GHN Series Motion Controller
-Controls upto 40 axes with 32 floating point processing

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Overview

GHN series motion controller is a network type and modularize design motion controller. The motion card is responsible for computation and path generation, while the axes control modules are responsible for hardware communication by gLink-II bus.

There are several special functions of axes control modules which are available for the users to build their machines, such as laser module, 4 axes module and 6 axes module.

The GHN motion controller is equipped with four function sets which are specialized for *4 axes SCARA robot*, *6 degrees of freedom robot*, laser cutting machine and *CNC machine*. User no more need to develop the mathematic model of the machine but only need to apply the models in the GHN motion controller.

GHN not only can be used in special purposed equipment such as quality checking machine, assembly machine, dispenser machine, but also supports multi-working station and production line manufacturing. The card fulfills the needs of remote working station control which provides the maximum flexibility for configuring the production line.
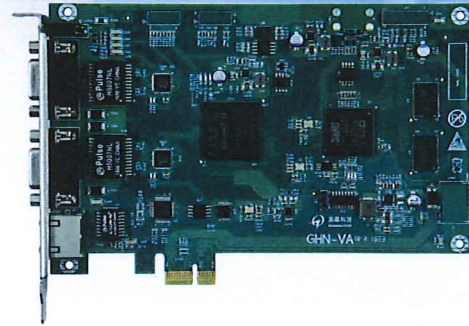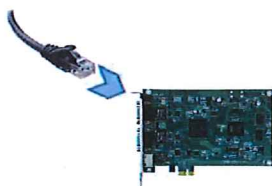
Main Features

✓ Support up to 40 axes motion control with 250us computing cycle,
✓ Full compactable with GTS function set,
✓ Support gLink-II(Duel gigabytes network ports),
✓ Power failure protection and encryption function,
✓ Support different types of axes control modules,
✓ Equipped with ADI SHARC processor,
✓ (dual core 32 floating point DSP+ARM Cortex A5, freq. 450MHz)
   DSP support client's self-define control algorithm
✓ Operations through Ethernet/Standalone/PCIe,
✓ Support *4 axes SCARA motion* , *6 DOFs robot motion*, *CNC* and *laser function.*

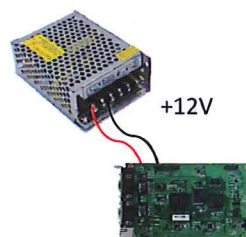Four axes SCARA motion profile

6 DOFs robot motion profile

GHN motion controller-
Do more works than a motion controller

CNC motion profile

Laser control functions

Operation Modes

GHN Serise

Operation Mode I:
Access by ethernet cable

Operation Mode II:
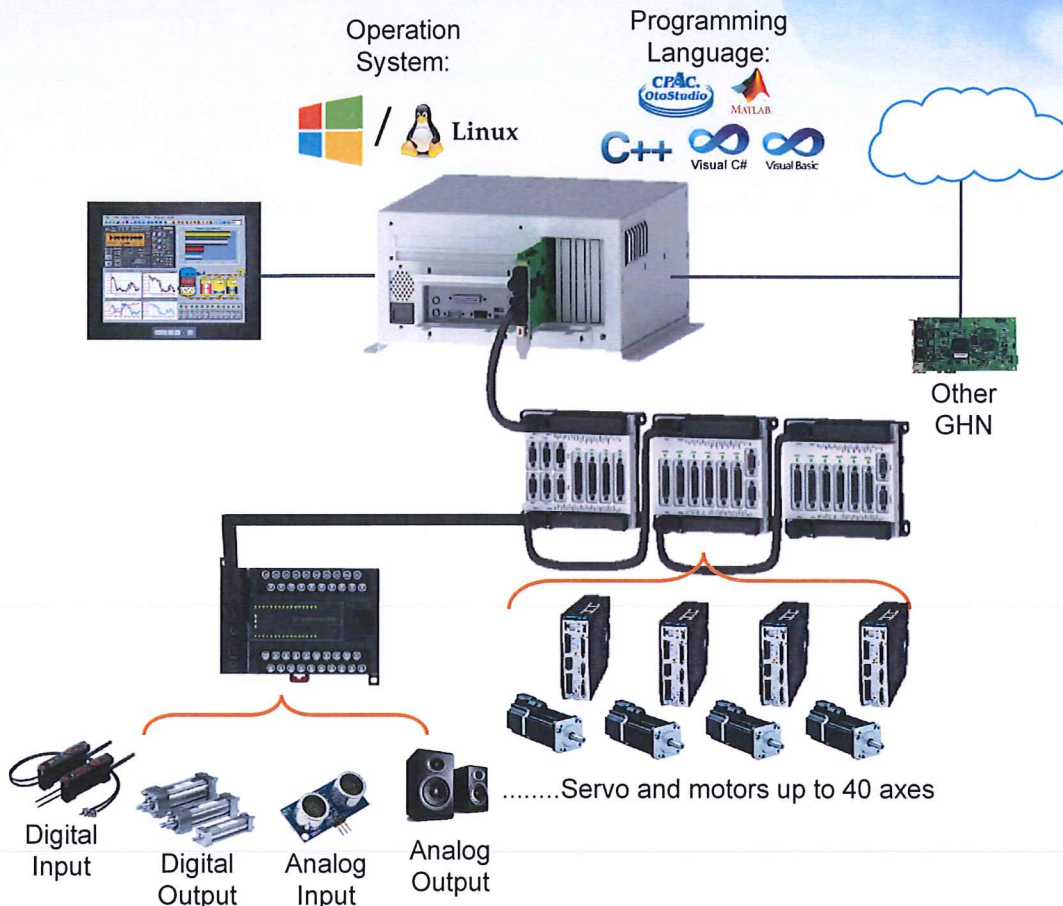Standalone operation

+12V

Operation Mode III:
Onboard operation

+

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System Layout Example

Operation System:

Windows / Linux

Programming Language:

CP&C. OtoStudio

MATLAB

C++

Visual C#

Visual Basic

Other GHN

Digital Input

Digital Output

Analog Input

Analog Output

........Servo and motors up to 40 axes

Specifications

	Description
Motion control	
No. of control axes	40
Control cycle	250us
Basic motion function	T-curve, Jog motion, electronic gear mode, linear interpolation, circular interpolation, auto-homing, position comparison output
Optional function	PT/PVT motion, S-curve motion, electronic cam, continuous path pre-processing and feed-forward, galvanometic control
Encoder	Incremental/ absolute encoder
Support development environment	C, C++, C#, VB.NET, VB, Delphi, LabVIEW, Otostudio V3.5
Hardware	
No. of IO support	64 DI/DO, 64 AI/AO
Digital IO	10-14 channels, 24V

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Analog IO	8 channels input, 12bit accuracy, ±10V
Dimension	121x181(mm)
Other	
OS	Windows 7 (32/64bit), Windows XP, Linux
Voltage	Control card on PCIe: DC 24V ±10% Control card standalone: DC 12V ±10% Axis control module: DC 24V ±10%
Current	Axis control module: 2A
Operating Temperature	0~55 °C
Working Humidity	0%~90%, Non-condensing

Ordering Guide

Hardware	Model Number	Description	Appearance
Motion control card	GHN-MASTER	Motion control card	
Axis control module	GN-SLAVE-G-SCAN	3 axes, Pulse output, 16 DI/14DO 2 galvanometers, support XY2-100 protocol 2 laser control channel, support PWM &DA Extended module port, auxiliary encoder	
	GN-SLAVE-V-SCAN	3 axes, Pulse/**Analog** output, 16 DI/14DO 2 galvanometers, support XY2-100 protocol 2 laser control channel, support PWM &DA Extended module port, auxiliary encoder	
	GN-SLAVE-G-400	4 axes, Pulse output, 16DI,14DO, auxiliary encoder	
	GN-SLAVE-V-400	4 axes, Pulse/Analog output, 16DI,14DO, auxiliary encoder	
	GN-SLAVE-G-600	6 axes, Pulse output, 16DI,14DO, auxiliary encoder	
	GN-SLAVE-V-600	6 axes, Pulse/Analog output, 16DI,14DO, auxiliary encoder	
Cable	GN-LINK-CAT5e-DB9M-DB9M-1M5	DB9 gigabit network cable, 1.5m, connecting control card and axis control modules	
	GN-LINK-CAT5e-DB9M-DB9M-10M	DB9 gigabit network cable, 10m, connecting control card and axis control modules	

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Optional Hardware

Hardware	Model Number	Description
Extension IO module	HCB4-1616-DTD01	16DI/14DO, active low input, NPN output
	HCB4-1616-DTS01	16DI/14DO, active high input, PNP output
	HCB4-3200-DTD01	32 DI, active low input, NPN output
	HCB4-0606-A1201	6 AI/6AO, 12 bits resolution
Extension IO connection cable	DB9 F/M L=0.3m	Accompany with each extension IO module (1 pc) 0.3m
	DB9 F/M L=1.5m	Accompany with each extension IO module (1 pc) 1.5m
Drive connection cable	ACC5-D01005/10/15/20	Panasonic series drive connection cable, 0.5m/1m/1.5m/2m
	ACC5-D01005/10/15/20(brake)	Panasonic series drive connection cable with brake signal cable, 0.5m/1m/1.5m/2m
	ACC5-SP01015	Sanyo series drive connection cable, 1.5m
	ACC5-D03015/30	Yaskawa series drive connection cable 1.5/3m
	ACC5-D03015/30 (brake)	Yaskawa series drive connection cable with brake signal cable 1.5/3m
	HPCN36P/M+DB25P/M	GTHD series drive connection cable, 1.5m

Industrial Applications

CMM

Production line

Textile machine

Laser cutting machine

CNC

Robot

Contact Us

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