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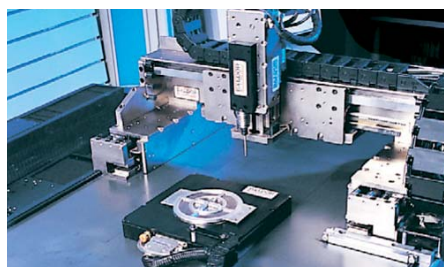
Highlights
– Plug-in controller module
– Powerful Mint® multitasking programming
– CANopen manager for system expansion
– Non-volatile RAM for user data storage and flash program storage
– Control of one closed loop analog axis
– Controls of up to five axes

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

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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.

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.
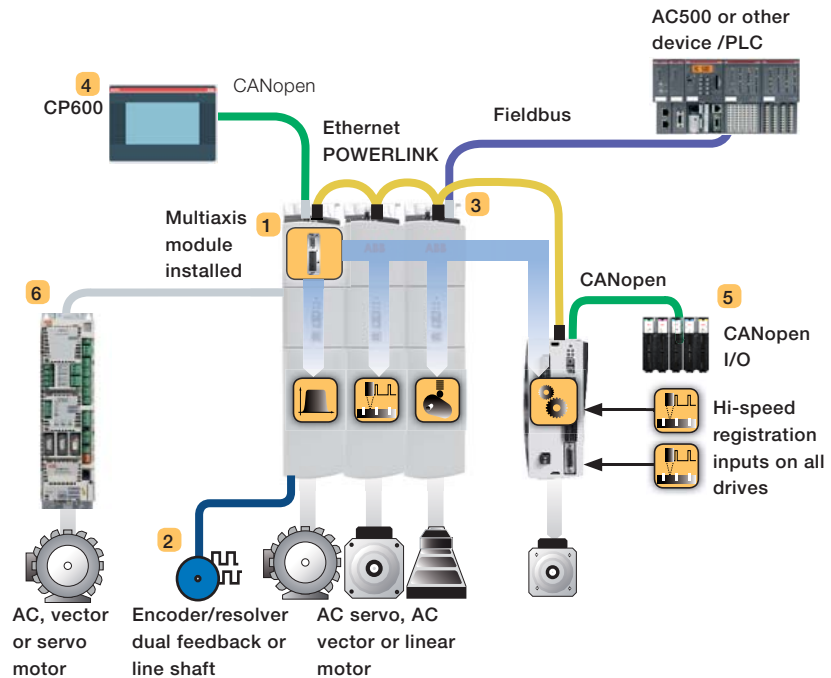
Example: Five axes solution

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

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

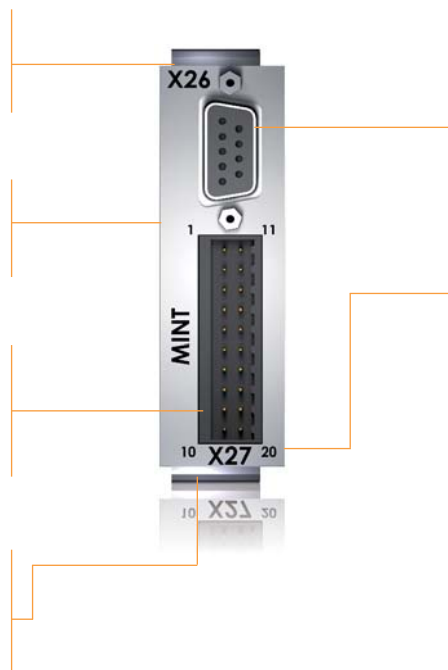### Application I/O - digital/analog

– 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:

www.abb.com/motion
www.abb.com/drives
www.abb.com/drivespartners

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