Marvie Series 4DOF Robot Controller

-Integration of Servo Drives, Controller and Software

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Overview

Robot controller integrates with 4 axes servo drive (Marvie) having the functions of controller, servo drives and control software, which is widely used in light weight robot such as 4 axes SCARA robot and 4 axes Delta robot.

To good fit in different applications, Marvie has a compacted design and has a high power to volume ratio, helping the production line tidy and clean. Furthermore, no wiring between servo drive and controller is needed. The design minimizes interference and makes Marvie achieve a relatively high stability.

Marvie Series 4DOF Robot Controller
(Marvie)

Marvie comes with some user friendly control commands which fulfill most of the industrial operation. If some special applications are needed, users can do coding on the OtoStudio developmenet platform which supports IEC61131-3 standard.

Main Features

- ✓ Integrated the functions of controller, servo drives and robot control software in a single unit,
- ✓ Compacted design, high power to volume ratio, integrated design,
- ✓ Applying multi-dimensional and non-linear algorithm, ensuring accuracy velocity loop, position loop and current loop control,
- ✓ Support local and remote IO, auxiliary encoder, RS 232 and machine vision,
- ✓ Synchronization of motion profile computing and servo control computing,
- ✓ Ease of tuning, software and firmware upgrade.

Delta
Applications

Pick & Place,
Palletizing,

SCARA
Applications

Pick & Place,
Palletizing,
Assembly,
Uplaod and unload

Gantry
Applications

Upload & unload,
Transportaion,
Palletizing,
Cutting

Palletizer
Applications

Transportaion,
Palletizing

Self-define robot
Applications

build control
algorithm for client

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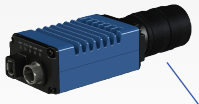
Support hardware

Machine vision-
Kestrel Series Smart Camera



Control pendant-
GRP3000II

Auxiliary encoder

IO modules-
CPAC 300

Servo Motors X 4

Relay ON/OFF

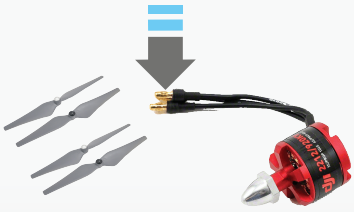
System layout example

Product assembly line

Material loading unit

Assumbly unit

Packaging unit



Components

Product

Packaging

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Software

OtoRobot is the robot control software that is developed by Googol Technology. The platform is opened for secondary development, user can do tailor made fuction by editing the code. The platform is built in a real-time operation platform which fillful the needs of high speed motion and accuracy motion.

Follows are some features of OtoRobot:
-Support 6 types of programming language, including C and C++,
-Support network control and maintenance,
-Support encryption protection
-Support network varaible, co-working between robots

	Description
Coordinate system	
ACS	Using J1-J8 to describe joint coordinate
KCS	Using X,Y,Z,A,B,C to describe coordinate with 2 accessories axes (Aux1, Aux2)
PCSI/PCS2	User defined coordinate for work pieces
WCS	32 sets client self-define world coordinate system
TCS	32 sets client self-define tool coordinate system
Craftsmanship	
Welding, palletizing, tracking, accessories axes, machine vision, network communication	

Specifications

	Description
Hardware	
CPU	1GHz
RAM	2GB
Hard disk	4GB
Operation system	Windows CE 6.0
Power	
Rated Voltage	Single phase AC 220V, (range 187V-242V)
Rated frequency	50-60Hz, ±5%
Output	
Motor	750W X 4
Output current	5A
Output voltage	3 phases, 0V to rated input voltage
Output frequency	0-1000Hz
Overload limit	120% rated current 30 seconds, 300% current for 1.5 seconds
IO	
Digital Input	8 channels of optocoupler isolation input
Digital Output	8 channels of optocoupler isolation output
Motor brake	24VDC, 500mA X 4
Encoder	
Absolute encoder	4 channels, 5V DC, 250mA each
Auxiliary encoder	2 channels, incremental, 5V DC, 250mA each
Ports	
LAN	100MB Ethernet
RS-232	DB9 (male)
gLink-I	1 channel
gLink-II	1 channel
Control pendant	eHMI, two channels STO, two channels input, 24VDC, 300mAh
Other	
Dimension	Width 230 X Length 410 X Height 410 (mm)
Operation temperature	0～55 °C
Operation height	Not higher than 2000m
Operation pressure	80kPa-110kPa
Installation orientation	Keep the Marvie installed horizontal
Working Humidity	0%～90%, Non-condensing

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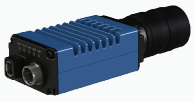
Ordering guide

Marvie Series 4DOF Robot Controller		
Model Number	GTSD42-T2-K003-X1-N10-X0	
Configuration	2 phases, 220V, Standard casing, on floor installation and support abs encoder	
Remarks	Other configurations are available such as 380V operating voltage and other voltage and other encoder types	

Ordering guide (Optional)

Software (OtoRobot)		
Model Number	GT_OtoRobo_CS_4 V1.0	
No. of control axes	Less than or equal to 4 axes	
Program Features	-Joint PTP command/ Cartesian system PTP command/ Cartesian system linear command / Arc CP command -Joint/ tool/ global/ work piece coordinate system	
Control Pendant		
Model Number	GRP-3000II	
Configuration	7 inch LCD, EFT Class 2/ ESD Class 4	
Dimension	285 x 170 x 68.5(mm)	
Kestrel Series Smart Camera		
Model Number	GCK-1100-130M	
Configuration	640 x 480 (30W)/620fps 800 x 600 (50W)/420fps 1280 x 1024 (130W)/175fps	
Extended IO		
Model Number	HCB1-1616-DTS01	
Configuration	Digital 16 In, 16 Out, NPN	

Contact Us

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