

Euro404 / Euro408 Integrated Servo Drive Assembly

KaiZen
Motion Technologies
"Constantly Improving the Process of Motion"

COMPLETE 8-AXIS DRIVE
AND CONTROLLER
ASSEMBLY

10 A PEAK / 5 A CONT.
CURRENT OUTPUT
(PER AXIS)



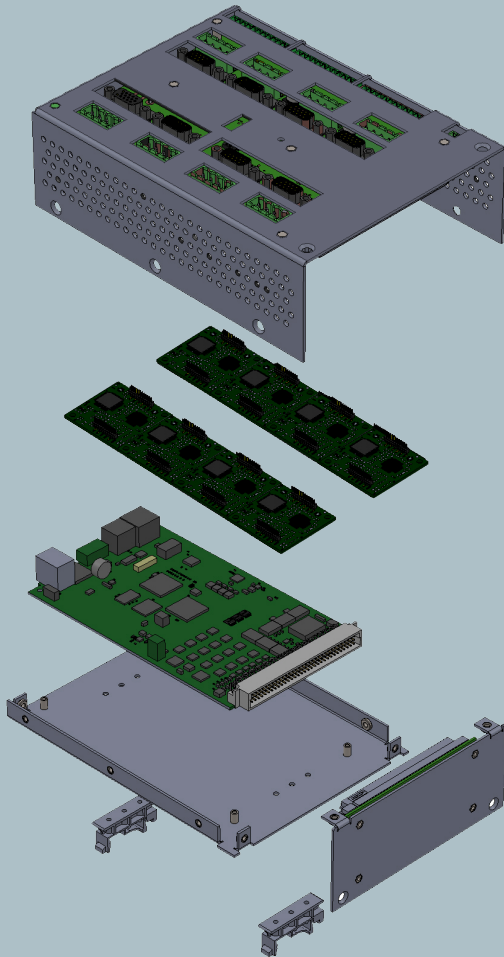
POWER, MOTOR,
FEEDBACK, AND I/O
CONNECTORS

DIN RAIL MOUNTING
BRACKETS

ETHERNET, CAN, AND
RS485/232 CONNECTORS

FEATURES

- * 10 - 36 VDC Supply
- * Separate 24 VDC Logic
- * Up to 8 Servo Axes (4 or 8 axis models)
- * Linear, Circular, Helical and Spherical Interpolation
- * Flexible CAM shapes, Linked Motion
- * Incremental Encoder Feedback Supported
- * Hardware Linked Outputs for Camera / Laser Control
- * Ethernet-IP / Modbus TCP / Ethernet Interface Built-In
- * Global Drive Ready Status LED
- * Motor Type Selectable by DIP Switch (Brushed or Brushless)
- * 125 - 2000 μ sec Selectable Servo Update
- * Precise 64 bit Motion Calculations on ARM11 Processor with VFP
- * IEC 61131 Programming
- * Multi-tasking BASIC Programming
- * Text File Handling
- * Robotic Transformations
- * Micro SD Memory Card Slot
- * CANopen I/O Expansion
- * RoHS and CE Approved



The MCA8XTR integrated drive and controller assembly contains a Trio Euro404 or Euro408 *Motion Coordinator* and up to 8 servo drives.

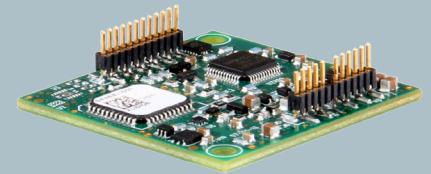
The assembly integrates the drives and control card within the unit housing, and includes an interface PCB for user connections to power, motor outputs, feedback, and I/O signals. Network communication and controller programming is accomplished via the Euro *Motion Coordinator* connectors.

SPECIFICATIONS:

DC Supply Voltage Range	VDC	10 - 36
Logic Supply Voltage Range (nominal)	VDC	24
Continuous Current (per axis)	A	5
Peak Current (per axis - 2 second max)	A	10

INTERFACE PCB CONNECTORS:

DC Bus	3-position spring PCB terminal block
Logic Power	2-position COMBICON terminal block
Motor Power (x8)	4-position pluggable terminal block
Feedback (x8)	15-pin high-density female D-Sub
HS Digital Inputs	12-position pluggable terminal block
GP Digital Inputs	12-position pluggable terminal block
Digital Outputs	12-position pluggable terminal block
Analog Inputs	12-position pluggable terminal block



The integrated servo drives are designed to drive brushless and brushed DC motors at a high switching frequency.

These servo drives are fully protected against over-voltage, under-voltage, over-current, over-heating, and short-circuits. Hall Sensors are used for motor commutation. A single digital output indicates operating status.

The servo drives interface with digital controllers that have $\pm 10V$ output.

OVERALL ASSEMBLY DIMENSIONS:

Height	mm (in)	184.2 (7.25)
Width	mm (in)	137.9 (5.43)
Depth	mm (in)	67.1 (2.64)

DRIVE FEATURES:

- Current Mode Operation
- Four Quadrant Regenerative Operation
- High Switching Frequency
- Wide Temperature Range
- Differential $\pm 10V$ Input Command
- Digital Fault Output Monitor
- Current Monitor Output
- Compact Size
- High Power Density

Trio Euro404 and Euro408 *Motion Coordinators* are designed to provide a powerful yet cost effective control solution for OEM machine builders.

Both the Euro404 and Euro408 are high specification *Motion Coordinators* using a high performance ARM11 processor, with up to 4 / 8 flexible axis ports and 4 / 8 voltage outputs respectively. The flexible axis ports can be configured in software as feedback devices or pulse direction outputs. As outputs they can be used as pulse and direction with stepper or servo drives or they can operate as a simulated encoder output. When configured as feedback they can be either incremental encoder input or one of three popular absolute encoder types; SSI, Tamagawa or Endat. Any feedback axis with a Voltage output can be used to form a closed loop servo.

The built-in Ethernet port allows programming and connection of common HMI and PLC protocols directly to the *Motion Coordinator*. User programs can be written in Trio's established multi-tasking TrioBASIC language using the powerful *Motion Perfect v3* application development software making complex motion easy. Also available as an option are the industry standard IEC 61131-3 languages allowing a fully functional PLC programming system.



EURO404 PRODUCT OPTIONS			EURO408 PRODUCT OPTIONS	
	P831	P832	P833	P834
Axis 0	Core	Extended + AS	Core	Extended + AS
Axis 1	Core	Extended + AS	Core	Extended + AS
Axis 2	Core	Extended + AS	Core	Extended + AS
Axis 3	Core	Extended + AS	Core	Extended + AS
Axis 4			Core	Extended + AS
Axis 5			Core	Extended + AS
Axis 6			Core	Extended + AS
Axis 7			Core	Extended + AS

CORE AXES - can be configured in software as pulse and direction outputs to stepper or servo drives. They can also be configured for incremental encoder feedback or simulated encoder output.

EXTENDED AXES - in addition to the Core functionality these axes can also be configured for SSI, Tamagawa, or EnDat absolute encoders.

AS - Analog 'closed loop' servo using built-in $\pm 10V$ analog output.

EURO404/408 FEATURES:

- ARM 11 Processor
- 532 MHz Clock Frequency
- 2ms-125 μ s Servo Update Rate
- 6MHz Encoder Input Frequency
- 8MByte User Memory
- 512,000 Max Data Table Size
- 32 x 16,000 Flash Data Memory
- 4096 VR
- 64bit Position Register Precision
- Double FP Maths Precision
- Real Time Clock
- 2MHz Stepper Output Frequency
- 16 24VDC Digital Inputs
- 8 24VDC Digital Outputs
- 2 12-bit Analog Inputs
- Expandable Digital I/O to 512 Points
- Expandable $\pm 10V$ Analog Inputs to 32, Outputs to 16
- G-Code
- HPGL
- DXF Import
- DeviceNet, CANopen, Ethernet, MODBUS, RS485/232 Communication