

All-In-One Embedded Motion Controller

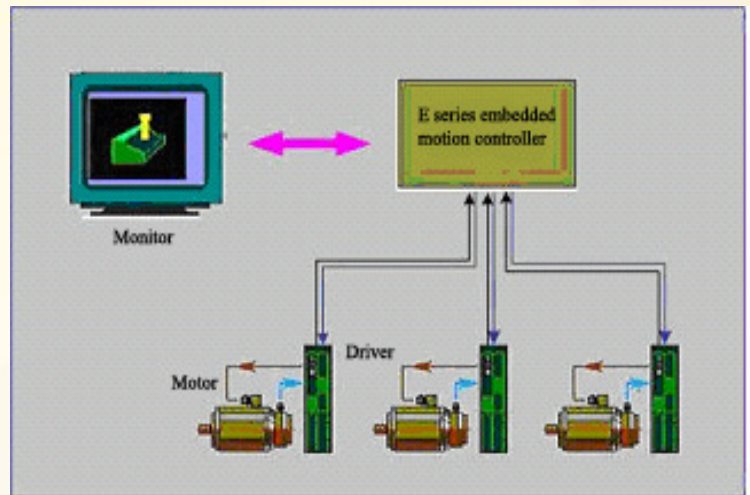
Overview

E series embedded motion controller is a type of all-in-one motion controller newly developed by Googol Technology. It is a standalone motion controller based on combination of embedded PC104 main board of X86, motion control board, terminal board in one structure, and thus has the advantages of smaller volume, less wiring, higher reliability. It is easy to upgrade, install and maintain, thus the reliability of the equipment operating under adverse industrial environments, such as humid, dusty, and shacking, etc, is greatly enhanced.



System Characteristics

- High performance DSP, FPGA technology, PC104 main board
- Be applicable for Googol's 2/3-axis generic or specific motion control bards.
- Different interfaces such as USB, RS232 / 485, Ethernet, DNC / floppy drive, extended I/O, control panel, touch screen, keyboard, mouse etc are provided to facilitate tuning and expansion
- DOS OS support USB, USB bootable
- Advantages due to the integration of embedded motion controller and terminal board:
 - 1) No need to use traditional "embedded motion controller + terminal board" structure, better control functions, lower cost.
 - 2) Reliability of the equipment operating under adverse industrial environment is greatly enhanced.
 - 3) Less wiring to facilitate installation.
 - 4) Space-saving due to its compact size.



Schematic Drawing

Technical Specification

(I) Motion Control Board

Input/Output Control:	<ul style="list-style-type: none"> • Control up to 3 servo/stepper axes, 2-channel opto-isolated limit switch signal and 1-channel opto-isolated driver alarm signal input for each axis
------------------------------	---



	<ul style="list-style-type: none"> • 1-channel opto-isolated drive enabling signal and 1-channel drive resetting signal output for each axis • Free combination of 3-channel 16-bit resolution analog voltage output signal or pulse output signal (can be pulse + direction, positive/negative pulse mode) • 4 channels of encoder feedback (encoder sampling frequency up to 4M Hz, 3 channels are axis encoder signal, 1 channel is auxiliary encoder signal) and 3 channels of axis encoder INDEX signal capture. • Pulse generation frequency up to 1M Hz.
Generic Digital Input/Output	<ul style="list-style-type: none"> • Generic 8-channel inputs, generic 6-channel outputs • Multiple I/O via I/O extension terminal board
System Software:	<ul style="list-style-type: none"> • Support DOS, WinCE, Linux OS • WinCE, Linux OS driver • DLL, C and C++ library in DOS
Dimension (LxWxH)	232mmX162mmX65mm
Power	+24V, ICC=2A; External power provided by users
Operating Environment:	<ul style="list-style-type: none"> • Operating temperature: 0~60°C (32°F-140°F) • Relative humidity: 5%~90% condensation free
Interface:	Standard DB adaptor (possess fastening plug-in function)

(II) Main Board Configuration

Main Board Model	I-001	I-002	I-003	P-001	
CPU frequency	166MHz	133MHz	533MHz	100MHz	
RAM	64M	64M	64M	1M	
Display	VGA display interface	VGA display interface	VGA display interface	LVDS display interface	
Connecting Interface	USB	2 channels	2 channels	2 channels	1 channel
	COM	2 channels	2 channels	2 channels	4 channels
	Ethernet	10/100M	Nil	10/100M	10/100M
	Keyboard	PS2 industrial keyboard interface	PS2 industrial keyboard interface	PS2 industrial keyboard interface	PS2 industrial keyboard interface
	Mouse	Yes	Yes	Yes	Yes
	Others				Built-in 1.44M flash drive
Optional DOM	64M/128M/256M/512M				

Ordering Guide

GU-300-ESG-Laser-P01/128-E	3 axis for servo/stepping motors, open-loop, P-001 main board, DOM 128M; laser power control
GU-300-ESG-P01/128-E	3 axis for servo/stepping motors control, open-loop, P-001 main board; DOM: 128M