

AEROTECH AUTOMATION1

6-Axis Hexapod Servo Drive **Automation1 HXA4**

Six Axes. One Drive. Simplified Hexapod Control.

Automation1-HXA4 is a compact 6-axis hexapod drive, 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 HXA4 reduces complexity without sacrificing capability. The HXA4 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:

- ◆ **COST-EFFECTIVE**, high-performance 6-axis design
- ◆ Compact design **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 HXA4 GENERAL SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Motion Controller	Aerotech's Automation1-iSMC Intelligent Software-Based Motion Controller (version 2.11 and above)
Number of Axes	6
Motor Style	Aerotech brushless hexapod motors
Motor Supply	15-100 VDC
Control Supply	24 VDC
Bus Voltage⁽¹⁾	15-100 VDC
Peak Output Current (1 sec)⁽²⁾⁽³⁾	10 A
Continuous Output Current⁽²⁾⁽⁴⁾⁽⁵⁾	3 A _{pk}
Position Synchronized Output (PSO)	Standard: Three-axis Part-Speed PSO
Multiplier	250 kHz sine-wave input; encoder multiplier up to 16,384
I/O	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
Drive Array Memory	67.1 MB (16,777,216 32-bit elements)
Safe Torque Off (STO)	Yes, SIL3/PLe/Cat 4 (certification pending)
HyperWire Connections	2x HyperWire small form-factor pluggable (SFP) ports
Current Loop Update Rate	20 kHz
Servo Loop Update Rate	10 kHz
Operating Temperature	0 to 40°C
Storage Temperature	-30 to 85°C
Weight	0.8 kg
Compliance	[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_{pk}.
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 HXA4 ORDERING OPTIONS

Automation1 HXA4

Automation1 HXA4 Six-axis Hexapod PWM servo drive with HyperWire motion controller

Axes

-AX6 Six-axis servo motor drive

Firmware Version

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

-LEGACY Configured with legacy firmware version.



