

# Automation1: Get the Right PC User Guide

The Automation1 Software-Based Machine Controller (iSMC) controller is engineered to run on a real-time operating system (RTOS) on top of Windows on an industrial PC. To get a PC that is built for real-time performance, choose from one of the following options. Note that options one, two and three are built on Advantech industrial motherboards, which are on the Intel-embedded roadmap, and contain Windows 10 IoT Enterprise Long-Term Service Channel (LTSC) installations. The Intel-embedded roadmap and Windows LTSC ensures your PC solution will work reliably for years to come. [Contact sales](#) at any time for assistance.

## Option 1. Buy a PC from Aerotech

*The “simple, ready to go” solution.*

Recommended for: All end-users, worldwide

The Automation1 iPC is a completely configured and optimized industrial PC. It can be shipped from Aerotech ready to immediately start controlling your system.

To learn more, visit [Automation1 iPC](#).

## Option 2. Buy through Arrow Electronics

*The “install it yourself” solution.*

Recommended for: Integrators in the continental USA

Electronics distributor [Arrow Electronics](#) can directly ship the PC hardware on which the Automation1 iPC is built. All hardware settings, BIOS settings and Windows 10 LTSC installation are managed by Arrow.

Note: The Automation1 Motion Development Kit (MDK), Automation1 iSMC and the HyperWire® PCIe card must be purchased directly from Aerotech and installed upon receipt of the PC hardware.

Please contact Arrow sales representative [Kelly O'Rourke](#) to purchase one of the following PC Options From Arrow Electronics:

PC Type	Arrow Part Number
4U Rack Mount PC (Similar to the <a href="#">Automation1 iPC</a> , -R402 hardware option)	C-ARR05-ACP4020-01
1U Rack Mount PC (Similar to the <a href="#">Automation1 iPC</a> , -R103 hardware option)	C-ARR05-ACP1010-01
Desktop PC (Similar to the <a href="#">Automation1 iPC</a> , -DT01 hardware option)	C-ARR05-IPC7120-01

### Option 3. Buy Direct from Advantech

*The “build it yourself” solution.*

Recommended for: OEM machine builders and integrators, worldwide

[Advantech](#), a global supplier of industrial PCs, has partnered with Aerotech to supply customers with a reliable, high-performance PC solution. Aerotech customers can save on cost by building their own high-end, reliable PC solution. Detailed instructions on the required parts, configurations and setup procedures are available on the [Aerotech manuals and help files page](#) and [here](#).

### Option 4. Buy Your Own PC

Due to PC configuration changes caused by Windows 10 updates over the lifetime of operation, Aerotech does not recommend this option. We recommend one of the Intel-embedded roadmap motherboards and Windows 10 LTSC installations offered in options one, two and three above. However, if you do choose this option, we offer a few recommended PC specifications:

#### Recommended PC Specifications for Automation1 iSMC Installation

Processor	<p>Recommended:</p> <ul style="list-style-type: none"> <li>Intel Core i5/i7 or Xeon processor with four or more cores<sup>(1,2,3)</sup></li> </ul> <p>Not Supported:</p> <ul style="list-style-type: none"> <li>AMD, Intel Celeron, Intel Pentium 4, Intel Pentium D, Itanium or notebook/laptop/mobile processors<sup>(4)</sup></li> </ul>
-----------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

RAM	16GB or 32GB, 32GB preferred
Operating System <sup>(5)</sup>	Windows 10, 64-bit version 1809 or newer
PCIe Expansion Port	A single, open PCIe card slot is required to accommodate the required HyperWire-PCIe card for Aerotech's motion bus
Graphics Display	Minimum 1920 x 1080 resolution and a standard display adapter <sup>(6)</sup>
Hard Disk Space	1 GB available disk space

1. A PC with two physical processors is not supported. Use a PC with one processor and more than one physical core.
2. Intel Xeon processors based on the Intel Core 2 or Intel Core i3/i5/i7 architecture are supported. Intel Xeon processors based on older architectures are not supported.
3. A PC that has INtime configured is always limited to 32 cores, even when the PC has more than 32 physical cores.
4. Laptop computers are not supported. They can be used for offline debugging and simulation only.
5. To avoid machine disruption, Aerotech disables automatic updates on Windows PCs that are shipped from Aerotech. To customize your update settings, refer to Microsoft's Windows documentation or Aerotech's [User Guide to Windows 10 Updates](#).
6. Aerotech recommends that you do not use high-end display adapters because they can cause interference with the A3200. Use onboard integrated graphics if present or a medium-performance PCI express dedicated graphics card. For more information, refer to [Optimizing PC Performance](#).

## Other PC-Related Services from Aerotech

### PC Evaluations

Aerotech can evaluate your PC for a fee. Contact Global Technical Support for this service. No guarantee of compatibility can be made.

### Servicing a Non-Approved PC

A non-approved PC can be serviced. Phone/email support for remote support is billed at an hourly rate (one-hour minimum). No guarantee of compatibility can be made.