ABB motion control products
NextMove ESB-2 high performance motion controller

NextMove ESB-2 is an economic eight axes motion controller, with powerful multitasking Mint programming. It can provide control of up to 4 axes of closed loop control (servo or vector) and 4 axes of open loop control (step/direction outputs).

USB, Serial and CANopen provide flexible communications to PLC, distributed I/O and other devices.

The controller's low profile form factor and two part screw terminal connectors make it simple to install, while integrated digital/analog I/O including high-speed registration inputs make this a single box solution for many applications.

Complete machine controller

NextMove ESB-2's complement of onboard digital and analog I/O allows the controller to be employed as a complete machine controller. The I/O can be expanded easily by CAN I/O devices available from ABB or alternatively, industry standard CANopen DS401 analog and digital I/O can be used.

Flexible programming

Mint multitasking provides a powerful yet simple solution to complex motion tasks. Programming flexibility is further enhanced with the ability to develop Windows applications using the supplied ActiveX® control. The ActiveX control allows motion and I/O sequencing to be performed in any Windows programming tool, such as Visual Basic.

Closed loop control

The NextMove ESB-2 can control up to 4 servo axes and is ideally matched with ABB's MicroFlex™ and EuroFlex range of servo drives, BSM servo and linear motor ranges.

Open loop control

Open loop axes can be controlled from any of the four step and direction outputs.

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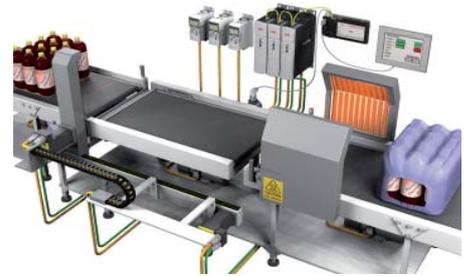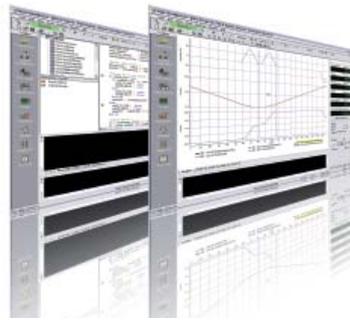
Stand-alone operation

Onboard flash memory and NextMove's Mint or C programming capabilities allow the controller to be operated as stand-alone. Onboard communications channels, including RS232/485, CANopen and USB make it easier to interface with other devices. Simple ASCII protocols such as Modbus RTU allow data transfer between PLCs and the NextMove controller.

PC tool offers simple and intuitive commissioning

The Mint Workbench PC tool offers fast and simple setup, commissioning and monitoring in a single software tool. In addition to a step by step configuration wizard, oscilloscope graphing, parameter view/edit/compare it also includes motion programming, integrated help and a support tool to package a single concise email to streamline technical support.

Ethernet machine control range

ABB's e100 motion control solutions provide all the benefits of NextMove ESB-2 combined with Ethernet based technology, controlling traditional analog, stepper and distributed drives and I/O in an array of different applications. Applications include over-wrappers, vertical form fill seal, tray sealers and markets such as metal forming, material handling and more.

CANopen expansion

– CANopen manager
– DS401 I/O devices expand system I/O
– Distribute I/O devices as required
– Peer to peer process data exchange

Serial port

– Modbus RTU
– RS232 or RS485 variants
– ActiveX support for PC communications
– Simple ASCII communications
– Host Comms Protocol for simple data exchange
– Compatible with some HMI panels

USB - communications

– Configuration and programming with Mint Workbench
– ActiveX support for PC HMI interfaces or application use

Digital and analog I/O

– 16 x standard digital inputs
– 4 x high speed inputs 1µs with registration functions
– 12 x digital outputs
– 1 x relay NO/NC 24 V

Multi-axis motion control

– Up to 8 axes total
– 3 or 4 x analog axes of motion
– 4 x stepper axes

5 x encoder input (ABZ)

– Axis feedback
– Master encoder (line-shaft) input(s)
– Electronic gearing functions
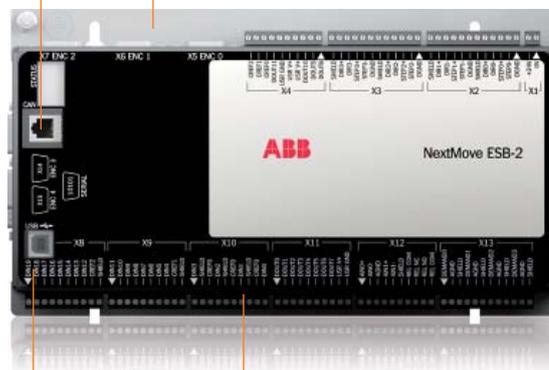
For more information please contact your local ABB representative or visit:

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