SERVOTRONIX
always in motion™

softMC 702

Multi-axis motion control software and hardware package, offering extensive programming capabilities for a variety of automation and robotics applications.

Modular real-time Linux-based software

- Servotronix multi-axis control algorithms embedded in a qualified off-the-shelf industrial PC

Scalable programming options for enhanced user exibility

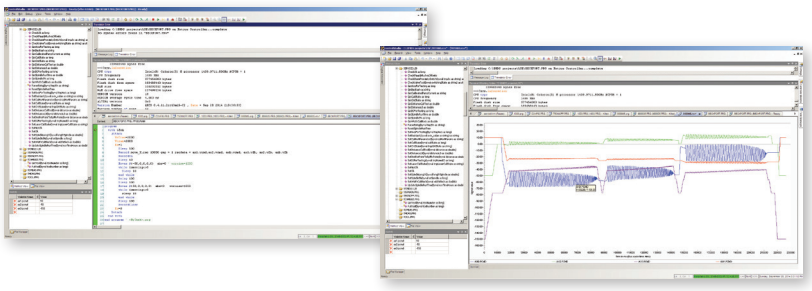
- Powerful, open, real-time programming language enables preemptive multitasking at user program level
- C/C++ user written module integration
- Enable code IEC 61131 CODESYS

Extensive motion and robotics functionalities

- Up to 64 interpolated axes
- Additional axes supported upon special request
- Single axis and synchronized axes motion
- Supports standard robot types such as DELTA, PUMA, SCARA, as well as other non-standard robotic kinematics such as traverse, scissors etc.

ControlStudioTM program development environment

ControlStudioTM is a free Windows-based integrated development environment used for editing and debugging of the MC-BASIC program.
A variety of machine and motion features are available, such as: task handling, text files editing, record graphs display, watch window, online tracking, etc.



Designed for the Perfect System

- Create the motion system you need, using Servotronix servo HMI Teach Pendant drives and motors
- Use softMI Human Machine Interface for machine controlling
- Use softTP Robot Teach Pendant for operational and programming tasks
- Use CDHD EtherCAT or CANopen servo drives for high-performance and high-power servo systems
- Use stepIM CANopen integrated closed-loop stepper motors for cost-effective servo performance at the price level of a stepper system

Key benefits

- Open, modular, and modern machine control environment
- Ethernet machine interface
- Support EtherCAT® and CANopen® motion buses
- Controls up to 64 interpolated axes
- Extensive capabilities for both standard and non-standard robotic kinematics
- Software core has been implemented in motion and robotic applications for over 30 years
- Customized software solution can be embedded into the customer's hardware

Complete Motion Solution

softMI
Human Machine Interface

softTP
Teach Pendant

CDHD servo drives with PRO2 rotary brushless servo motors

StepIM integrated closed-loop stepper motor

Motion

- Single-axis motion (move, jog)
- Group interpolation (move, circle)
- Blended motions
- Master-slave (camming, gearing)
- Pro les (sine acceleration, trapezoidal, customized)
- Simulated motions (off-line program validation)
- Advanced stop and proceed mechanisms
- User selectable units (meters, inches, mm/s and rpm)
- On-the- y motion control (immediate, velocity-override)
- 3D compensation table for correcting mechanical inaccuracies
- Conveyor tracking (pick-and-place from linear and rotary conveyers)
- Robotic kinematics for standard and non-standard types
- Advanced spatial interpolation for all kinematics
- Dynamic model (identi cation, online inverse dynamic)
- Real-time robot impact detection
- Multiple robots controlled by single controller
- Multi robot synchronization

Interfaces

- Machine: Seria,: Ethernet TCP/IP, Modbus TCP, OPC UA®
- Fieldbus: EtherCAT® or CANopen®

System

- Real-time Linux operating system
- Preemptive multitasking at user program level
- Integration with C/C++ user modules
- Position-based event generation using programmable limit switches, with microsecond resolution
- softMC-Basic language: Global and local libraries, user data structure, le system, error handling
- Integrated development environment: programming, software program management, diagnostic

Hardware

- CPU: 1.86 GHz Intel® AtomTM N2800 dual-core processor
- RAM: 1 GB 1066 MHz DDR3
- Storage: CompactFlash® card slot
- Ethernet: RJ45 port for host communications
- EtherCAT®: RJ45 port for real-time motion control

Customization capabilities

- softMC software embedded in other industrial PC platforms
- Customized software designed per customer's hardware

Order Information

		MC	–	E		08	–	703	–	0000
	softMC Motion Controller									
	Fieldbus									
E xx 301	EtherCAT + softMC 301									
E xx 703	EtherCAT + softMC 703 – New. *Available*									
E xx 705	EtherCAT + softMC 705 – *Available upon request*									
C xx 301	CANopen + softMC 301									
B xx 702	Multi-bus (EtherCAT and CANopen) + softMC 702 – *Legacy*									
B xx 704	Multi-bus (EtherCAT and CANopen) + softMC 704 – New. *Available upon request*									
	Number of Axes									
04, 06	4, 6 axes – softMC 3									
08, 16, 32	**8, 16, 32 axes – softMC 7**									
	Other number of axes available upon request									
	Hardware Options									
301	softMC 3 – ARM, for 4 to 6 axes									
702	softMC 7 – Atom, for 8 to 32 axes									
703	**softMC 7 – Atom, for 8 to 32 axes**									
704	softMC 7 – Atom, for 8 to 32 axes									
705	softMC 7 – CORE i5, for 8 to 32 axes									
	Options									
0100	IEC 61131 CODESYS									
0200	IEC 61131 CODESYS + WebVisu									
2100	softTP Web Server									

Software Add-On	
Part Number	Item
FW-MC03-CODESYS	IEC 61131 CODESYS for softMC 3
FW-MC07-CODESYS	IEC 61131 CODESYS for softMC 7
FW-MC03-TPH0701	softTP Web Server for softMC 3
FW-MC07-TPH0701	softTP Web Server for softMC 7

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