GOOGOLTECH

GUS Series motion controller

-- An integrated and user friendly motion controller

Ordering Guide

Model Number			Description	Picture
Optional Accessories	Extended IO Module			
	ACC-S1616D	For Windows CE 6.0	Extended digital IO module (16 IN and 16 OUT)	
	ACC-S0408A		Extended analog IO module (8 IN and 4 OUT)	
	CPAC-300-ACC-S1616D	For CPAC	Extended digital IO module (16 IN and 16 OUT)	
	CPAC-300-ACC-SS0408A		Extended analog IO module (8 IN and 4 OUT)	
	Servo Drive			
	GTHD / GTDD series servo drive		High performance and programmable servo drive	
	Power Supply			
	ACC-DC24		24V DC power supply	
	Touch Screen			
	ACC6-PN3-05		5 inch touch screen	
	ACC6-PN3-12		12 inch touch screen	
	ACC6-PN3-15		15 inch touch screen	
	Control Pendant			
	GRP 3000-I		7 inch LCD, resolution 800*600, ESD Class4/ EFT Class 2	
	GRP 2000-II		6.5 inch LCD, resolution 640*480, ESD Class4/ EFT Class 4	
	Cables			
	ACC5-D01005		0.5 m Panasonic MINUS A cables	
	ACC5-D01010		1 m Panasonic MINUS A cables	
	ACC5-D01015		1.5 m Panasonic MINUS A cables	
	ACC5-D01020		2 m Panasonic MINUS A cables	
	ACC5-SP010115		1.5 m Sanyo Denki drive cable (Series: R3E model, R advanced model)	
	ACC5-D03015		1.5 m Yaskaw drive cable (Series: Sigma II)	
	ACC5-D03030		3 m Yaskaw drive cable (Series: Sigma II)	

Applications

Robotic control, semi-conducting industries, 3D printing, injection molding machine, injection molding machine manipulator, glue dispening machine, measuring machine, packageing machine, automatic production line etc.

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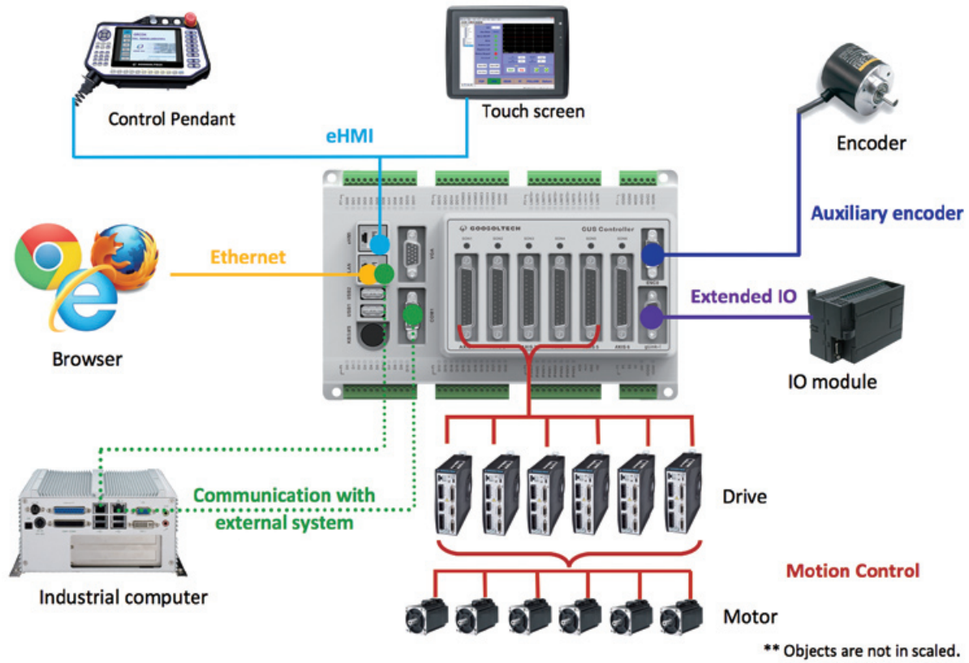
Overview

A highly integrated motion controller coming with the functions of computer, motion controller, PLC is launched by Googol Technology.
Compare with conventional motion controller, GUS series provides an optimal size for different applications, helping to achieve a less wieldy control system. Knowing that the controller may be used in a harsh environment, a fanless model is also available.
Although the controller is tightened into a relatively small package, the functionalities are still maintained: S-curve motion, Trapezoid-curve motion, Jog mode, Gear mode, Linear interpolation and Arc interpolation.
To ensure the motion controller works in a reliable manner, avoiding the motion controller gets damage from overcurrent, GUS equips with resettable fuse at 24V power terminal. Users no longer need to pause the development process due to replacement of fuse.

GUS TG02

System Layout



GUS series

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Specifications

Features	GUS-TG01 Series	GUS-TG02 Series
Differential pulse output channels	4 channels (1MHz maximum)	4 or 6 channels (1MHz maximum)
Axes’ encoder	4 channels (8MHz maximum after quadrupled)	4 or 6 channels (8MHz maximum after quadrupled)
Auxiliary encoder	1 channel (8MHz maximum after quadrupled)	
CPU	X86 800 MHz	
RAM	DDR2 512 MB	
Storage (DOM)	4 GB	
Sampling cycle	250 us	
Operation system	DOS or Windows CE 6.0	
Support language	OtoStudio*, C++, VB, C#...	
Digital Input (support PNP and NPN)	16 digital input	24 digital input
Digital output (support NPN)	16 digital output	
DAC (Only available on Laser type GUS)	16 bits, 2 channels, -10V to +10V	
Step count range	± 1,073,741,823 pulses	
EXIO port	1	
Ethernet (10/100MHz adaptive)	1	
PS/2	1	
USB 2.0	2	
VGA (Upto 1280 x 1024)	1	
eHMI	Nil	1
RS 232	2	1
Operation power	24 VDC, Icc 1A Min.	
Operation Temperature	0˚C to 55˚C	
Storage Temperature	- 40 ˚C to 70 ˚C	
Operating Humidity	0% ~ 90% relative humidity, non-condensing	
Dimension	244 x 128 x57 (mm)	224 x 145 x50 (mm)
Cooling	Fan	Fanless (by heat conduction)

* The development platform OtoStudio is based on IEC61131-3 programming standard, users can use instruction list, ladder diagram, function block diagram, structure text and sequential function chat to do programming. For more details, please refer to the CPAC catalog or contact Googol Technology.

GUS series

Controller Selection Guide

With Windows CE 6.0:

GUS – X00 – TGXX – XXXX

- **X00 – Number of axis**
  - X=4 4 Axes
  - X=6 6 Axes
- **TGXX – Controller type**
  - XX=01 The econmical series
  - XX=02 The fanless series
- **XXXX – Special function**
  - For econmical series (TG01)
    - XXXX=G General type
    - XXXX=LR With laser control function
  - For 4 axes fanless series (TG02)
    - XXXX=G General type
  - For 6 axes fanless series (TG02)
    - XXXX=HD With eHMI port
    - XXXX=HDLR With eHMI port and laser control function

GUS has a special version for laser control. Beside the basic features, the Laser type GUS equips with:

2 channels of DA output (-10V to +10V)
2 channels of PWM differential output
2 channels of laser ON/OFF differential output signal

With CPAC (Computerized Programmable Automation Controller):

Googol Technology also provides CPAC series. With the real time property, CPAC are widely used in applications which ask for ultrafast respond. Based on IEC61131-3 programming standard, users can use instruction list, ladder diagram, function block diagram, structure text and sequential function chat to do programming. For more details, please refer to the CPAC catalog or contact Googoltech.

CPAC – OtoBox – UST2L – 4PG – TcCNC – P01

- **UST2L – Controller model**
  - UST2 GUS-400-TPG-P01-F4G
  - UST2L GUS-400-TPG-LR-P01-F4G
  - UST2H GUS-600-TPG-P01-F4G
  - UST2HL GUS-600-TPG-LR-P01-F4G
- **4PG – Number of axis and type of output**
  - For UST2 and UST2L series
    - 4PG 4 Axes with pulse output
  - For UST2H and UST2HL series
    - TcCNC 6 Axes with pulse output
- **TcCNC – Selected module of CPAC**
  - For UST2,UST2L, UST2H AND UST2HL series
    - Nil General type
  - For UST2L and UST2HL series
    - TcCNC With CNC module
- **P01 – CPU**
  - P01 800MHz

Ordering Guide

Controller Type	Model Number	Package
Windows CE 6.0	GUS-400-TG01-G	Controller X 1, PS/2 cable X 1, Product CD X1 (contain manuals, lib), Warranty card X 1, Glove X 1
	GUS-400-TG01-LR	
	GUS-400-TG02- G	
	GUS-600-TG02-HD	
	GUS-600-TG02-HDLR	
Windows CE 6.0 + CPAC OtoStudio	CPAC-OtoBox-UST2-4PG-P01	
	CPAC-OtoBox-UST2L-4PG-P01	
	CPAC-OtoBox-UST2L-4PG-TcCNC-P01	
	CPAC-OtoBox-UST2H-6PG-P01	
	CPAC-OtoBox-UST2HL-6PG-P01	
	CPAC-OtoBox-UST2HL-6PG-TcCNC -P01	