PRODUCTS OVERVIEW

Fast, Accurate, Smooth Motion Control Technology

Ezi-SERVO® Closed Loop Stepping System

Ezi-IO® Input/Output Module

Ezi-Robo® Precise Positioning Actuator System

Ezi-SPEED® BLDC Motor Speed Control System

Ezi-POS® BLDC Motor Positioning System

Ezi-LINEARStep® Precision Hybrid Stepper Linear Actuators

EtherCAT®   Ethernet   CC-Link IE TSN   PROFINET   Modbus

FASTECH

Fast, Accurate, Smooth Motion

Company Profile

Company at a Glance

Company Name ：FASTECH Co., Ltd.
Established 　 ：10th Aug, 2001
Website 　　　：www.fastech-motions.com
Headquarter 　：Rm#1202, 401-dong, Bucheon Techno-Park, 655,
　　　　　　　　Pyeongcheon-ro Bucheon-si Gyeonggi-do,
　　　　　　　　Republic of Korea
Call Center 　：+82-32-234-6317
E-mail 　　　 ：sales@fastech-motions.com
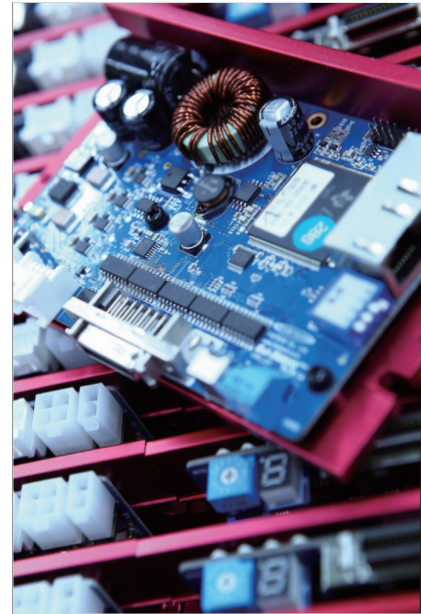
Business Information

▌ Professional motion control company

FASTECH has secured optimized management system by continuous challenge spirit and constant innovation based on FASTECH its own technology in a motion control business filed through long time experiences and achieved value of customer satisfaction with the best quality and competitiveness. By establishment of toehold, FASTECH will be grown up as worldwide motion control company.

▌ Optimized total solution provider based on high level of technical skills

FASTECH provides total solutions mostly covers Closed Loop System, Open Loop Stepping System, various Field Network Solution and various Unit Product combine with Mechanisms are all required from motion control market field. In addition, through continuous technical research and product development, we build very concrete establishment to provide optimized total solution matching any requests from customers.

▌ Leads the market with a constant innovation

FASTECH has been going ahead on the road not taken by anyone with continuous effort and innovation. Then now FASTECH has positioned as leading company in a Closed Loop Stepping market area since the establishment of the company and is ready to build maximized business growth through world-wide exports as a Global Brand. FASTECH will continue to generate infinite value with a product and quality fulfill customer's requirements based on continuous innovation, up-to-date idea and top level of technology.

▌ Honest and trustful company

FASTECH will continue to do our best to realize stable management, strict quality control and customer first service to be a long term trustful partner shares value and target with all of customers. Also FASTECH will go forward as creditable company treasure value of craftmanship and partnership as motion control specialized company.

Quality Standard

▌ Secure the quality system with global standard

FASTECH secures quality management system matching global standard for systematic quality management and implementation and set the target to provide zero defects product through strict self quality management system.

ISO 9001   **ISO 14001**

Service

▌ Various information providing and communication with customer

Website(www.fastech-motions.com)
Available to download all products catalogue, manual, video clip and drawing from FASTECH website includes product information.

Participate in domestic and global exhibitions
FASTECH does our best to maximize opportunity to meet customers through domestic and overseas exhibitions and introduce new technology and product.

▌ Technology consultation and supports

Technical consultation and motor selection service
Please call to main call center of FASTECH and will do our best to support on time.

Field technical support and technology seminar
Please call to main call center of FASTECH for any questionnaires or troubles about FASTECH products then we will execute field technical support and technology seminar.

Technical training
FASTECH prepares various customized training program for matching each different level of customers and implements technical training for our product. If need, please contact with our main phone number of FASTECH.

Brand Introduction

Ezi-SERVO®
Closed Loop Stepping System

- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque
- High Resolution / High Response
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

Ezi-MOTIONLINK®
Network based Motion Controller Plug-in to Servo Drives

- 1-Axis Motion Controller
- Compatible with Various Servo Drives
- Various Motion Functions
- Reduced Wiring
- Ethernet Supported

Ezi-IO®
Input/Output Module

- Digital I/O, Analog I/O, High Speed Counter Module
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, PROFINET, etc.)
- Simple Wiring (e-CON Connector Type and Push-in Terminal Block Type Available)

Ezi-LINEARSTEP®
Precision Hybrid Stepper Linear Actuators

- Non-Captive / External / Captive Type Linear Actuator with High Resolution Encoder
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- High Resolution / High Response
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

Ezi-Robo®
Precise Positioning Actuator System

- Precise Positioning Actuator System
- Unit Solution Combining Ezi-SERVO + Actuator
- Various Types of Actuator (Hollow Rotary Table, Linear Actuator, Vacuum Linear Rotary Actuator)
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

Ezi-STEP
Micro Stepping System

- Microstepping System
- Software Damping
- High Torque
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

Ezi-SPEED
BLDC Motor Speed Control System

- AC Input BLDC Motor Speed Control System
- Compact · Light Weight · High Power · High Efficiency Brushless Motor
- Wide Speed Control Range (50~4000r/min)
- Stable Speed Control by Vector Control (Speed Regulation within 0.2%)
- RS-485 Modbus-RTU Supported

Ezi-POS
BLDC Motor Positioning System

- BLDC Motor Positioning System
- DC Power Supply Input
- Auto-tuning
- Various Motor & Position Sensor Options
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

Products Line-up
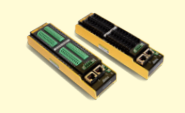
Ezi-SERVO®
Closed Loop Stepping System

Ezi-SERVO ST	Ezi-SERVO MINI	Ezi-SERVOII BT	Ezi-SERVO ALL
Ezi-SERVOII EtherCAT	NEW Ezi-SERVOII EtherCAT TO	Ezi-SERVOII EtherCAT MINI	Ezi-SERVOII EtherCAT 4X
Ezi-SERVOII EtherCAT ALL	Ezi-SERVOII Plus-E	Ezi-SERVOII Plus-E MINI	Ezi-SERVOII Plus-E ALL
Ezi-SERVOII CC-Link	Ezi-SERVO HS		

Ezi-MOTIONLINK®
Network based Motion Controller Plug-in to Servo Drives
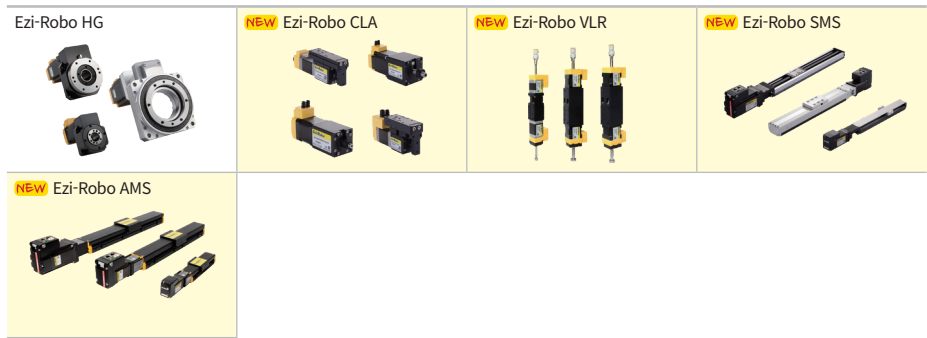
Ezi-MOTIONLINK Plus-E

Ezi-IO®
Input/Output Module

Ezi-IO EtherCAT DIO	Ezi-IO EtherCAT AD	Ezi-IO EtherCAT DA	NEW Ezi-IO EtherCAT CNT
Ezi-IO Ethernet DIO	Ezi-IO Ethernet AD	Ezi-IO Ethernet DA	NEW Ezi-IO Ethernet CNT
NEW Ezi-IO CC-Link IE TSN DIO	NEW Ezi-IO PROFINET DIO		

Ezi-LINEARSTEP®
Precision Hybrid Stepper Linear Actuators

Ezi-LINEARSTEP

Ezi-Robo®
Precise Positioning Actuator System

Ezi-Robo HG	NEW Ezi-Robo CLA	NEW Ezi-Robo VLR	NEW Ezi-Robo SMS

NEW Ezi-Robo AMS

Ezi-STEP®
Micro Stepping System

Ezi-STEP ST	Ezi-STEP MINI	Ezi-STEP BT	Ezi-STEPII EtherCAT
NEW Ezi-STEPII EtherCAT TO	Ezi-STEPII EtherCAT MINI	Ezi-STEPII EtherCAT 4X	NEW Ezi-STEPII EtherCAT ALL
Ezi-STEPII Plus-E	Ezi-STEPII Plus-E MINI	Ezi-STEPII CC-Link	

OPTION

Brake	Gearbox

Ezi-SPEED®
BLDC Motor Speed Control System

Ezi-SPEED	NEW Ezi-SPEED Modbus-RTU
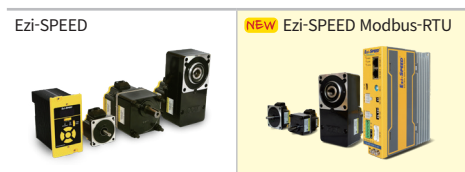
Ezi-POS®
BLDC Motor Positioning System

NEW Ezi-POS EtherCAT

New Products

New **Ezi-SERVO® II** EtherCAT **TO**
Closed Loop Stepping System

- CiA402 Drive Profile Supported
- Closed-Loop Stepping system
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque
- High Resolution / High Response
- Torque Off Function Supported

CE

New **Ezi-IO®** EtherCAT **CNT**
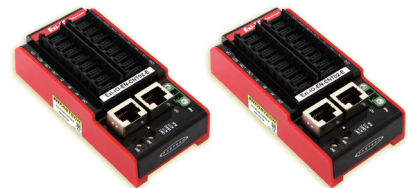Input/Output Module

- EtherCAT Based High Speed Counter Module
- All EtherCAT Synchronization Modes Supported
- Simple and Easy Wiring
- Line Receiver and DC Input Type Provided
- Equipped with Comparison Output Function

CE

New **Ezi-IO®** Ethernet **CNT**
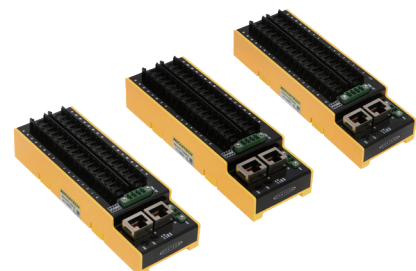Input/Output Module

- Ethernet Based High Speed Counter Module
- Simple and Easy Wiring
- Line Receiver and DC Input Type Provided
- Equipped with Comparison Output Function

CE
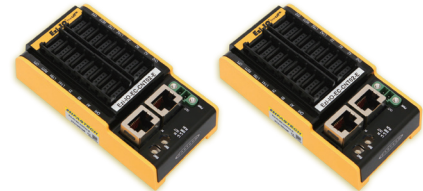
New **Ezi-IO®** CC-Link IE TSN **DIO**
Input/Output Module

- CC-Link IE TSN Based Digital I/O Module
- CC-Link IE TSN Authentication Class B
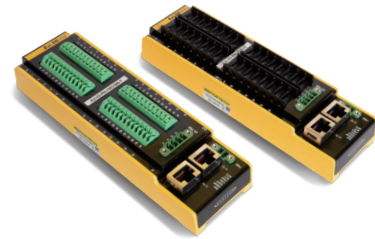- Input Filter Function
- Simple and Easy Wiring

CE

New Ezi-IO ® PROFINET DIO
Input/Output Module

CE

- PROFINET Based Digital I/O Module
- RT(Realtime) & IRT(Isochronous Realtime) Communication Supported
- Simple and Easy Wiring
- DIN Rail Mounting

New Ezi-Robo® CLA
Precise Positioning Actuator System

- Compact Linear Actuator with Hollow Shaft Motor & Ball Screw
- Repeatability : ±0.01mm, Lost Motion : <0.05mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder (Max. 20,000P/R)
- Size Line-up : □20mm, □28mm, □42mm, □56mm

New Ezi-Robo® VLR
Precise Positioning Actuator System

- Compact Actuator with Hollow Shaft Motor & Ball Screw Spline
- Vacuum(V) + Linear(L) + Rotary(R), 3-in-1 Actuator
- Repeatability : ±0.02mm(L), ±0.03°(R)
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder (Max. 20,000P/R)
- Size Line-up : □28mm, □35mm, □42mm

New **Ezi-Robo**® *SMS*
Precise Positioning Actuator System

- Integrated LM Guide Steel Actuator with Integrated Motor Drive
- Repeatability : ±0.005mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder : Max. 20,000P/R
- Size Line-up : SMS15 – 30x15mm, SMS23 – 50.5x23mm, SMS30 – 60.5x30mm

New **Ezi-Robo**® *AMS*
Precise Positioning Actuator System

- Integrated LM Guide Aluminum Actuator with Integrated Motor Drive
- Repeatability : ±0.005mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder : Max. 20,000P/R
- Size Line-up : AMS30 – 37x29mm, AMS40 – 42x38mm, AMS50 – 52x45mm, AMS60 – 60x45mm

New **Ezi-STEP**® Ⅱ EtherCAT
Micro Stepping System *TO*

- CiA402 Drive Profile Supported
- Microstepping
- Software Damping
- High Torque
- Torque Off Function Supported

CE

New

Ezi-STEP® II EtherCAT. ALL
Micro Stepping System

- Motor + Drive + EtherCAT Interface
- Space Saving / Reduced Wiring
- CiA402 Drive Profile Supported
- Microstepping
- Software Damping

New

Ezi-SPEED® Modbus RTU
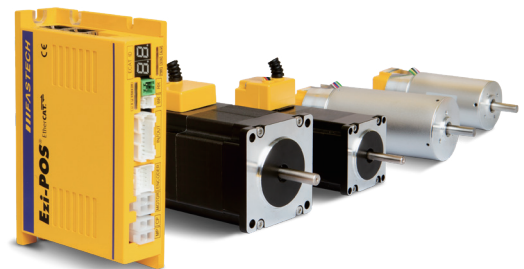### BLDC Motor Speed Control System

- AC Input (220V) BLDC Motor Speed Control System
- RS-485 Modbus-RTU Based BLDC Motor & Drive
- Compact·Light Weight·High Power·High Efficiency Brushless Motor
- Wide Speed Control Range (50~4000r/min)
- Stable Speed Control by Vector Control (Speed Regulation within 0.2%)
- Torque Limit and Load Holding Function
- Various Product Line-Up (30, 60, 120, 200, 400W)

New

Ezi-POS® EtherCAT.
BLDC Motor Positioning System

- EtherCAT Based BLDC Motor Positioning System
- DC Power Supply Input
- CiA402 Drive Profile Supported
- Auto-tuning
- Various Motor & Position Sensor Options

## Advantages over Open-Loop Control Stepping Drive

1. Reliable positioning without loss of synchronism.
2. Holding stable position and automatically recovering to the original position even after experiencing positioning error due to external forces, such as mechanical vibration or vertical positional holding.
3. Ezi-SERVO utilizes 100% of the full range of rated motor torque, contrary to a conventional Open-Loop stepping driver that can use up to 50% of the rated motor torque due to the loss of synchronism.
4. Capability to operate at high speed due to load-dependent current control, Open-Loop stepper drivers use a constant current control at all speed ranges without considering load variations.

Advantages over Servo Motor Controller

1. No gain tuning (Automatic adjustment of gain in response to a load change.)
2. Maintains the stable holding position without oscillation after completing positioning.
3. Fast positioning due to the independent control by on-board MCU.
4. Continuous operation during rapid short-stroke movement due to instantaneous positioning.

Closed Loop System

Ezi-SERVO is an innovative Closed Loop Stepping System that utilizes a high-resolution motor mounted encoder constantly to monitor the current position. The encoder feedback allows the Ezi-SERVO to update the current position every 25 micro seconds. It allows the Ezi-SERVO drive to compensate for the loss of position, ensuring accurate positioning. For example, due to a sudden load change, a conventional stepper motor and drive could lose a step but Ezi-SERVO automatically correct the position by encoder feedback.
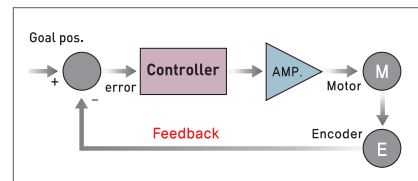

Tuning Not Required

To ensure machine performance, smoothness, positional error and low servo noise, conventional servo systems require the adjustment of its servo's gains as an initial crucial step. Even systems that employ auto-tuning require manual tuning after the system is installed, especially if more that one axis are interdependent. Ezi-SERVO employs the best characteristics of stepper, closed loop motion controls and algorithms to eliminate the need of tedious gain tuning required for conventional closed loop servo systems. This means that Ezi-SERVO is optimized for the application and ready to work right out of the box. The Ezi-SERVO system employs the unique characteristics of the closed loop stepping motor control, eliminating these cumbersome steps and giving the engineer a high performance servo system without wasting setup time. Ezi-SERVO is especially well suited for low stiffness loads (for example, a belt and pulley system) that sometime require conventional servo systems to inertia match with the additimal expensive and bulky gearbox. Ezi-SERVO also performs exceptionally, even under heavy loads and high speeds.
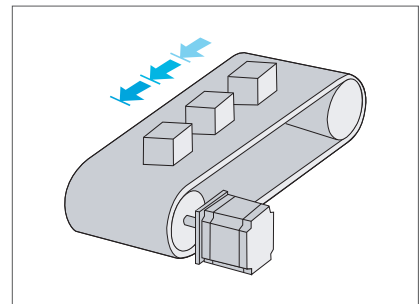
No Hunting

Traditional servo motor drives overshoot their position and try to correct overshooting by moving the opposite direction, especially in high gain applications. This is called null hunt and is especially prevalent in systems that the break away or static friction is significantly higher than the running friction. The cure is lowering the gain, which affects accuracy or using Ezi-SERVO Motion Control System. Ezi-SERVO utilizes the unique characteristics of stepping motors and locks itself into the desired target position, eliminating Null Hunt. This feature is especially useful in applications such as nanotech manufacturing, semiconductor fabrication, vision systems and ink jet printing in which system oscillation and vibration could be a problem.
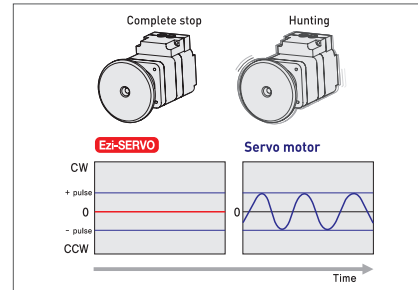

## Low Heat Generation / Energy Savings (Motor Current Control according to load)

Ezi-SERVO is an innovative Closed Loop Stepping System that utilizes a high-resolution motor mounted encoder constantly to monitor the current position. The encoder feedback allows the Ezi-SERVO to update the current position every 25 micro seconds. It allows the Ezi-SERVO drive to compensate for the loss of position, ensuring accurate positioning. For example, due to a sudden load change, a conventional stepper motor and drive could lose a step but Ezi-SERVO automatically correct the position by encoder feedback.
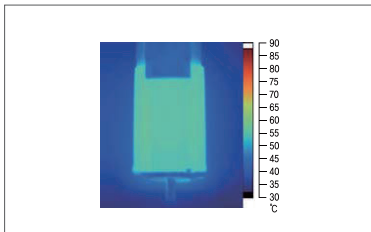
Motor temperature
[Measured by Thermal Imaging Camera]
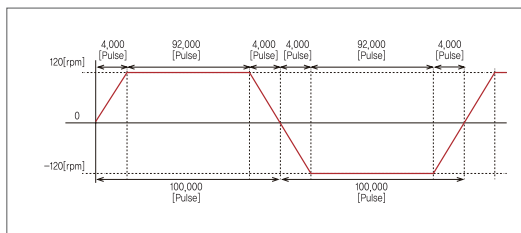
Condition to measure the motor temperature
[4hours operation, Motor surface temperature saturation]
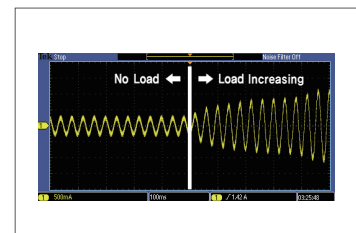
Example of the Motor Current
Control according to load

High Torque (Motor Voltage Increasing and Motor Current Setting)

Ezi-SERVO boosts the voltage supplied to the motor by internal DC-DC Converter. The torque at the high speed is increased. In addition, it is possible to set the Run Current up to 150%, whereby the torque at low speed is increased. Torque can be improved by about 30% over the entire speed range.
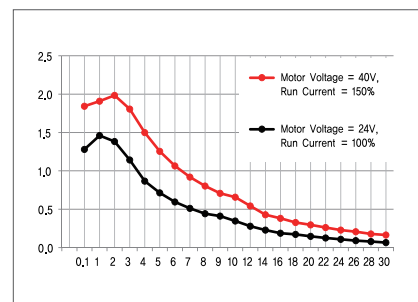

※ The torque at low speed and high speed is improved about 30%.

Measured Condition : Drive = Ezi-SERVO-ST-56L
　　　　　　　　　　 Motor Voltage = 40VDC
　　　　　　　　　　 Input Voltage = 24VDC

Smooth and Accurate Operation

Ezi-SERVO is a high-precision servo system, using a high-resolution encoder with 32,000 pulses/revolution. Unlike a conventional Microstep drive, the on-board high performance MCU (Micro Controller Unit) performs vector control and filtering, producing a smooth rotational control with minimum ripples.
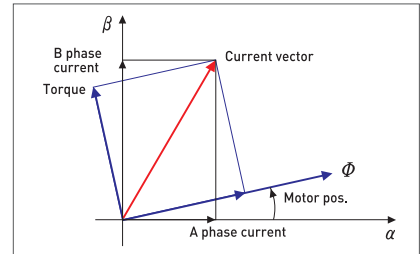
High Response

Similar to conventional stepping motors, Ezi-SERVO instantly synchronizes with command pulses providing fast positional response. Ezi-SERVO is the optimum choice when zero-speed stability and rapid motions within a short distance are required. Traditional servo motor systems have a natural delay called settling time between the command input signals and the resultant motion because of the constant monitoring of the current position.
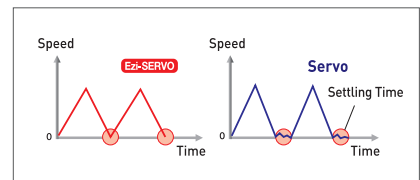
High Torque / Continuous Operation

Compared with common step motors and drives, Ezi-SERVO motion control systems can maintain a high torque state over relatively long period of time. This means that Ezi-SERVO continuously operates without loss of position under 100% of the load. Unlike conventional Microstep drives, Ezi-SERVO exploits continuous high torque operation during high speed motion due to its innovative optimum current phase control.
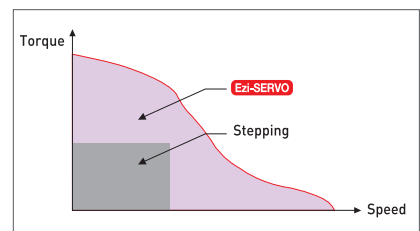
High Resolution

The unit of the position command can be divided precisely.
(Max. 32,000 pulses/revolution)

500
1000
1600
2000
3600
5000
6400
7200
10000
20000
32000
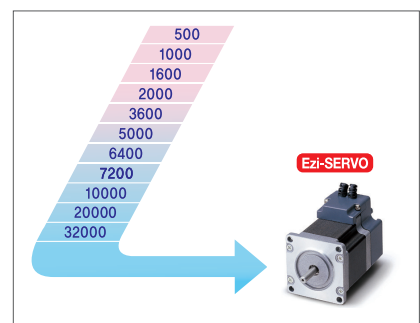
High Speed

The Ezi-SERVO operates well at high speed without the loss of synchronism or positioning error. Ezi-SERVO's ability of continuous current position monitoring of enables the stepping motor to generate high torque, even under a 100% load condition.
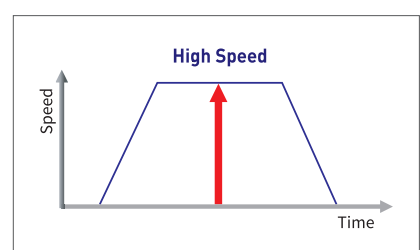
Why the Closed Loop Stepping System has better performance than the Servo Systems?

Cost

AC Servo

Ezi-SERVO®

Ezi-STEP®

Performance

▌ TORQUE COMPARISON BETWEEN STEP AND SERVO MOTOR

- Torque from Servo Motor is proportional to position error.
- Torque from Step Motor has no relation to position error.
- Torque from Step Motor has only relation to speed.

Torque Generation of Servo Motor

Instantaneous Torque

Rated Torque

Small torque near of goal position

Position Error

Torque Generation of Step Motor

Maximum torque near of goal position

(mN-m)

EzM-56L   NEMA 23
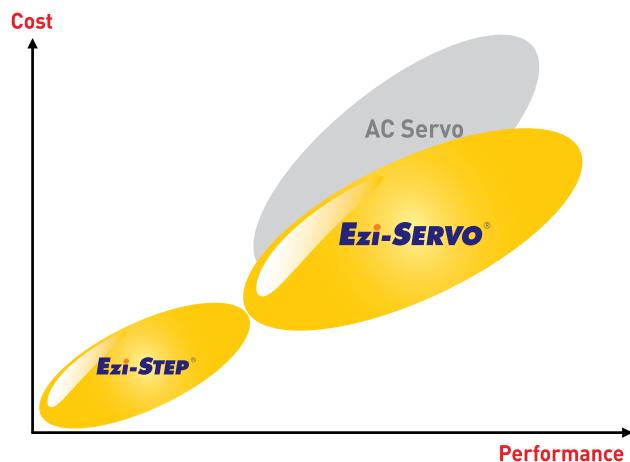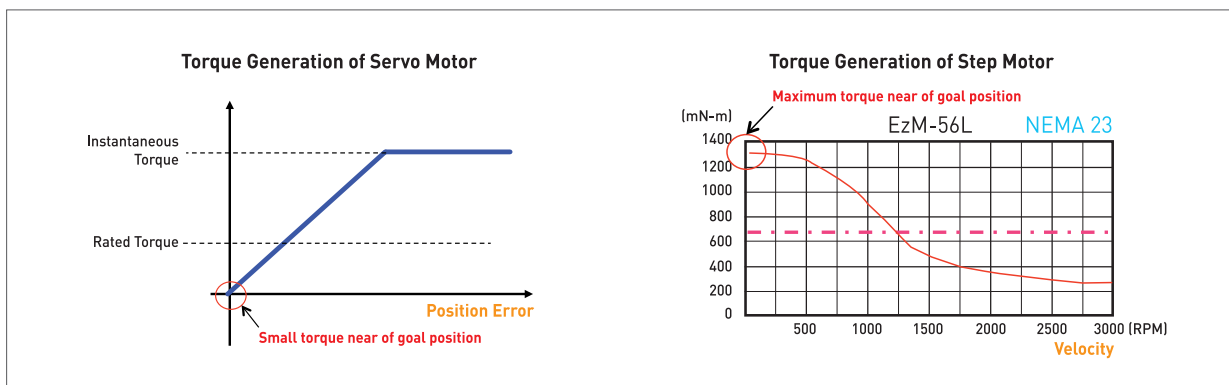
1400
1200
1000
800
600
400
200
0

500   1000   1500   2000   2500   3000 (RPM)

Velocity

▌ WHY STEP MOTOR SYSTEM IS BETTER FOR BELT & PULLEY SYSTEM?

- Motor revolution generates 62.8mm of linear movement so most of motion must be short pitch of movement.
- Due to less rigidity of load, shaking of load should be directly delivered to motor shaft when motion stops. In case of servo motor, when motor stops, servo motor has very tiny power to keep target position so shaking of load can be easily effected to motor shaft its own vibration.

* In a step motor's aspect, belt & pulley is short pitch of movement

R

$$L=2\pi R$$

One motor revolution generates 62.8mm of linear motion if Radius is 10mm. (L=62.8mm)

Ezi-SERVO®
Closed Loop Stepping System
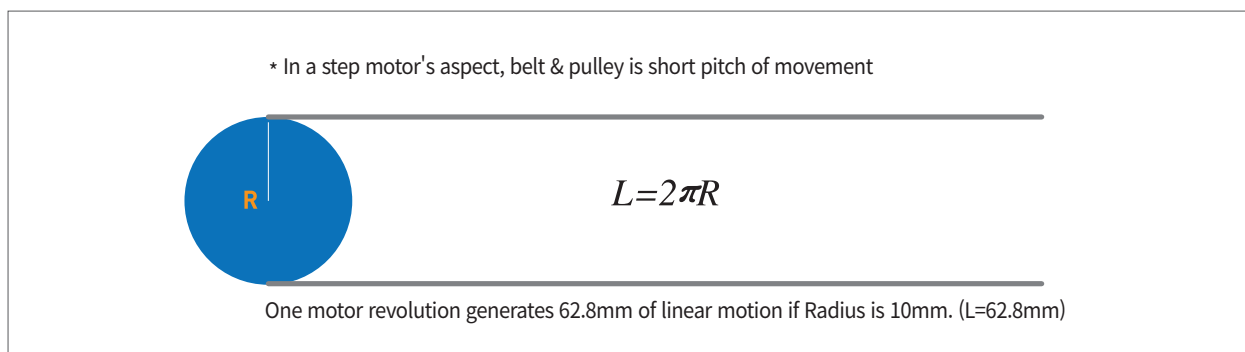
FASTECH Overview

FASTECH products can be found driving applications such as: LCD/LED manufacturing, semi-conductor fabrication, assembly machines, packaging machines, medical diagnostic equipment, laboratory apparatus, vision inspection systems and many other applications that require precise smooth movement. FASTECH drives have industry standard NEMA mounting flanges and easily adapt to most linear actuators and precision stages.

Ezi-SERVO® ST
Closed Loop Stepping System

CE RoHS COMPLIANT

- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque
- High Resolution / High Response

Ezi-SERVO® MINI
Closed Loop Stepping System

CE

- Space Saving / Reduced Wiring by Compact Drive
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- Low Heat Generation
- High Resolution / High Response

Ezi-SERVO® II BT
Closed Loop Stepping System

CE

- Motor + High-Resolution Encoder + Drive
- Space Saving / Reduced Wiring
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- High Resolution / High Response
- Low Heat Generation

Ezi-Servo® ALL
Closed Loop Stepping System

CE

- Motor + High Resolution Encoder + Drive + Motion Controller
- Space Saving / Reduced Wiring
- RS-485 Interface
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque

Ezi-Servo® II EtherCAT
Conformance tested
Closed Loop Stepping System

CE RoHS COMPLIANT

- CiA402 Drive Profile Supported
- Closed-Loop Stepping system
- Tuning Not Required / No Hunting
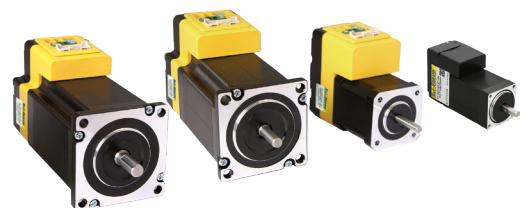- Low Heat Generation / High Torque
- High Resolution / High Response

New

Ezi-Servo® II EtherCAT TO
Closed Loop Stepping System

CE

- CiA402 Drive Profile Supported
- Closed-Loop Stepping system
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque
- High Resolution / High Response
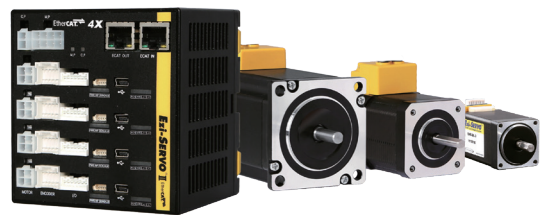- Torque Off Function Supported

Ezi-SERVO® II EtherCAT MINI
Closed Loop Stepping System

- CiA402 Drive Profile Supported
- Closed-Loop Stepping system
- Tuning Not Required / No Hunting
- Space Saving / Reduced Wiring by Compact Drive
- Low Heat Generation / High Torque
- High Resolution / High Response

CE

Ezi-SERVO® II EtherCAT 4X
Closed Loop Stepping System

- CiA402 Drive Profile Supported
- Closed-Loop Stepping system
- Tuning Not Required / No Hunting
- Compact Multi Axis Stepping Motor Drive
- Space Saving / Reduced Wiring

CE

Ezi-SERVO® II EtherCAT ALL
Closed Loop Stepping System

- Motor + High Resolution Encoder + Drive + EtherCAT Interface
- Space Saving / Reduced Wiring
- CiA402 Drive Profile Supported
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque

CE

Ezi-SERVO® II Plus-E
Closed Loop Stepping System

$C\epsilon$

- Embedded Motion Controller
- Ethernet Interface
- Position Table
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- High Resolution / High Response
- Low Heat Generation / High Torque

Ezi-SERVO® II Plus-E
MINI
Closed Loop Stepping System

$C\epsilon$

- Embedded Motion Controller
- Ethernet Interface
- Position Table
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- High Resolution / High Response
- Space Saving / Reduced Wiring by Compact Drive

Ezi-SERVO® II Plus-E
ALL
Closed Loop Stepping System

$C\epsilon$

- Motor + High Resolution Encoder + Drive + Motion Controller
- Space Saving / Reduced Wiring
- Ethernet Interface
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque

Ezi-SERVO® Ⅱ CC-Link
Closed Loop Stepping System

- Embedded Motion Controller
- Position Table
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque

CE

Ezi-SERVO® HS
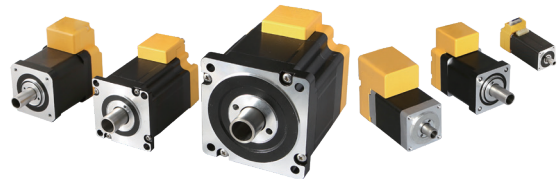## Closed Loop Stepping System

- Hollow Shaft Motor with High Resolution Encoder
- Closed-Loop Stepping System
- High Precision Position Control
- Low Heat Generation / High Torque
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

Ezi-MotionLink® Plus-E
Network based Motion Controller Plug-in to Servo Drives

$C\epsilon$

• Ethernet Based 1-Axis Motion Controller
• Compatible with Various Servo Drives
• Various Motion Functions
• Reduced Wiring

[Applicable Servo]
· MITSUBISHI   · YASKAWA
· PANASONIC   · SANYO DENKI
· LS MECAPION   · RS AUTOMATION
· DELTA

Ezi-IO® EtherCAT DIO
Input/Output Module

- EtherCAT Based Digital I/O Module
- All EtherCAT Synchronization Modes Supported
- CiA 401 Profile Supported
- Simple and Easy Wiring

CE

Ezi-IO® EtherCAT AD
Input/Output Module

- EtherCAT Based Analog Input Module
- All EtherCAT Synchronization Modes Supported
- CiA 401 Profile Supported
- Simple and Easy Wiring
- Input Mode and Range Configurable
- Moving Average Filtering

CE

Ezi-IO® EtherCAT DA
Input/Output Module

- EtherCAT Based Analog Output Module
- All EtherCAT Synchronization Modes Supported
- CiA 401 Profile Supported
- Simple and Easy Wiring
- Output Range Configurable
- Calibration for Output Deviation

CE

New

Ezi-IO® EtherCAT CNT
Input/Output Module

- EtherCAT Based High Speed Counter Module
- All EtherCAT Synchronization Modes Supported
- Simple and Easy Wiring
- Line Receiver and DC Input Type Provided
- Equipped with Comparison Output Function

CE

Ezi-IO® Ethernet DIO
Input/Output Module

- Ethernet Based Digital I/O Module
- Plus-E Series Communication Protocol Supported
- Simple and Easy Wiring

CE

Ezi-IO® Ethernet AD
Input/Output Module

- Ethernet Based Analog Input Module
- Simple and Easy Wiring
- Input Mode and Range Configurable
- Moving Average Filtering
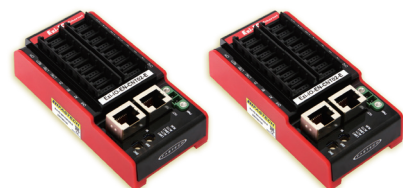
CE

Ezi-IO® Ethernet DA
Input/Output Module

- Ethernet Based Analog Output Module
- Simple and Easy Wiring
- Output Range Configurable
- Calibration for Output Deviation

CE

New Ezi-IO® Ethernet CNT
Input/Output Module

- Ethernet Based High Speed Counter Module
- Simple and Easy Wiring
- Line Receiver and DC Input Type Provided
- Equipped with Comparison Output Function

CE

New

Ezi-IO® *CC-Link IE TSN*
Input/Output Module **DIO**

CE

- CC-Link IE TSN Based Digital I/O Module
- CC-Link IE TSN Authentication Class B
- Input Filter Function
- Simple and Easy Wiring

New

Ezi-IO® *PROFINET*
Input/Output Module **DIO**

- PROFINET Based Digital I/O Module
- RT(Realtime) & IRT(Isochronous Realtime) Communication Supported
- Simple and Easy Wiring
- DIN Rail Mounting

Ezi-LINEARSTEP®
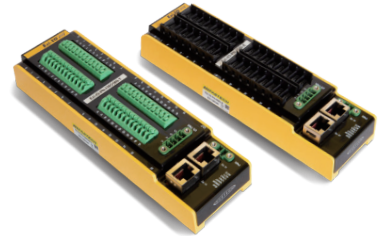Precision Hybrid Stepper Linear Actuators

- Non-Captive / External / Captive Type Linear Actuator with High Resolution Encoder
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- High Resolution / High Response
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
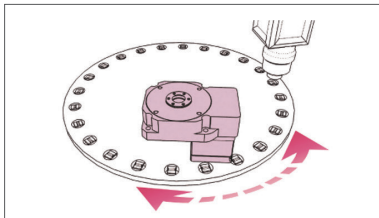
Ezi-Robo® HG

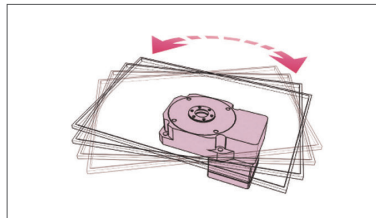*Precise Positioning Actuator System*

- Ezi-SERVO + Hollow Rotary Index Table
- Hollow Diameter : Max. Ø85mm
- Permissible Torque : Max. 170N·m
- Permissible Axial Load : Max. 4000N
- Repeatability : ±10arcsec
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

▌ Applications

Laser Engraving, Typing, CCD Inspection.

Module, Alignment Big Inertia of Rotation at 90°, 180° or Any Other Degree
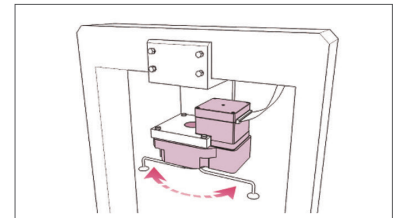
Axis Rotation Application.
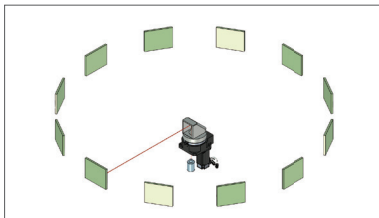
Applications for Optical Applications Using Hollow Bore
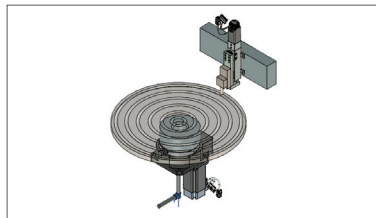
Applications for Precise Positioning Using Hollow Bore
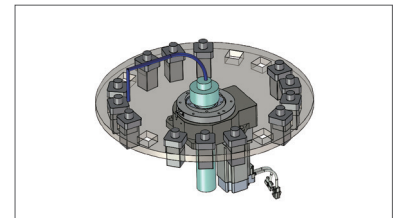
Applications for Air Absorption Using Hollow Bore

▌ Procuct Line-up

Product	HG60	HG100	HG130S	HG170S	
Permissible Torque	4.5 N·m	12 N·m	34 N·m	170 N·m	107 N·m
Gear Ratio	1:5	1:8	1:18	1:20	1:36
Repeatability	±10(±0.0028°) arcsec	±10(±0.0028°) arcsec	±10(0.0028°) arcsec	±10(0.0028°) arcsec	
Motor Size	42mm [NEMA17]	60mm [NEMA24]	60mm [NEMA24]	60mm [NEMA24] or 86mm [NEMA34]	

New **Ezi-Robo**® **CLA**
Precise Positioning Actuator System

- Compact Linear Actuator with Hollow Shaft Motor & Ball Screw
- Repeatability : ±0.01mm, Lost Motion : <0.05mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder (Max. 20,000P/R)
- Size Line-up : □20mm, □28mm, □42mm, □56mm

New **Ezi-Robo**® **VLR**
Precise Positioning Actuator System

- Compact Actuator with Hollow Shaft Motor & Ball Screw Spline
- Vacuum(V) + Linear(L) + Rotary(R), 3-in-1 Actuator
- Repeatability : ±0.02mm(L), ±0.03°(R)
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder (Max. 20,000P/R)
- Size Line-up : □28mm, □35mm, □42mm

New **Ezi-Robo**® **SMS**
Precise Positioning Actuator System

- Integrated LM Guide Steel Actuator with Integrated Motor Drive
- Repeatability : ±0.005mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder : Max. 20,000P/R
- Size Line-up : SMS15 – 30x15mm, SMS23 – 50.5x23mm,
  SMS30 – 60.5x30mm

New Ezi-Robo® AMS
Precise Positioning Actuator System

- Integrated LM Guide Aluminum Actuator with Integrated Motor Drive
- Repeatability : ±0.005mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder : Max. 20,000P/R
- Size Line-up : AMS30 – 37x29mm, AMS40 – 42x38mm, AMS50 – 52x45mm, AMS60 – 60x45mm

Ezi-STEP Characteristics

Ezi-STEP is an all in one unit incorporating the stepper drive into the motor housing. This helps eliminate wiring, ensures reliability and provides a low cost compact package. FASTECH's unique integrated software provides sensor-less detection of the loss of step synchronization, dampening that provides smooth motion and no vibration at the low speed range.

HIGH Speed and precision are ensured by the high performance onboard MCU (Micro Controller Unit) and proprietary algorithms constantly monitoring the motor's performance and making corrections.

The MCU even detects missed steps during high speed operation (over 300 [r/min]) and built in damping provides smooth operation at low speeds. The resolution of the Ezi-STEP can be adjusted from 1.8 ° motor step angle to 0.0072 ° step angle for super precision. Ezi-STEP also generates alarms and running signals to monitor its operation remotely.

▌ Microstep and Filtering

The high-performance MCU operates at step resolutions of 1.8° up to maximum 0.0072° (1/250 steps) and Ezi-STEP adjusts PWM control signal in every 25μsec, which makes it possible for more precise current control, resulting in high-precision Microstep operation.

In addition, Ezi-STEP applies filtering control to enable smooth operation even at very low-speed.

▌ Software Damping

Motor vibration is created by magnetic flux variations of the motor, lower current from the drive due to back-emf from the motor at high speeds and lowering of phase voltages from the drive. Ezi-STEP drive detects these problems and the MCU adjusts the phase of the current according to the pole position of the motor, drastically suppressing vibration. This allows the smooth operation of the motor at high speeds.

Software Damping OFF → Software Damping ON
*This is real measured speed that using 100000[pulse/rev] encoder.
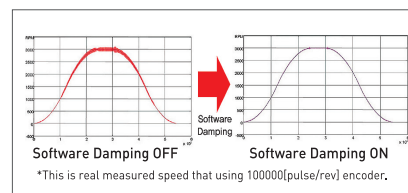
▌ Signal Output for Motion Monitoring

Ezi-STEP outputs the Run/Stop signal during operation, so you can check whether the motor is operating normally through the host controller.

▌ Improved High-speed Operation Performance

Depending on the speed of the stepping motor, Ezi-STEP automatically increases the supply voltage and prevents torque lowering due to low operating voltage to the motor caused by back-EMF voltage, this enables high-speed operation.

Additionally, the software damping algorithm minimizes the vibration and prevents the loss-of-synchronization at high-speed.

Ezi-Step® ST
Micro Stepping System

CE

- Microstepping
- Software Damping
- High Torque
- Run/Stop Signal Output
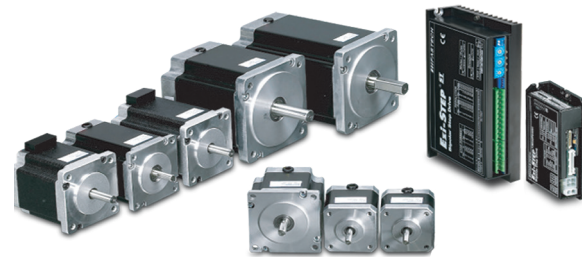
Ezi-Step® MINI
Micro Stepping System

CE

- Microstepping
- Space Saving / Reduced Wiring by Compact Drive
- Software Damping
- Run/Stop Signal Output

Ezi-Step® BT
Micro Stepping System

CE

- Microstepping
- Space Saving / Reduced Wiring
- Software Damping
- Run/Stop Signal Output

Ezi-STEP® II EtherCAT
Micro Stepping System

- CiA402 Drive Profile Supported
- Microstepping
- Software Damping
- High Torque

$C\epsilon$

New

Ezi-STEP® II EtherCAT TO
Micro Stepping System

- CiA402 Drive Profile Supported
- Microstepping
- Software Damping
- High Torque
- Torque Off Function Supported

$C\epsilon$

Ezi-STEP® II EtherCAT MINI
Micro Stepping System

- CiA402 Drive Profile Supported
- Microstepping
- Software Damping
- Space Saving / Reduced Wiring by Compact Drive

$C\epsilon$

Ezi-STEP® II EtherCAT 4X
Micro Stepping System

- CiA402 Drive Profile Supported
- Microstepping
- Software Damping
- Compact Multi Axis Stepping Motor Drive
- Space Saving / Reduced Wiring

CE

New

Ezi-STEP® II EtherCAT ALL
Micro Stepping System

- Motor + Drive + EtherCAT Interface
- Space Saving / Reduced Wiring
- CiA402 Drive Profile Supported
- Microstepping
- Software Damping

CE

Ezi-STEP® II Plus-E
Micro Stepping System

- Embedded Motion Controller
- Ethernet Interface
- Position Table
- Microstepping
- Software Damping
- High Torque

CE

Ezi-STEP® II Plus-E MINI
Micro Stepping System

- Embedded Controller
- Ethernet Interface
- Position Table
- Microstepping
- Software Damping
- Space Saving / Reduced Wiring by Compact Drive

CE

Ezi-STEP® II CC-Link
Micro Stepping System

- Embedded Motion Controller
- CC-Link Interface
- Microstepping
- Software Damping
- High Torque

CE

OPTION

Brake

- Non-excitation Electromagnetic Brake
- Automatic Braking During Power Cutoff or Blackout
- Long Durability
- Rapid Brake Timing

Name of Product	Motor Brake Size			
	42mm	56mm	60mm	86mm
Ezi-SERVO ST	██████████████████████			
Ezi-SERVO MINI	████			
Ezi-SERVO II EtherCAT / Plus-E	██████████████████████			
Ezi-SERVO II EtherCAT TO / MINI	██████████████			
Ezi-SERVO II EtherCAT 4X	██████████████			
Ezi-SERVO II EtherCAT ALL	██████████████████████			
Ezi-SERVO II Plus-E MINI	██████████████			
Ezi-SERVO II Plus-E ALL	██████████████████████			
Ezi-SERVO II CC-Link	██████████████████████			
Ezi-SERVO II BT	██████████████████			
Ezi-SERVO ALL	██████████████			
Ezi-STEP ST	██████████████████████			
Ezi-STEP MINI	████			
Ezi-STEP BT	██████████			██████
Ezi-STEP ALL	██████████			
Ezi-STEP II EtherCAT	██████████████████			
Ezi-STEP II EtherCAT MINI	██████████████			
Ezi-STEP II EtherCAT 4X	██████████████			
Ezi-STEP II Plus-E	██████████████████			
Ezi-STEP II Plus-E MINI	██████████████			
Ezi-STEP II CC-Link	██████████████████			

Gearbox

- Low Vibration / Low Noise / Low Backlash
- High Rigidity / High Torque
- Long Life / Maintenance Free
- Resonance Minimization
- Various Gear Ratio(1:3~1:50)
- Optimized Solution for Operation with High Inertia Load

Name of Product	Gearbox frame size			
	42mm	60mm		86mm
	Motor frame size			
	42mm	56mm	60mm	86mm
Ezi-SERVO ST	●	●	●	●
Ezi-SERVO MINI	●			
Ezi-SERVO II EtherCAT / Plus-E	●	●	●	●
Ezi-SERVO II EtherCAT TO / MINI	●	●	●	
Ezi-SERVO II EtherCAT 4X	●	●	●	
Ezi-SERVO II EtherCAT ALL	●	●	●	●
Ezi-SERVO II Plus-E MINI	●	●	●	
Ezi-SERVO II Plus-E ALL	●	●	●	●
Ezi-SERVO II CC-Link	●	●	●	●
Ezi-SERVO II BT	●	●	●	
Ezi-SERVO ALL	●	●	●	

Ezi-SPEED®
BLDC Motor Speed Control System

Ezi-SPEED®
BLDC Motor Speed Control System

CE

- AC Input (220V) BLDC Motor Speed Control System
- Compact·Light Weight·High Power·High Efficiency Brushless Motor
- Wide Speed Control Range (50~4000r/min)
- Stable Speed Control by Vector Control (Speed Regulation within 0.2%)
- Easy Connection, Easy Operation
- Various Product Line-Up (30, 60, 120, 200, 400W)

New ### Ezi-SPEED® Modbus RTU
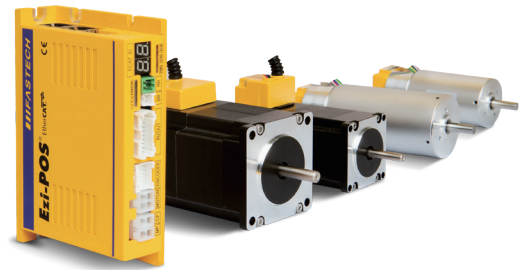BLDC Motor Speed Control System

CE

- AC Input (220V) BLDC Motor Speed Control System
- RS-485 Modbus-RTU Based BLDC Motor & Drive
- Compact·Light Weight·High Power·High Efficiency Brushless Motor
- Wide Speed Control Range (50~4000r/min)
- Stable Speed Control by Vector Control (Speed Regulation within 0.2%)
- Torque Limit and Load Holding Function
- Various Product Line-Up (30, 60, 120, 200, 400W)

New
Ezi-POS® EtherCAT®
BLDC Motor Positioning System

- EtherCAT Based BLDC Motor Positioning System
- DC Power Supply Input
- CiA402 Drive Profile Supported
- Auto-tuning
- Various Motor & Position Sensor Options

Network Line-up

EtherCAT

p.39

- High Speed Ethernet (100Mbps Full-Duplex) Based Fieldbus
- Products Registered on ETG & EtherCAT Conformance Tested
- Interoperability Test Completed with Major EtherCAT Master Companies
- CiA402 Drive Profile Supported for Drives
- CiA401 Device Profile Supported for I/O Modules
- Total Solution with Stepping System, BLDC Control System, I/O Modules, and Actuators

Ethernet

p.47

- Easy Connection with PC via Ethernet Interface
- Windows Motion Library(API) and GUI Provided for PC Users
- Programmable in C, C#, C++, Visual Basic, Labview, etc.
- Daisy-Chain Connection with Embedded 2 Port Switching HUB (Max. 254-Axis)
- Total Solution with Stepping System, 1-Axis Motion Controller for AC Servo,
- I/O Modules, and Actuators

CC-Link IE TSN

p.53

- High Speed Ethernet (1Gbps, Full-Duplex) Based Fieldbus, CC-Link IE TSN
- CC-Link IE TSN Certification Class B
- Product Registered on CC-Link Partner Association & Conformance Test Completed
- Compatible with MITSUBISHI PLC

PROFINET

p.53

- Ethernet Based Fieldbus, PROFINET
- RT (Realtime) & IRT (Isochronous Realtime) Communication Supported
- Compatible with SIEMENS PROFINET Master and Slave Module
- PROFIdrive, Standard Drive Profile for PROFINET Supported for Stepping System

Modbus

p.53

- RS-485 Based Protocol, Modbus-RTU
- Ethernet Based Protocol, Modbus-TCP (Launching Soon)
- Daisy-Chain Connection (Max. 31-Axis)
- PC Software for Parameter Setting and Product Testing Provided

Ezi-SERVO® II EtherCAT.
Conformance tested
Closed Loop Stepping System

CE RoHS COMPLIANT

- CiA402 Drive Profile Supported
- Closed-Loop Stepping system
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque
- High Resolution / High Response

New

Ezi-SERVO® II EtherCAT.
TO
Closed Loop Stepping System

CE

- CiA402 Drive Profile Supported
- Closed-Loop Stepping system
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque
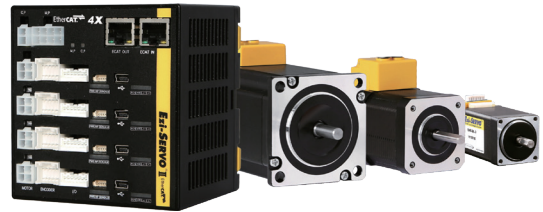- High Resolution / High Response
- Torque Off Function Supported

Ezi-SERVO® II EtherCAT.
MINI
Closed Loop Stepping System

CE

- CiA402 Drive Profile Supported
- Closed-Loop Stepping system
- Tuning Not Required / No Hunting
- Space Saving / Reduced Wiring by Compact Drive
- Low Heat Generation / High Torque
- High Resolution / High Response

Ezi-SERVO® II EtherCAT 4X
Closed Loop Stepping System

- CiA402 Drive Profile Supported
- Closed-Loop Stepping system
- Tuning Not Required / No Hunting
- Compact Multi Axis Stepping Motor Drive
- Space Saving / Reduced Wiring

Ezi-SERVO® II EtherCAT ALL
Closed Loop Stepping System

- Motor + High Resolution Encoder + Drive + EtherCAT Interface
- Space Saving / Reduced Wiring
- CiA402 Drive Profile Supported
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque

Ezi-STEP® II EtherCAT
Micro Stepping System

- CiA402 Drive Profile Supported
- Microstepping
- Software Damping
- High Torque

New

Ezi-STEP® II EtherCAT TO
Micro Stepping System

- CiA402 Drive Profile Supported
- Microstepping
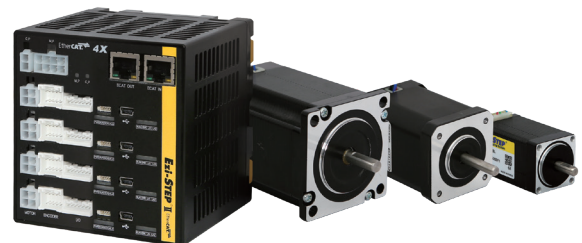- Software Damping
- High Torque
- Torque Off Function Supported

Ezi-STEP® II EtherCAT MINI
Micro Stepping System

- CiA402 Drive Profile Supported
- Microstepping
- Software Damping
- Space Saving / Reduced Wiring by Compact Drive

Ezi-STEP® II EtherCAT 4X
Micro Stepping System

- CiA402 Drive Profile Supported
- Microstepping
- Software Damping
- Compact Multi Axis Stepping Motor Drive
- Space Saving / Reduced Wiring

New

# Ezi-STEP® II EtherCAT ALL
Micro Stepping System

- Motor + Drive + EtherCAT Interface
- Space Saving / Reduced Wiring
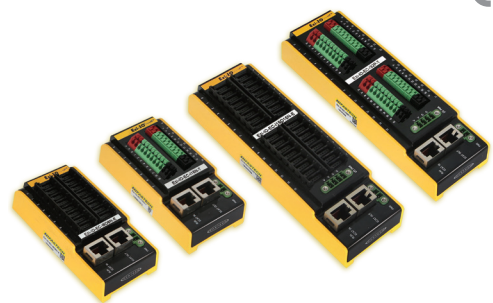- CiA402 Drive Profile Supported
- Microstepping
- Software Damping

New

Ezi-POS® EtherCAT
BLDC Motor Positioning System

- EtherCAT Based BLDC Motor Positioning System
- DC Power Supply Input
- CiA402 Drive Profile Supported
- Auto-tuning
- Various Motor & Position Sensor Options
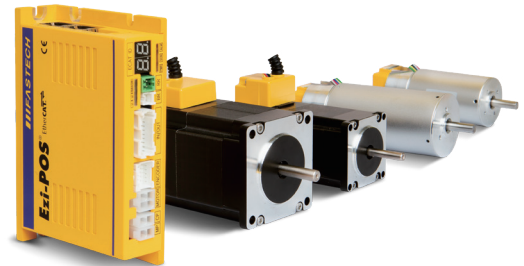
Ezi-IO® EtherCAT DIO
Input/Output Module

- EtherCAT Based Digital I/O Module
- All EtherCAT Synchronization Modes Supported
- CiA 401 Profile Supported
- Simple and Easy Wiring

Ezi-IO
Input/Output Module EtherCAT **AD**

CE

- EtherCAT Based Analog Input Module
- All EtherCAT Synchronization Modes Supported
- CiA 401 Profile Supported
- Simple and Easy Wiring
- Input Mode and Range Configurable
- Moving Average Filtering

Ezi-IO
Input/Output Module EtherCAT **DA**

CE

- EtherCAT Based Analog Output Module
- All EtherCAT Synchronization Modes Supported
- CiA 401 Profile Supported
- Simple and Easy Wiring
- Output Range Configurable
- Calibration for Output Deviation

New Ezi-IO
Input/Output Module EtherCAT **CNT**

CE

- EtherCAT Based High Speed Counter Module
- All EtherCAT Synchronization Modes Supported
- Simple and Easy Wiring
- Line Receiver and DC Input Type Provided
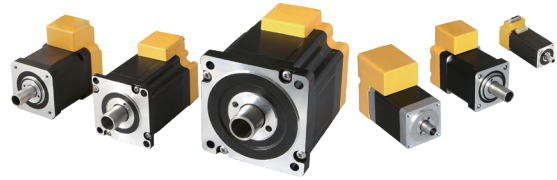- Equipped with Comparison Output Function

Ezi-SERVO® *HS*
Closed Loop Stepping System

$C\epsilon$

- Hollow Shaft Motor with High Resolution Encoder
- Closed-Loop Stepping System
- High Precision Position Control
- Low Heat Generation / High Torque
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

Ezi-LINEARSTEP®
Precision Hybrid Stepper Linear Actuators

- Non-Captive / External / Captive Type Linear Actuator with High Resolution Encoder
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- High Resolution / High Response
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

Ezi-Robo® *HG*
Precise Positioning Actuator System

- Ezi-SERVO + Hollow Rotary Index Table
- Hollow Diameter : Max. Ø85mm
- Permissible Torque : Max. 170N·m
- Permissible Axial Load : Max. 4000N
- Repeatability : ±10arcsec
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

New **Ezi-Robo**® **CLA**
Precise Positioning Actuator System

- Compact Linear Actuator with Hollow Shaft Motor & Ball Screw
- Repeatability : ±0.01mm, Lost Motion : <0.05mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder (Max. 20,000P/R)
- Size Line-up : □20mm, □28mm, □42mm, □56mm

New **Ezi-Robo**® **VLR**
Precise Positioning Actuator System

- Compact Actuator with Hollow Shaft Motor & Ball Screw Spline
- Vacuum(V) + Linear(L) + Rotary(R), 3-in-1 Actuator
- Repeatability : ±0.02mm(L), ±0.03°(R)
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder (Max. 20,000P/R)
- Size Line-up : □28mm, □35mm, □42mm

New **Ezi-Robo**® **SMS**
Precise Positioning Actuator System

- Integrated LM Guide Steel Actuator with Integrated Motor Drive
- Repeatability : ±0.005mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder : Max. 20,000P/R
- Size Line-up : SMS15 – 30x15mm, SMS23 – 50.5x23mm,
                 SMS30 – 60.5x30mm

Ezi-Robo® AMS

Precise Positioning Actuator System

- Integrated LM Guide Aluminum Actuator with Integrated Motor Drive
- Repeatability : ±0.005mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder : Max. 20,000P/R
- Size Line-up : AMS30 – 37x29mm, AMS40 – 42x38mm,
  AMS50 – 52x45mm, AMS60 – 60x45mm

Ezi-SERVO® Ⅱ *Plus-E*
Closed Loop Stepping System

CE

- Embedded Motion Controller
- Ethernet Interface
- Position Table
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- High Resolution / High Response
- Low Heat Generation / High Torque

Ezi-SERVO® Ⅱ *Plus-E MINI*
Closed Loop Stepping System

CE

- Embedded Motion Controller
- Ethernet Interface
- Position Table
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- High Resolution / High Response
- Space Saving / Reduced Wiring by Compact Drive

Ezi-SERVO® Ⅱ *Plus-E ALL*
Closed Loop Stepping System

CE

- Motor + High Resolution Encoder + Drive + Motion Controller
- Space Saving / Reduced Wiring
- Ethernet Interface
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- Low Heat Generation / High Torque

Ezi-STEP® II Plus-E
Micro Stepping System

- Embedded Motion Controller
- Ethernet Interface
- Position Table
- Microstepping
- Software Damping
- High Torque

Ezi-STEP® II Plus-E MINI
Micro Stepping System

- Embedded Controller
- Ethernet Interface
- Position Table
- Microstepping
- Software Damping
- Space Saving / Reduced Wiring by Compact Drive

Ezi-IO® Ethernet DIO
Input/Output Module

- Ethernet Based Digital I/O Module
- Plus-E Series Communication Protocol Supported
- Simple and Easy Wiring

Ezi-IO® Ethernet AD
Input/Output Module

- Ethernet Based Analog Input Module
- Simple and Easy Wiring
- Input Mode and Range Configurable
- Moving Average Filtering

CE

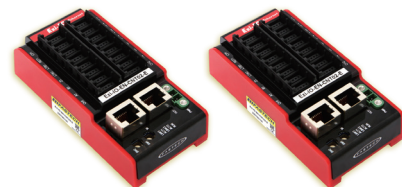## Ezi-IO® Ethernet DA
Input/Output Module

- Ethernet Based Analog Output Module
- Simple and Easy Wiring
- Output Range Configurable
- Calibration for Output Deviation

CE

New

Ezi-IO® Ethernet CNT
Input/Output Module

- Ethernet Based High Speed Counter Module
- Simple and Easy Wiring
- Line Receiver and DC Input Type Provided
- Equipped with Comparison Output Function

CE

Ezi-MotionLink® Plus-E

Network based Motion Controller Plug-in to Servo Drives

CE

- Ethernet Based 1-Axis Motion Controller
- Compatible with Various Servo Drives
- Various Motion Functions
- Reduced Wiring

[Applicable Servo]
- MITSUBISHI
- PANASONIC
- LS MECAPION
- DELTA
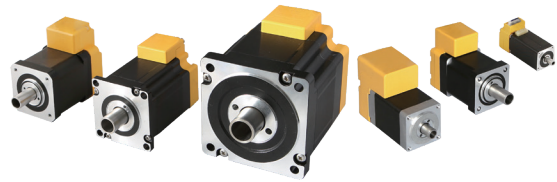- YASKAWA
- SANYO DENKI
- RS AUTOMATION

Ezi-Servo® HS

Closed Loop Stepping System

CE

- Hollow Shaft Motor with High Resolution Encoder
- Closed-Loop Stepping System
- High Precision Position Control
- Low Heat Generation / High Torque
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
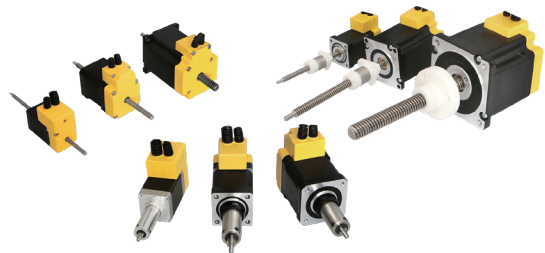

Ezi-LinearStep®
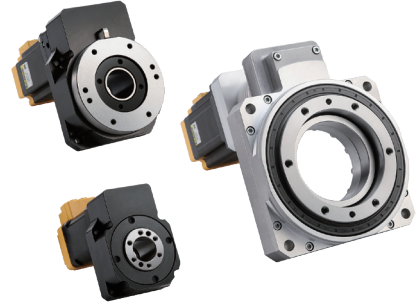
Precision Hybrid Stepper Linear Actuators

- Non-Captive / External / Captive Type Linear Actuator with High Resolution Encoder
- Closed-Loop Stepping System
- Tuning Not Required / No Hunting
- High Resolution / High Response
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

Ezi-Robo® HG
Precise Positioning Actuator System

- Ezi-SERVO + Hollow Rotary Index Table
- Hollow Diameter : Max. Ø85mm
- Permissible Torque : Max. 170N·m
- Permissible Axial Load : Max. 4000N
- Repeatability : ±10arcsec
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)

New # Ezi-Robo® CLA
Precise Positioning Actuator System

- Compact Linear Actuator with Hollow Shaft Motor & Ball Screw
- Repeatability : ±0.01mm, Lost Motion : ＜0.05mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder (Max. 20,000P/R)
- Size Line-up : □20mm, □28mm, □42mm, □56mm

New # Ezi-Robo® VLR
Precise Positioning Actuator System

- Compact Actuator with Hollow Shaft Motor & Ball Screw Spline
- Vacuum(V) + Linear(L) + Rotary(R), 3-in-1 Actuator
- Repeatability : ±0.02mm(L), ±0.03°(R)
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder (Max. 20,000P/R)
- Size Line-up : □28mm, □35mm, □42mm

Ezi-Robo® SMS

New

Precise Positioning Actuator System

- Integrated LM Guide Steel Actuator with Integrated Motor Drive
- Repeatability : ±0.005mm
- Various Field Networks Supported (EtherCAT, Ethernet, CC-Link IE TSN, etc.)
- High Resolution Encoder : Max. 20,000P/R
- Size Line-up : SMS15 – 30x15mm, SMS23 – 50.5x23mm, SMS30 – 60.5x30mm
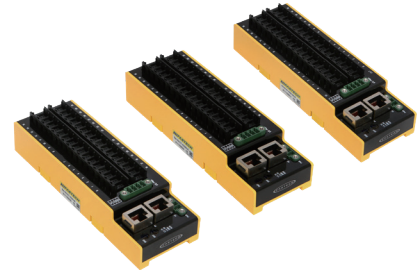

Ezi-Robo® AMS

New

Precise Positioning Actuator System

- Integrated LM Guide Aluminum Actuator with Integrated Motor Drive
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CC-Link IE TSN PROFINET Modbus

CE

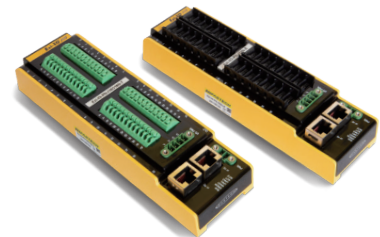**New** **Ezi-IO**® *CC-Link IE TSN*
Input/Output Module **DIO**

- CC-Link IE TSN Based Digital I/O Module
- CC-Link IE TSN Authentication Class B
- Input Filter Function
- Simple and Easy Wiring

CE

New **Ezi-IO**® PROFINET
Input/Output Module **DIO**

- PROFINET Based Digital I/O Module
- RT (Realtime) & IRT (Isochronous Realtime) Communication Supported
- Simple and Easy Wiring
- DIN Rail Mounting

CE

New **Ezi-SPEED**® Modbus RTU
BLDC Motor Speed Control System

- AC Input (220V) BLDC Motor Speed Control System
- RS-485 Modbus-RTU based BLDC Motor & Drive
- Compact·Light Weight·High Power·High Efficiency Brushless Motor
- Wide Speed Control Range (50~4000r/min)
- Stable Speed Control by Vector Control (Speed Regulation within 0.2%)
- Torque Limit and Load Holding Function
- Various Product Line-Up (30, 60, 120, 200, 400W)

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