz)
<b>Agency Approvals</b>	UL 61010-1 and UL 61010-2-201 File E139594, Canada & USA CE (EN 61131-2 EMC, EN 61010-1 and EN 61010-2-201 Safety)*

\*See CE Declaration of Conformance for details.



Link to GitHub

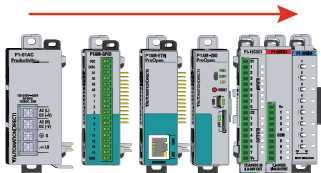


Link to full additional resources

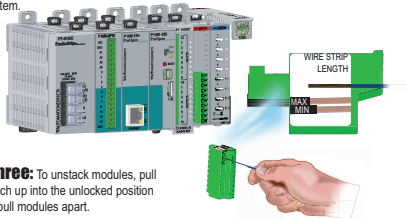
# Module Installation

**WARNING:** Do not add or remove modules with field power applied.

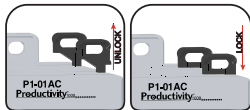
**Step One:** With latch in "locked" position, align connectors on the side of each module and stack by pressing together. Click indicates lock is engaged.



**Step Two:** Attach field wiring using the removable terminal block or ZIPLink wiring system.



**Step Three:** To unstack modules, pull locking latch up into the unlocked position and then pull modules apart.



**WARNING:** To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

*Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.*

*This device is not intended for personnel, product, or machine safety applications.*

This publication is based on information that was available at the time it was printed. At AutomationDirect.com® we constantly strive to improve our products and services, so we reserve the right to make changes to the products and/or publications at any time without notice and without any obligation. This publication may also discuss features that may not be available in certain revisions of the product.

## Power Requirements

### Base Controller and I/O Power Requirement<sup>1</sup>

24VDC  $\pm 2\%$  1.25 W per I/O module  
@ 0.5 W for SAMD and Base Controller  
@ 9W for max header power draw<sup>2</sup>

### Recommended Fuse (External)

Edison S506-R, Time Delay, 1A Fuse  
For 9–15 modules: Edison S506-R, Time Delay, 2A Fuse

1. If you do not use a Productivity1000 power supply, like the P1-01AC, then use a power supply that has a transformer isolation. Use different 24VDC supplies for the CPU and inductive loads to keep the CPU power clean and free of voltage spikes caused by switching solenoids, motors and relay coils.
2. See Header Power Limitations in P1AM User Manual in QR code link to additional resources.

Document Name	Edition/Revision	Date
P1AM-200-DS	2nd Edition	2/15/2024

Copyright 2023, AutomationDirect.com Incorporated/All Rights Reserved Worldwide