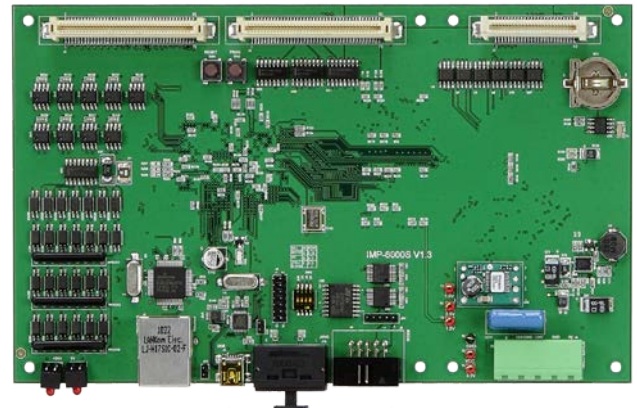


IMP-6000S

Six-Axis Intelligent Motion Control Platform

Features

- Built-in microprocessor and real-time operating system
- Support standalone operation mode
- Support multi-axis synchronized motion trajectory planning
- Support articulated robot trajectory planning (Software Optioned)
- Provide servo control loop design by software
- The remote I/O employs optical fiber transmission interface to improve the transfer rate and the correctness of the data at the I/O connections



Introduction

The intelligent motion control platform developed by the MSL of ITRI, IMP-6000S, has a built-in microprocessor (PowerPC 440) and a real-time operating system (VxWorks RTOS) so it can execute the motion control commands in standalone mode.

IMP-6000S can be used in conjunction with the adapter (IMP-6000S-1 or IMP-6000S-2) and the analog adapter (IMP-6AB) to construct a complete controller facilitates the configurations with various devices and machines. The IMP-6000S supports synchronous motion of 6-axis servo motor for open loop or closed loop control. It also provides the hardware PID and FeedForward control algorithm so as to solve the tracking error and steady-state error.

IMP-6000S allows the user to commence commands and carry out the monitoring function by using a personal computer (PC) via the network interface (A+ Ethernet mode) or the RS232 (standalone mode). Optical fiber transmission technology is employed on the remote I/O connections to improve the transfer speed and correctness of the data.

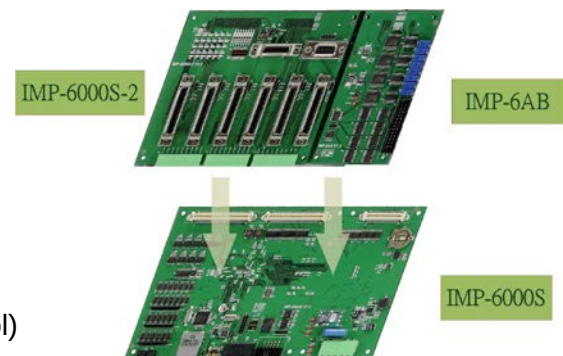
Specifications

■ Motion Control Interface:

- | | |
|-------------------------|---|
| ◆ Pulse Generator | 32-bit x 6 Axes (10MHz) |
| ◆ Encoder Interface | 32-bit x 6 Axes (16M Counts/s) |
| ◆ DAC Interface | 14-bit x 8 Channels |
| ◆ ADC Interface | 16-bit x 8 Channels |
| ◆ Position Control Loop | 6 Axes (PID & Feedforward Control) |
| ◆ Absolute Encoder | EnDat 2.2 x 3 Sets |
| ◆ Power Requirement | 5V(3A) / 24V(500mA) |
| ◆ Local Input /Output | 32 Input /Output (OT+, OT-, HOME, SVON, SRDY) x 6 Sets, PRDY, ESTOP |
| ◆ Remote Input /Output | 32 Sets IMP-ARIO (Each IMP-ARIO provides 16 In / 16Out) |
| ◆ Dimensions | 190mm x 87mm |

■ Peripheral Components

- | | | | |
|-------------------------|-------|-------------|-------|
| ◆ RS232 | 1 Set | ◆ DDR SDRAM | 128MB |
| ◆ Ethernet (10/100Mbps) | 1 Set | ◆ Flash | 32MB |
| ◆ USB (USB2.0) | 1 Set | | |



Schematic Diagram for IMP-6000S Complete Control

Software Support

- | | |
|---|---|
| ■ Supported IDDL (IMP Series Device Driver Library) | Windows XP / Windows 7 / Wind River VxWorks6.8 |
| ■ Supported MCCL (Motion Control Command Library) | Windows XP / Windows 7 / Wind River VxWorks6.8 |
| ■ Support Integrated Development Environment | Visual C++ / Visual C# / Wind River Workbench 3.2 |

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