GOOGOL TECHNOLOGY

Control & network factories of the future

GOOGOLTECH

GOOGOL TECHNOLOGY (HK) LIMITED
Unit 1008-09, 10/F C-Bons International Center, 108 Wai Yip Street, Kwun Tong, Kowloon, Hong Kong
Tel.: +(852) 2358-1033
Fax:+ (852)2719-8399
E-mail: hkgoogol@gmail.com / sales@googoltech.com
Web: http://www.googoltech.com

GOOGOL TECHNOLOGY (SZ) LIMITED
Room W211, IER Building (PKU-HKUST High-tech Industrial Park, Nanshan District, Shenzhen, PRC (Postal Code: 518057)
Tel.: +(86) 755-26970817, 755-26970824,
Fax: +(86) 755- 26970821
E-mail: googol@googoltech.com
Web: www.googoltech.com.cn

GOOGOL TECHNOLOGY (TWN) LIMITED
7F-3, No.97, Sec. 3, Taichung Port Road, Xitun Dist., Taichung City 40755, Taiwan.
Tel.: +886-4-2358-8245
Fax: +886-4-2358-6495
E-mail: twinfo@googoltech.com


The headquarter office, Hong Kong


Googol Technology (SZ) Limited, Shenzhen, China


Googol Institute, Shenzhen, China


Googol Science Park, Dongguan, China

GTHD High Performance Servo Drive

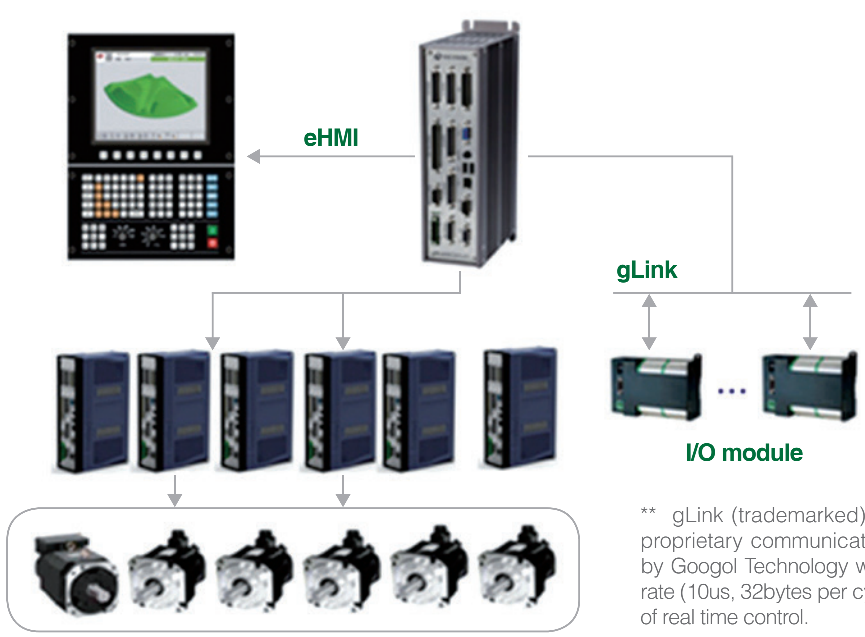
Overview

The GTHD series high performance servo drive features hardware and software design innovations that deliver superior servo performance, industry-leading power density and extensive versatility. GTHD supports virtually any motor, any feedback type, and any I/O requirement. Product functionality covers most applications that servo control needs, offering seamless commissioning through ServoITE software or direct terminal access, with all–in-one tuning of current, velocity, and position control loops.

Main Features

- High power density drive in one of the smallest footprints
- New current loop design for outstanding frequency response of up to 3 kHz.
- Real time Auto-Tune function minimizing position error and settling time
- Anti-Vibration algorithm that effectively eliminates any mechanical resonance
- User friendly ServoITE software for simple commissioning within minutes
- Encoder feedback interpolation - total theoretical resolution supported as much as 26 bits

Furthermore, GTHD can connect seamlessly with Googoltech’s multi-axes motion controller, such as GTS-, GUC- series throughout high efficient gLink communication protocol and therefore provide all-in-one solutions for wide range of industrial applications.



** gLink (trademarked) is a high performance proprietary communication protocol developed by Googol Technology with ultra-short refreshing rate (10us, 32bytes per cycle) ensuring the quality of real time control.

GTHD High Performance Servo Drive

Specifications

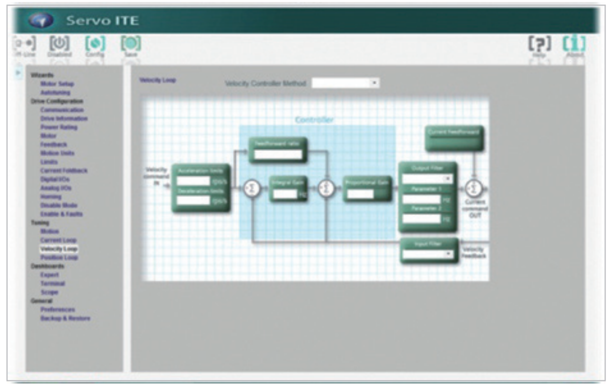
Function	Description
Supported motor	Rotary/Linear / DDR / Brush or brushless
Encoder and protocol	Incremental encoder/ Absolute Encoder/ Resolver/ Sin wave encoder /Cos wave encoder/EnDAT2.1&EnDAT 2.2
Control mode	Position / Velocity / Current
Pulse signal	Pulse + Direction/±Pulse
Maximum output frequency	50 kHz
Speed range	0~6000 rpm
Speed control accuracy	<±0.2%
Speed fluctuation	<±0.3%
Positioning accuracy	<±1pulse
Current loop bandwidth	3000 Hz
Velocity loop bandwidth	600 Hz
Position loop bandwidth	100 HZ
Digital IO	11 Input / 6 Output
Analog IO	2 Input / 1 Output
Operating Temperature	-10~45℃
Humidity	5%~95%
Communication bus supported	gLink/RS232/USB/CanOpen/EtheCat/ProfiNet

Dimension

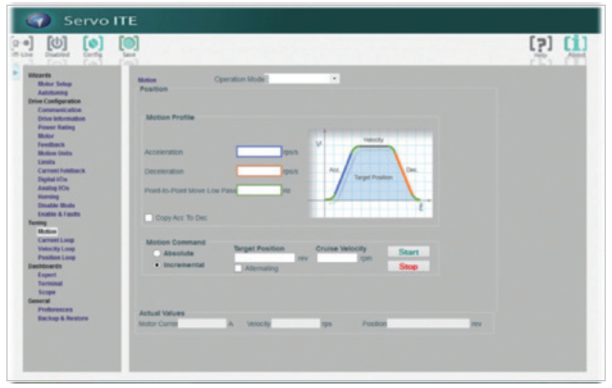
Model	Rating Voltage (VAC)	Dimension W x H x D (mm)
GTHD-003	120/240	43.2 x 173 x 144.9
GTHD-006, GHTD-4D5	120/240	54.7 x 173 x 167.4
GHTD-008, GTHD-010, GHTD-013	120/240	61.8 x 194.3 x 181.8
GTHD-020, GTHD-024	120/240	117.4 x 245.4 x 193.3
GTHD-003	400/480	110 x 172.2 x 193.1
GTHD-012	400/480	116.4 x 245 x 193.5
GTHD-024, GTHD-030	400/480	147.3 x 353 x 209.3

ServoITE

ServoITE is a graphic user interface (GUI) provided with the GTHD to enable set up, configuration and tuning of the drive. It allows you to program the drive parameters specifically for the motor to which the GTHD is connected, and for the particular operation that the drive will be performing in the machine.



Page for editing the parameters of velocity loop



Page for editing the motion's acceleration, deceleration and position

Selection Guide

GTHD – 003 – 2A – AP – 1 – LM

Power rating
For 120/240 VAC

Continue Current/Peak Current	
003	3A/9A
4D5	4.5A/18A
006	6A/18A
008	8A/28A
010	10A/28A
013	13A/28A
020	20A/48A
024	24A/48A

Power rating
For 400/480 VAC

Continue Current/Peak Current	
003	3A/9A
006	6A/18A
012	12A/24A
024	24A/72A
030	30A/90A

Analog Input

0	No Analog Input
1	One Analog Input, 16 bits
2	Two Analog Input, 14 bits each

Motor Type

N/A	Only rotary motors are supported
LM	Support linear and rotary motors

Power Supply

2A	Single phase 120 L-L VAC+10%-15% 50/60 Hz Single phase 120 L-L VAC+10%-15% 50/60 Hz Three phase 120-240 L-L VAC+10%-15% 50/60 Hz
4D	Three phase 400 L-L VAC+10%-15% 50/60 Hz Three phase 480 L-L VAC+10%-15% 50/60 Hz 24VDC power supply for control board

Interface

AP	Analog voltage, Pulse Train Ref, RS232
AF	Analog voltage, Pulse Train Ref, CANopen, USB, RS232
EB	Analog voltage, EtherCAT, USB
EC	Analog voltage, Pulse Train Ref, EtherCAT, USB, RS232

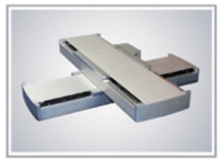
Applications

Robotic

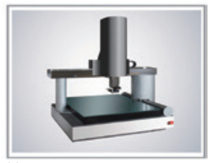
Printing Machine

Textile

CNC



CMM



Linear motor stage

Ordering Guide

Model / Parameters		Rated Current (A)	Rated Voltage (V)	Motor Power (W)	Communication
Standard type Series (Analog model)	GTHD-003-2AAP1	3	120/240VAC	400/750(Small inertia)	RS232
	GTHD-003-2AAP1-LM				
	GTHD-4D5-2AAP1	4.5		400/750(Small inertia)	
	GTHD-4D5-2AAP1-LM				
	GTHD-006-2AAP1	6		750(Mid. To Largeinertia)/1000/1300/1500	
	GTHD-006-2AAP1-LM				
	GTHD-008-2AAP1	8		1000(Mid. To Largeinertia)/1300/1500/2000	
	GTHD-008-2AAP1-LM				
	GTHD-010-2AAP1	10		1300(Mid. To Largeinertia)/1500/2000	
	GTHD-010-2AAP1-LM				
	GTHD-013-2AAP1	13		2500/3000/3500	
	GTHD-013-2AAP1-LM				
	GTHD-020-2AAP1	20		2900/3000/3500/4400	
	GTHD-020-2AAP1-LM				
	GTHD-024-2AAP1	24		4400/5500/7300	
	GTHD-024-2AAP1-LM				
	GTHD-003-4DAP1	3	400/480VAC	Under 1500	
	GTHD-003-4DAP1-LM				
	GTHD-006-4DAP1	6		Under 3000	
	GTHD-006-4DAP1-LM				
	GTHD-012-4DAP1	12		Under 6300	
	GTHD-012-4DAP1-LM				
	GTHD-024-4DAP1	24		Under 12kw	
	GTHD-024-4DAP1-LM				
	GTHD-030-4DAP1	30		Under 15kw	
	GTHD-030-4DAP1				

GTHD Series

GOOGOLTECH

GTHD High Performance Servo Drive

Ordering Guide

Model / Parameters		Rated Current (A)	Rated Voltage (V)	Motor Power (W)	Communication
Analog+ CANopen	GTHD-003-2AAF0	3	120/240VAC	400/750(Small inertia)	STD+CANopen, USB, support Hiperface
	GTHD-003-2AAF0-LM				
	GTHD-4D5-2AAF0	4.5		400/750(Small inertia)	
	GTHD-4D5-2AAF0-LM				
	GTHD-006-2AAF0	6		750(Mid. To Largeinertia)/1000/1300/1500	
	GTHD-006-2AAF0-LM				
	GTHD-008-2AAF0	8		1000(Mid. To Largeinertia)/1300/1500/2000	
	GTHD-008-2AAF0-LM				
	GTHD-010-2AAF0	10		1300(Mid. To Largeinertia) 1500/2000	
	GTHD-010-2AAF0-LM				
	GTHD-013-2AAF0	13		2500/3000/3500	
	GTHD-013-2AAF0-LM				
	GTHD-020-2AAF1	20		2900/3000/3500/4400	
	GTHD-020-2AAF1-LM				
	GTHD-024-2AAF1	24		4400/5500/7300	
	GTHD-024-2AAF1-LM				
	GTHD-003-4DAF1	3	400/480VAC	Under 1500	
	GTHD-003-4DAF1-LM				
	GTHD-006-4DAF1	6		Under 3000	
	GTHD-006-4DAF1-LM				
	GTHD-012-4DAF1	12	400/480VAV	Under 6300	
	GTHD-012-4DAF1-LM				
	GTHD-024-4DAF1	24		Under 12kw	
	GTHD-024-4DAF1-LM				
	GTHD-030-4DAF1	30		Under 15kw	
	GTHD-030-4DAF1-LM				
Analog+ EtherCAT	GTHD-003-2AEC2	3	120/240VAC	400/750(Small inertia)	STD+EtherCAT, USB, support Hiperface
	GTHD-003-2AEC2-LM				
	GTHD-4D5-2AEC2	4.5		400/750(Small inertia)	
	GTHD-4D5-2AEC2-LM				
	GTHD-006-2AEC2	6		750(Mid. To Largeinertia)/1000/1300/1500	
	GTHD-006-2AEC2-LM				
	GTHD-008-2AEC2	8		1000(Mid. To Largeinertia)/1300/1500/2000	
	GTHD-008-2AEC2-LM				
	GTHD-010-2AEC2	10		1300(Mid. To Largeinertia)/1500/2000	
	GTHD-010-2AEC2-LM				
	GTHD-013-2AEC2	13		2500/3000/3500	
	GTHD-013-2AEC2-LM				
	GTHD-020-2AEC2	20		2900/3000/3500/4400	
	GTHD-020-2AEC2-LM				
	GTHD-024-2AEC2	24		4400/5500/7300	
	GTHD-024-2AEC2-LM				
	GTHD-003-4DEC2	3	400/480VAC	Under 1500	
	GTHD-003-4DEC2-LM				
	GTHD-006-4DEC2	6		Under 3000	
	GTHD-006-4DEC2-LM				
	GTHD-012-4DEC2	12		Under 6300	
	GTHD-012-4DEC2-LM				
	GTHD-024-4DEC2	24		Under 12kw	
	GTHD-024-4DEC2-LM				
	GTHD-030-4DEC2	30		Under 15kw	
	GTHD-030-4DEC2-LM				