





sMI6 6 Axis Motion controller

-  Human-Machine Interface
-  Application Code
-  Servo Loop
-  Servo Board



INTRODUCTION

The SMI6 is a Motion Controller that interfaces to standard amplifiers. It includes the motion controller as well as the application code. The SMI6 offers the highest **versatility** among Cerebellum's product.

Multiple SMI6, **Adept Technology robots** as well as any other Cerebellum Automation product can be combined on a FireWire network to add more axes and extra features.

Open Architecture FireWire, Modbus, Profibus-DP, DeviceNet, Can-open, Interbus-S, AS-i.

DESCRIPTION

The SMI6 solution is the global answer to multi-axes mechanisms and Robots using, Servo motors and Steppers.

- The easy to use Cerebellum Automation Integrated Development Environment running on a PC connected to the sMI6 is used for setup, tuning and diagnostic, but is not mandatory for the application program execution.
- The application code is designed specifically for the target machine from Cerebellum Automation's top notch C libraries. It is **embedded** in the SMI6 and runs under a Real Time Operating System.
The standard industrial high-speed bus, FireWire, provides the synchronous communication required for coordinated motion and vision systems. The embedded soft IEC 61131 PLC gives the user the option to manage the automation logic of remote I/O.
- The servo loop can be entirely customized to handle non-linear mechanisms and optimize tracking, accuracy and cycle time.

SPECIFICATIONS

- Controls standard 6 brushless (+/- 10V interface) or Steppers (Pulse & Direction) drives
- Absolute (SSI or Omron/Yaskawa Sigma-I and II), and incremental (up to 32 MHz input rate) encoder support
- 200 MHz PowerPC Processor
- FireWire, 2 ports RS-232 or 422/485 connectivity
- Embedded IEC 61131 PLC
- 8 KHz servo loops with PID / Feed Forward
- 2 fast digital outputs (microsecond)
- 18 digital inputs and 13 digital outputs (more over Field Bus)
- 4 instrument grade 16-bit analog inputs and 6 outputs
- Supports FireWire, Modbus (standard) and Profibus-DP, DeviceNet, CAN-Open, Interbus-S, AS-i (options)
- Built-In Software Tool Box for servo tuning, system diagnostic and application program development
- Low Cost Vision with FireWire cameras

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