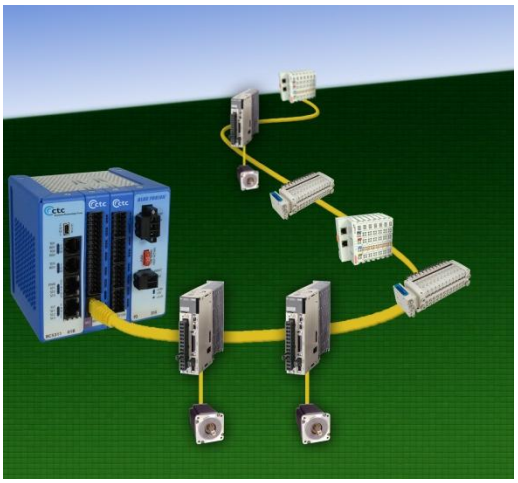
Control Technology Corp.



Fast, faster, fastest — EtherCAT®

High Precision, Highly Accurate Control on a Single Wire

CTC's EtherCAT implementation takes full advantage of EtherCAT's fundamental principle: Ethernet "on the fly."

Control Technology introduces its EtherCAT Master module — for exceptional performance with a wide variety of I/O, signal types, sensors, and actuators.

Sophisticated capabilities, with simple execution

The CTC EtherCAT Master (part number M3-41A) supports advanced EtherCAT Master distributed motion control using CoE (CAN Application Protocol over EtherCAT). This includes servo and stepper drives, and I/O devices. Unlike other EtherCAT Masters, the M3-41A isolates the user from the complexity of the EtherCAT environment by automatically scanning the network and configuring recognized devices. High-level motion control commands are accomplished using QuickBuilder, CTC's standard programming environment.

No need to wrestle with a complex configurator, poke drive objects, or figure out how interfaces work. Each supported device has been verified with the M3-41A and all set-up and initialization is done for you. This greatly simplifies your EtherCAT installation, allowing you to concentrate on motion control and your system – not a complicated configurator. Multiple networks are supported and may be intermixed with other networks such as EtherNet/IP, DeviceNet, and BACnet using a separate Ethernet port.

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Motion Control Highlights

- Cyclic sync position, interpolated position, profile velocity, and position modes supported
- Distributed clocks by default, syncs master to slaves and triggers motions simultaneously
- 16 axis support at 1mS, including I/O
- Segmented, geared, position, velocity and cammed moves
- Any axis can track and gear off any other axis
- Multi-master and virtual master support
- Currently supports Beckhoff and Wago digital and analog I/O blocks
- Native communication using Modbus, DeviceNet, Ethernet/IP, and BACnet via separate ports
- Multiple EtherCAT Master networks supported
- Built-in diagnostics

Autoconfiguration & Support for the Devices You Already Use

The following devices are supported; more are added as the need/request arises.

- *Yaskawa Sigma 5*
- *ADVANCED Motion Controls (AMC)*
- *Copley Accelnet*
- *Kollmorgen AKD*
- *Sanyo Denki SANMotion RS2E*
- *Control Techniques – Unidrive and Digitax*
- *I/O blocks: Beckhoff, Wago, SMC*

High-level motion commands

Programming with QuickBuilder is intuitive. With QuickBuilder you have access to a wide variety of tools for setting up and programming your system. Its powerful object-oriented approach simplifies application creation and maintenance. It improves performance by off-loading demanding motion control tasks to the specialized motion control processors on the 5300 Motion Modules.

The Motion Sequence Block (MSB) is a standalone block of code that is part of your motion program. Once you create an MSB, you can use it over again in the same motion application or in new applications, saving you time and effort.

Sample code:

```
// Move to the pick up position
move at ExtendSpeed to PickUpPosition;
wait for in position;

delay 200 ms;

// Move back to the drop off position
move at RetractSpeed to DropOffPosition;
wait for in position;
```

Find out more:

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