

# AEROTECH AUTOMATION1



## 6-Axis Hexapod Servo Drive with Motion Controller **Automation1 iHXA4**

### Six Axes. One Drive. Simplified Hexapod Control.

Automation1-iHXA4 is a compact 6-axis hexapod drive and motion controller, precisely engineered to amplify the advantages of our second-generation hexapod family including [HEX150-125HL](#). It simplifies your system design by treating the hexapod like any other axis on the Automation1 network, enabling effortless coordination across complex motion systems. With only two connectors per hexapod, plus ample built-in analog and digital I/O, the iHXA4 reduces complexity without sacrificing capability. The iHXA4 delivers an exceptional balance of capability and cost, making high-performance hexapod control more accessible than ever.

### Automation1

The HXA4 is a part of the user-friendly Automation1 motion control platform, which includes the following:

- ◆ **Development Software**
- ◆ **Controls**
- ◆ **Motor Drives**
- ◆ **Fiber-Optic HyperWire® Communication Bus**

### KEY FEATURES:

- ◆ Includes full **MOTION CONTROLLER & DRIVE IN ONE PACKAGE**
- ◆ **COST-EFFECTIVE**, high-performance 6-axis design
- ◆ Compact size **MINIMIZES PANEL SPACE** for easy integration
- ◆ Built-in **ANALOG & DIGITAL I/O, PART-SPEED PSO & SAFE TORQUE OFF** enhance connectivity, performance & safety
- ◆ Compatible with all Aerotech second-generation hexapods
- ◆ Offers effortless integration & coordination with other Aerotech axes & drives—**JUST ANOTHER AXIS** on the Automation1 network

## AUTOMATION1 iHXA4 GENERAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
<b>Motion Controller</b>	Aerotech's <a href="#">Automation1-iSMC</a> Intelligent Software-Based Motion Controller (version 2.11 and above)
<b>Number of Axes</b>	6
<b>Motor Style</b>	Aerotech brushless hexapod motors
<b>Motor Supply</b>	15-100 VDC
<b>Control Supply</b>	24 VDC
<b>Bus Voltage<sup>(1)</sup></b>	15-100 VDC
<b>Peak Output Current (1 sec)<sup>(2)(3)</sup></b>	10 A
<b>Continuous Output Current<sup>(2)(4)(5)</sup></b>	3 A <sub>pk</sub>
<b>Position Synchronized Output (PSO)</b>	Standard: Three-axis Part-Speed PSO
<b>Multiplier</b>	250 kHz sine-wave input; encoder multiplier up to 16,384
<b>I/O</b>	6x analog inputs, 16-bit, differential, ±10 V 1x analog output, 16-bit, ±10 V 4x digital inputs, optically isolated 4x digital outputs, optically isolated
<b>Drive Array Memory</b>	67.1 MB (16,777,216 32-bit elements)
<b>Safe Torque Off (STO)</b>	Yes, SIL3/PLe/Cat 4 (certification pending)
<b>HyperWire Connections</b>	1x HyperWire small form-factor pluggable (SFP) port
<b>Current Loop Update Rate</b>	20 kHz
<b>Servo Loop Update Rate</b>	10 kHz
<b>Operating Temperature</b>	0 to 40°C
<b>Storage Temperature</b>	-30 to 85°C
<b>Weight</b>	0.8 kg
<b>Compliance</b>	[Pending] CE approved, NRTL safety certification, EU 2015/863 RoHS 3 directive

1. Output voltage depends on input voltage.
2. Peak value of the sine wave; rms current for AC motors is 0.707 A<sub>pk</sub>.
3. This specification is for all axes together. The drive can achieve the peak output current for each axis with all axes running.
4. This specification is per axis.
5. Maximum achievable continuous output current depends on the thermal conditions of the drive and the specific mechanical device (hexapod) paired with the drive.

## AUTOMATION1 iHXA4 ORDERING OPTIONS

### Automation1 iHXA4

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**Automation1 iHXA4** Six-axis Hexapod PWM servo drive with HyperWire motion controller

### Axes

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**-AX6** Six-axis servo motor drive

### Firmware Version

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**-DEFAULT** Configured with current firmware version at the time of shipment.

**-LEGACY** Configured with legacy firmware version.



# AUTOMATION1 iHXA4 DIMENSIONS

