EtherCAT

The Multifunction Motion Controller
PXEP-CN

The Controller that fused hardware's high speed and software's flexibility

Compatible with PCI Express
PXEP-CN

Pulse generator software **'PGS'**
- Motion arithmetic
- Versatile input-output signal processing
- Other PC side command processing

EtherCAT Control
- Position control
- Servo parameter
- Versatile I/O signal
- ADC DAC etc.

We have in-house 5-phase stepper driver compatible with EtherCAT

CTDR-0514ES-2LS   CTDR-0514ES-4LS

Features

1
Enhancing of motion function and software processing speed

The existing product needed waiting time between PC and controller, because of the processing related to control is controlled on PC dependently. However, this product process high speed in "PGS", even when complex control and function. You can share software with RTEX products except for difference in hardware function and communication standards.

2
All-in-one board

The biggest feature of PXEP-CN is being All-in-one board that included "EtherCAT communication + Real-time control + Motion control" in only one board. Therefore, it is possible to develop with Visual Studio.

3
Pitch error correction

It is the function that correct pitch errors by positioning that adding correction amount to command position when driving controlled axis, in advance have measured regular interval pitch error of a transmission mechanism (e.g., screw).
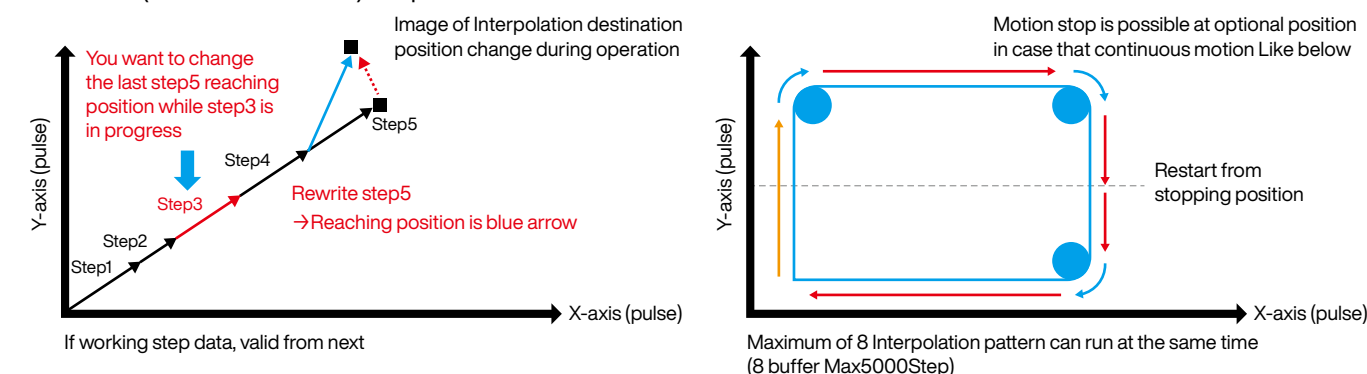
4
Compatible with wide variety devices

We provide functions to be able to control CIA401/CIA402 compatible slaves easily. We have verification results for over 50 types of slaves from over 25 companies and connection manual of compatible devices. The product that has passed official testing by EtherCAT Test Center (ETC) certified by ETG can be supported if the environment is set up if also a product not in the manual.
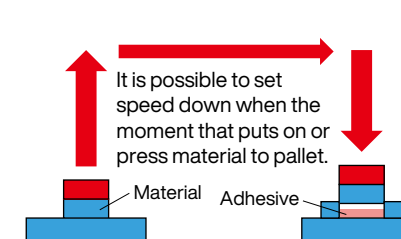
Main functions

Interpolation control: circular and ellipse interpolation, Helical interpolation, and third dimension interpolation function

Up to 5000 steps of interpolated data can be recorded in "PGS", change interpolation data in working, revise and interpolate reached position, and pause interpolation motion are possible. Also restart from paused position and exchange interpolation axis (XY-axis → XZ-axis) are possible.

Image of Interpolation destination position change during operation
You want to change the last step5 reaching position while step3 is in progress
Step5
Step4
Step3
Step2
Step1
Rewrite step5 →Reaching position is blue arrow
Y-axis (pulse)
X-axis (pulse)
If working step data, valid from next

Motion stop is possible at optional position in case that continuous motion Like below
Restart from stopping position
Y-axis (pulse)
X-axis (pulse)
Maximum of 8 Interpolation pattern can run at the same time (8 buffer Max5000Step)
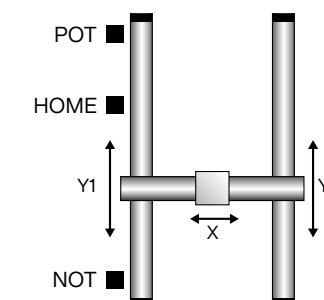
High-accuracy synchronous · (axis)interlocking function · Gantry control · Soft landing function
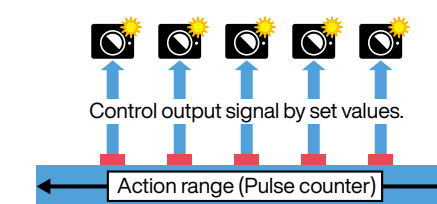
Overshoot at a stop such as bonding machine may cause clash and damage to parts, but the soft-landing function suppresses overshoot when stopping, protecting machines, materials, and workpieces.

We provided gantry control as basic function. This function applies axis interlocking functions, and by setting Y2-axis as interlocked axis of Y1-axis, Y2-axis automatically track by needing only to send operation to unit Y1-axis.

You can set output signal that can use for flipping ON/OFF of strobe and sensor to Motor position information.

It is possible to set speed down when the moment that puts on or press material to pallet.
Material Adhesive

POT
HOME
Y1   X   Y2
NOT

Control output signal by set values.
Action range (Pulse counter)

Others

- 31-Axis Motion Control and I/O control are possible (Motion control is a maximum of 31-axis)
- Speed, acceleration, deceleration can set in 1pps between 1pps~400 Mpps.
- By the Worktable (X, Y, Z) interlock to encoder information of conveyor, complex action is possible without stopping motion axis
- Use versatile input as trigger signal, and it can use for motion start and synchronous control set in advance.
- The cam axis control function can choose from 6 types of cam ark, Constant Acceleration / Harmonic / Cycloid / Modified Trapezoid / Modified Sine / Modified Constant Speed.

Sales area
- Japan
- China

Language
- Japanese

For more information

URL : https://www.cosmotechs.co.jp/