

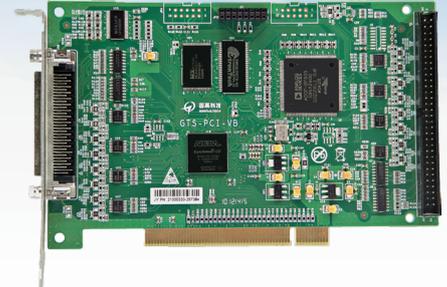
GTS-VB Series Multiple Axes Motion Controller



Overview

GTS-VB series are PCI multiple axes general purpose motion controllers for stepping motor and servomotor control. It implements motion planning via DSP and FPGA; outputs pulse or analog commands.

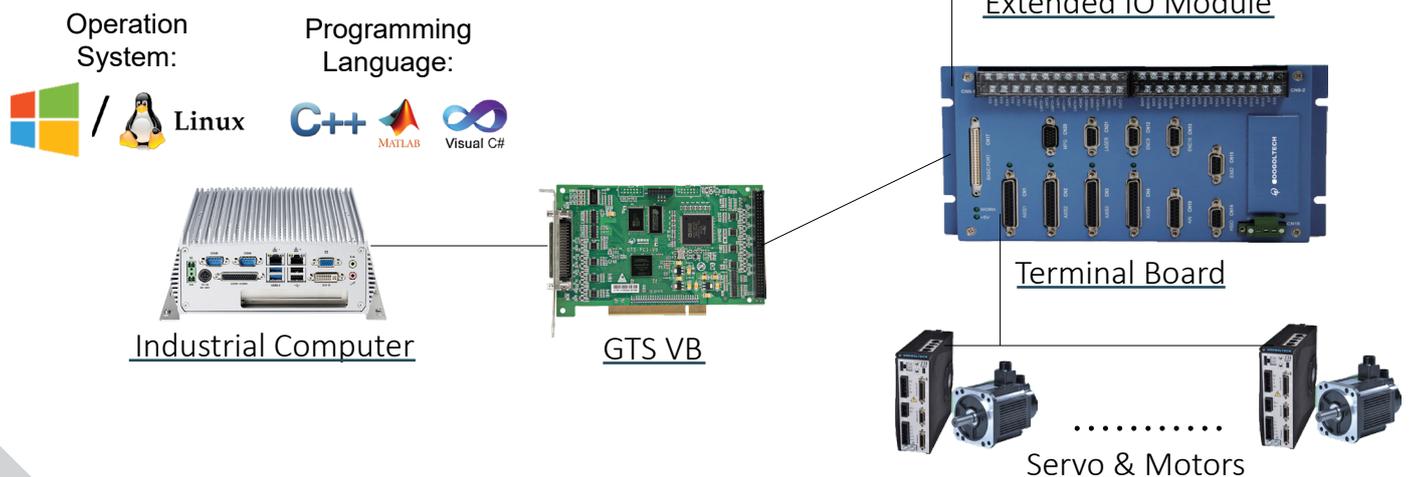
It supports point-to-point, continuous path, multi-axis synchronization, linear/arc/helix/3D linear interpolation motion modes. Users can freely set parameters of acceleration, deceleration, S-shaped curve smoothness to assist them designing the optimal motion planning for mechanical structures. Users can program the controller and construct automatic control systems via the library files of VC, VB, C#, Labview development environment.



Features

- 4/8 axes motion control
- DSP high speed motion planning
- Pulse count is precisely latched by FPGA; multi-axis synchronous control
- Supports Trap, Jog, Gear, Follow, PT, PVT
- Supports arbitrary 2 axes linear, arc interpolation; arbitrary 3-4 axes linear interpolation; 3D spiral interpolation
- Possesses look ahead preprocessing algorithm; reverse gap compensation; pitch error compensation
- 2-channel differential position comparison output signal
- 2-channel independent laser control function
- Laser energy following speed and distance

System Structure



GTS-VB Series Multiple Axes Motion Controller



Specifications

Motion control	
No. of controlled axis	4/8 axes
Control method	Pulse, analog
Filtering algorithm	PID + speed look ahead + acceleration look ahead
Control cycle	250us (pulse) / 125us (analog)
Pulse output	1MHz
Analog output	8-channel axis control interface (-10V~+10V) 4-channel non-axis interface (0~10V)
Encoder	ABZ 3-phase differential signal; sampling frequency 8MHz
Hardware resource	
Motion control interface	+/- limit, origin signal, driver alarm, driver reset, in position signal (optocouple isolation), MPG interface, laser control
Hardware capture	Home, Index, probe, position comparison capture
Auxiliary encoder	2 channels
General-purpose IO	16-channel input, 16-channel output (optocouple isolation)
Analog input	-10V~+10V, 12/16 bit
Fieldbus	gLink extension remote I/O
Other	
Power supply	24V DC \pm 10%, Icc = 3A Min
Operating temperature	0-55°C
Controller dimension	168mm * 126mm

Ordering Guide

	Ordering Number	Description
Standard Package	GTS-400-PG-VB-PCI	4-axis pulse standard control
	GTS-400-PV-VB-PCI	4-axis pulse + analog standard control
	GTS-800-PG-VB-PCI	8-axis pulse standard control
	GTS-800-PV-VB-PCI	8-axis pulse + analog standard control
	GTS-400-PG-VB-PCI-LASER	4-axis pulse laser control
	GTS-400-PV-VB-PCI-LASER	4-axis pulse + analog laser control
	GTS-800-PG-VB-PCI-LASER	8-axis pulse laser control
	GTS-800-PV-VB-PCI-LASER	8-axis pulse + analog laser control

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Accessories

Type	Ordering no.	Description
Standard package		
Terminal board	GT2-400-ACC2-VB-G	4-axis pulse terminal board
	GT2-400-ACC2-VB-V	4-axis pulse + analog terminal board
	GT2-800-ACC2-VB-G	8-axis pulse terminal board
	GT2-800-ACC2-VB-V	8-axis pulse + analog terminal board
	GT2-400-ACC2-VB-G-A	4-axis pulse terminal board, 8AI/4AO (non-axis interface)
	GT2-400-ACC2-VB-V-A	4-axis pulse + analog terminal board, 8AI/4AO (non-axis interface)
	GT2-800-ACC2-VB-G-A	8-axis pulse terminal board, 8AI/4AO (non-axis interface)
	GT2-800-ACC2-VB-V-A	8-axis pulse + analog terminal board, 8AI/4AO (non-axis interface)
68-pin cable	CN17-ACC3-T1-068005/10/15/30/50	Suitable for 4-axis controller and CN17 channel of 8-axis one, 0.5m/1.0m/1.5m/3.0m/5.0m
	CN18-ACC3-T1-068005/10/15/30/50	Suitable for CN18 channel of 8-axis controller, 0.5m/1.0m/1.5m/3.0m/5.0m
Optional Accessories		
Extension IO module	HCB2-1616-DTD01	16DI/16DO, input low level effective, NPN output
	HCB2-1616-DTS01	16DI/16DO, input level selectable (high/low), PNP output
	HCB2-0606-A1201	6AI/6AO, 12-digit accuracy
Extension IO connecting cable	DB9F F/M L=0.3m	Extension IO connecting cable, 0.3m
	DB9F F/M L=1.5m	Extension IO connecting cable, 1.5m
Driver connecting cable	ACC5-D01005/10/15/20	Panasonic series driver connecting cable, 0.5m/1.0m/1.5m/2.0m
	ACC5-D01005/10/15/20 (brake)	Panasonic series driver connecting cable (brake), 0.5m/1.0m/1.5m/2.0m
	ACC5-SP1015	Sanyo series driver connecting cable, 1.5m
	ACC5-D03015/30	Yaskawa series driver connecting cable, 1.5m/3.0m
	ACC5/D03015/30 (brake)	Yaskawa series driver connecting cable (brake), 1.5m/3.0m
	HPCN36P/M+DB25P/M	GTHD series driver connecting cable, 1.5m

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Industrial Applications



Laser Cutting Machine



Gantry Automation



SCARA Robot



Mini CNC

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