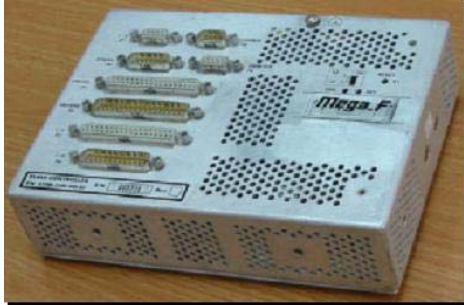


The SMC-300 is a Floating Point DSP based 3-Axis Stand Alone Motion Controller for high demands motion and I/O control applications.



The Controller features Advanced Motion Control of any type of motors together with high performance digital and analog I/O control and PLC functions. The control power of this Controller is defined by joined together computing power of the Floating Point SHARC DSP and the logic power of the Altera FLEX 10K device. Both Control Algorithms and H/W are programmable. Various filters and algorithms can be implemented to provide complete control means for industrial machines automation. Supported by powerful MegaF Development, Programming, Acquisition and Debugging Tools.

Main Features

Types of Motors	4 axes any types of DC , DC Brushless rotary and linear (AC servo), AC Induction, Voice coils, Step and Microstep, Hydraulics and Piezo-motors;
Sample Rate	50 μ sec (20 kHz) Update Rate not depending on the number of motors
Inputs/Outputs	80 digital I/O's, optoisolated, 8 Analog Inputs, 12 Outputs, differential
Control Algorithms	Cascaded PID algorithms, velocity and acceleration feedforward, non linear correction, antiwindup correction, notch filters, backlash compensation filters
DC Brushless Control	SW Sine Commutation for DC Brushless motors using incremental encoder only (no Hall sensors, no startup motion are required), phase advance control for high speed applications
Step Motors Control	DC Vector and Advanced Close Loop Control for Micro Step Motors
Motion Profiles	"On the Fly" Trapezoidal, S-curve and Parabolic profiles generation; Various types of interpolation; Polynomials interpolation with "on the fly" computing;
Interfaces	Two channels RS 232 and RS 422, 115KB, full duplex
Distributed Control	Distributed Control in Master – Slaves mode, 10 MHz TDM
User Language	Assignment, mathematics and program flow instructions, Up to 40 tasks MULTITASKING; Friendly Compiler and Source Level Debugger;
S/W Support	ActiveX Controls, Static Libraries, DLL for Host application
Debugging Tools	Watching and Modifying of any system and user variables in real time; Scope utility; Data processing: Zoom, Statistics, FFT; Build In Frequency Analyzer and Bode Diagrams Plotter for any part of the system;
Customizing	Number of motors, I/O's can be increased for customized versions

Optimal Motion and I/O System, Minimal Time to Market, Minimal Cost, Highest Performance - all these are reached by using the SMC-400 Motion Controller.