

ABB motion control products

Mint[®] Machine module for intelligent drive systems

The Mint[®] Machine module transforms MotiFlex e100 drives into a powerful intelligent drive system. It assumes complete control of the drive, on-board I/O, communications, and networking features, eliminating the need for external controller or PLC.

Available as a dual-axis (host MotiFlex plus one analog axis) or a multi-axis version capable of coordinating four axes via real-time Ethernet POWERLINK, plus one analog axis.

Both modules offer advanced motion control features, CANopen expansion, RS485, Ethernet POWERLINK and multitasking motion programming.

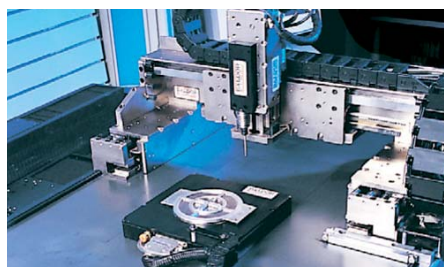


Highlights

- Plug-in controller module
- Powerful Mint[®] multitasking programming
- CANopen manager for system expansion
- Non-volatile RAM for user data storage and flash program storage
- Control of one closed loop analog axis
- Controls of up to five axes

Cost savings and benefits

- Compact solution, requiring less panel space and wiring
- Elimination of external controller or PLC, saving cost and reducing system complexity
- Real-time Ethernet reduces wiring and enhancing system capability
- Low cost distributed I/O expansion via CANopen
- Free software tools, ActiveX components and no runtime license required
- Simplified commissioning and serial manufacture through the use of digital drives and single point of access via Ethernet
- Fully compatible with NextMove e100 controllers for larger system requirements



The advanced multi-axis module

The option module provides an extremely compact multi-axis motion control package. It can be configured as a network manager, able to coordinate four axes via the MotiFlex Ethernet POWERLINK interface and one additional analog axis.

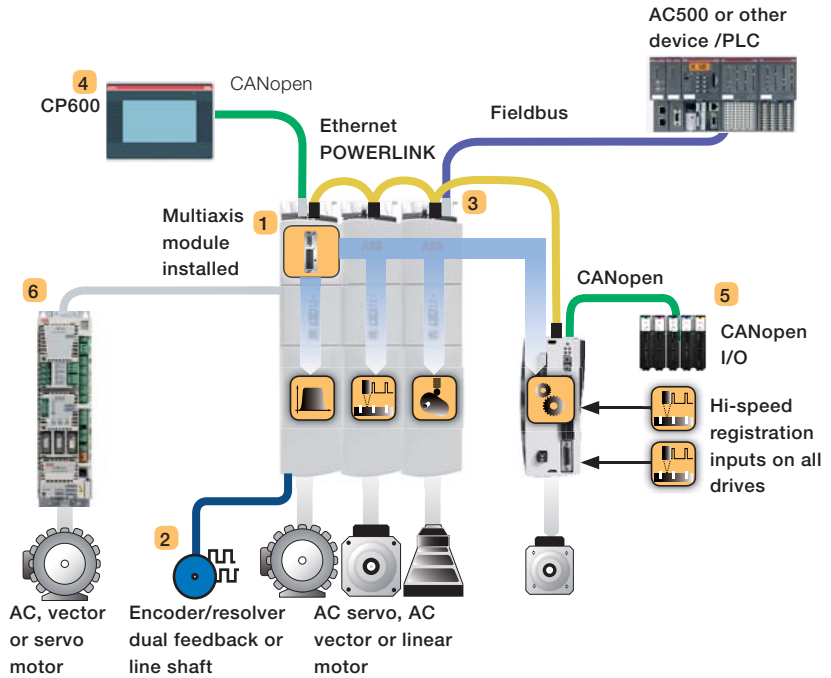
Example: Five axes solution

A machine control solution including five axes of advanced motion, HMI, distributed I/O, and fieldbus communications to upstream devices or networks.

1. Multi-axis Mint Machine module
2. Second feedback card for line-shaft following or dual loop control
3. Fieldbus gateway interface
4. HMI connected to the first drive on CANopen or Modbus RTU
5. Additional distributed I/O on CANopen from any drive
6. Analog controlled axis such as ACSM1, ACS355 and MicroFlex products

MotiFlex e100 option cards within the system become available to the controller as additional I/O, encoder channels, and fieldbus communication gateways to other systems, such as PLC's.

The host drive CANopen can be used to extend system I/O or add an HMI. MicroFlex e100 can also be controlled via POWERLINK, providing all the same motor control capabilities in lower power ratings.



Ethernet - POWERLINK and TCP/IP

- Assumes control of the drive Ethernet port
- Real-time Ethernet POWERLINK
- Controls four e100 drives (including host)

CANopen - simple expansion

- CANopen network manager
- I/O expansion, HMI and other devices
- Communicate with other Mint products

Application I/O - digital/analog

- 4 x digital inputs (2 fast inputs 1µs latency ideal for registration functions)
- 4 x digital outputs
- 1 x analog input ±10 V 12-bit

USB - configure/communicate

- The host drive USB interface can be used for commissioning and programming
- ActiveX tools for customer PC based applications

MotiFlex e100 power ratings

- 3 phase 180 to 528 V A
- 1.5 through to 65 A continuous in three sizes



Encoder input - 5 V incremental

- 1 x incremental encoder input
- Feedback for control of one analog axis, servo drives, inverters or servo hydraulics, in combination with the analog output
- Use as a line shaft encoder input

NextMove Core - advanced motion

- Powerful Mint multitasking software
- Multi-axis coordinated motion
- POWERLINK and fieldbus management

For more information please contact your local ABB representative or visit:

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