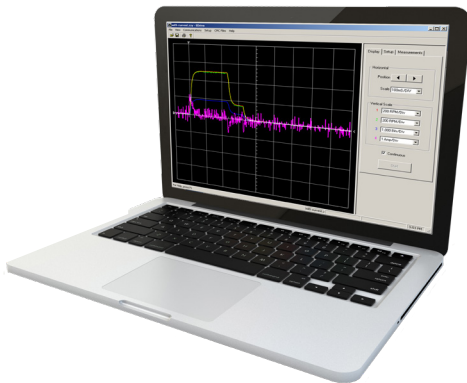# MSC Controller Replacement Program Using Emerald Technology
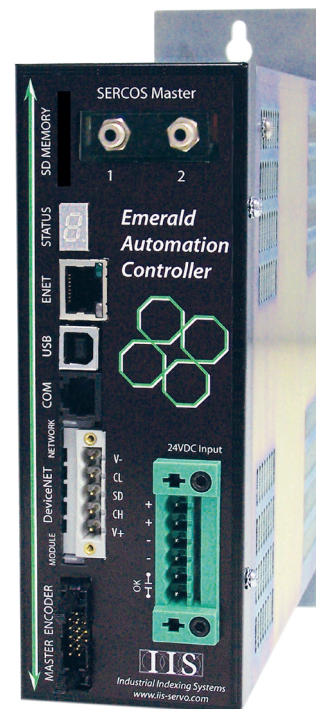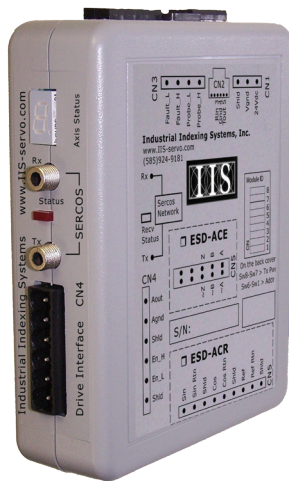
Overview

Emerald Multi-Axis Controller EMC-2100S together with our new sercos based emerald axis modules will maintain and exceed the functionality of the MSC family of controllers from IIS. The MSC which stands for Multi axis System Controller was introduced in 1983 and has gone through several technology versions until 1995. Service and support for the MSC products are still available today, but IIS does offer an option designed to minimize the cost of upgrading the MSC based systems.

Emerald Motion Language (EML)

ESD-ACR or ESD-ACE

EMC-2100S

Our replacement program allows you to minimize the expense of installing new technology by keeping the existing motors and analog drives on your machine and only replacing the MSC controller.   This program assures that the hardware and software investment in your MSC system is maintained with products based on proven Emerald technology.

Emerald Technology Highlight

IIS Legacy Multi-Axis System Controllers

Emerald technology uses a high-speed drive network over fiber cable called Sercos II instead of the legacy analog interface. Each "axis card" in a MSC system is replaced with an ESD Axis Module.
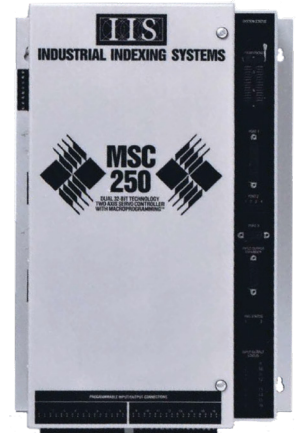
The Axis Module is a DIN rail mounted module for interfacing to the legacy analog drives and is also designed to utilize the existing analog drive interface cables. The ESD-ACE or the ESD-ACR Axis Modules will replace either an encoder or resolver axis card and two I/O points.

The following list outlines how ESD-ACR and ESD-ACE modules together with the EMC-2100S2 can be configured to replace any of our former controllers which include the, MSC-250, MSC-250A, MSC-800, MSC-850, or MSC-850/32.

For example:

- Two ESD-ACE axis modules will replace the internal axis functionality of the MSC-250 controller family.

- The ESD-ACE axis module will replace the ACE-800 or ACE-850 encoder based axis card functionality of the MSC-800 or MSC-850 controllers.

- The ESD-ACR axis module will replace the ACC-800 or ACR-850 resolver based axis card functionality of the MSC-800 or MSC-850 controllers.

- Sercos based I/O modules replace the IOE-850 I/O expander module.

- Sercos based I/O will also perform functions which replace the HPL-850 (PLS) and ACM-850 analog signal interface that are used in the MSC controller.

- The Master encoder interface port on the EMC-2100S2 replaces either the MCF-850 auxiliary master axis input card or duplicates the MSC-250 master input channel. As an alternative either the ESD-ACE or ESD-ACR can provide the master axis interface.

- Both the existing resolver based motor/drive systems and encoder based motor/drive systems can benefit from this replacement program without the expense of a motor and drive replacement. In the future, when the motors or drives need replacement, IIS offers Sercos based drives that will easily drop into the network.

MSC-250 Controller

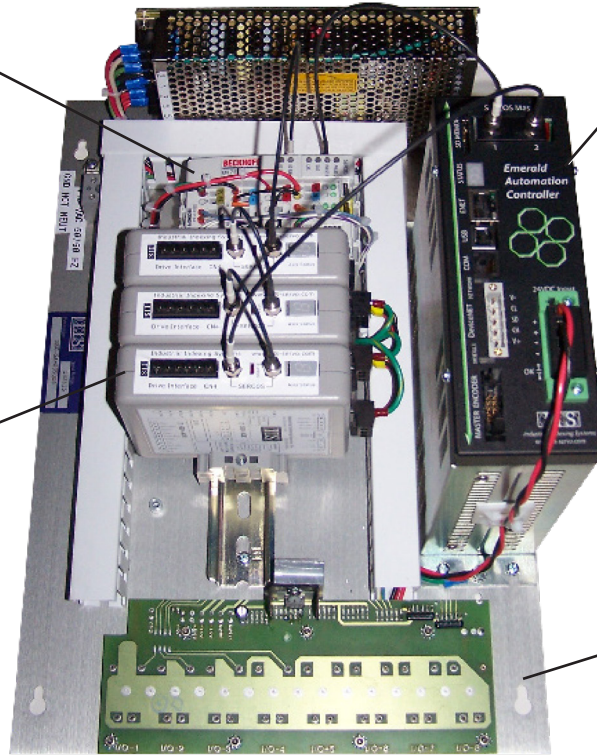*MSC-850/32Controller*

MSC-800 Controller

Sercos Network I/O
- AC or DC
- Input or Output
- Analog Input
- 256 I/O

Emerald ESD-ACR/E
- SERCOS Loop Interface
- Resolver or Encoder feedback
- Analog Output
- Axis Status Display
- Same MSC style connector interface
- Space for eight modules, use the additional DIN rail for up to 16 modules
- Adjustable spacing
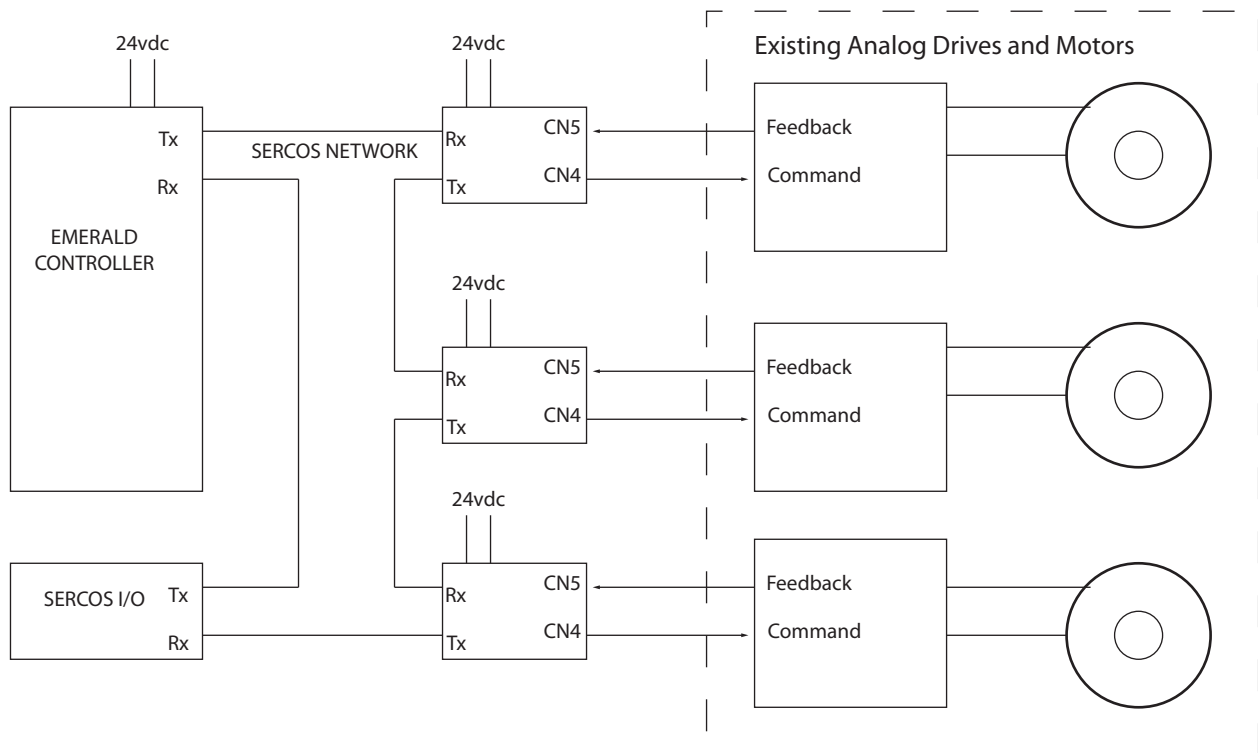- Same on-board I/O connections

Programming

The software conversion from the old MSC programming code to new Emerald programming code is straightforward.

IIS provides software conversion and/or development as a service.

Please call us for more information about how your MSC system can be converted to the new Emerald technology.

Mounting

Occupies the *same space* as the MSC controller. Mounted on the same MSC base-plate for drop-in convenience.

Existing Analog Drives and Motors

INDUSTRIAL INDEXING SYSTEMS, INC

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IIS

The IIS Team

Discover how our advanced motion control components and superior support can redefine your operations. Let's embark on a journey to operational excellence. Ready to elevate the efficiency, consistency, and repeatability in your operations? Call us today at (585)924-9181 to discuss your application.

Headquarters in Victor NY

Our location houses all critical departments: Applications Engineering, R&D, Production, Warehouse, Panel Shop, Quality Control, Sales, Marketing, and Customer Support. Having everything under one roof speeds communications and provides better service to our customers.

Check out our IIS InMotion Blog for the Servo Motion Control Professional ~ https://www.iis-servo.com/blog/

If you're interested in becoming a **Sales Representative** for Industrial Indexing Systems, where you'll play a crucial role in boosting brand recognition and nurturing client connections, contact our offices: (585) 924-9181 ~ Email: sales@iis-servo.com

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