

# Сервоконтроллеры для KAWASAKI ECO SERVO N-ECST

## Технические характеристики



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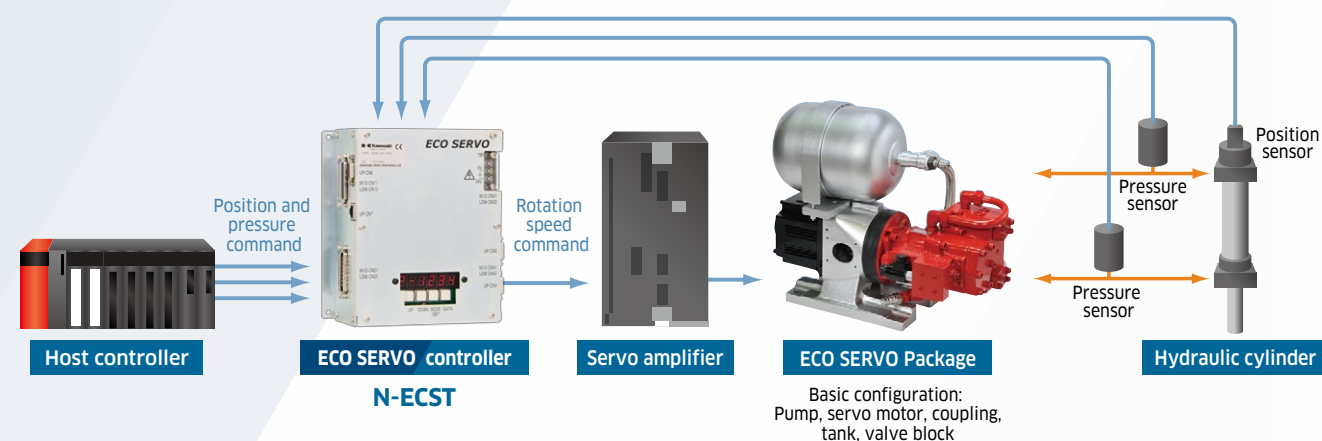
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# N-ECST New ECO SERVO controller for Twin actuators

**ECO SERVO electrically controls the flow rate of hydraulic pumps and maintains the optimal operating conditions, providing solutions to the problems that industrial machine systems need to address, such as high capacity, high efficiency, and energy saving.**

## Variable speed control pump system "ECO SERVO"



## Hard specification

- The standard 1-axis type, and 2-axis type of the 2 pieces I/O boards structure can be selected.
- Up to 4-axis control is possible through the communication with other N-ECST controller.
- All the DI/DO terminals serve as both sink type (minus common) / source type (plus common) circuits.

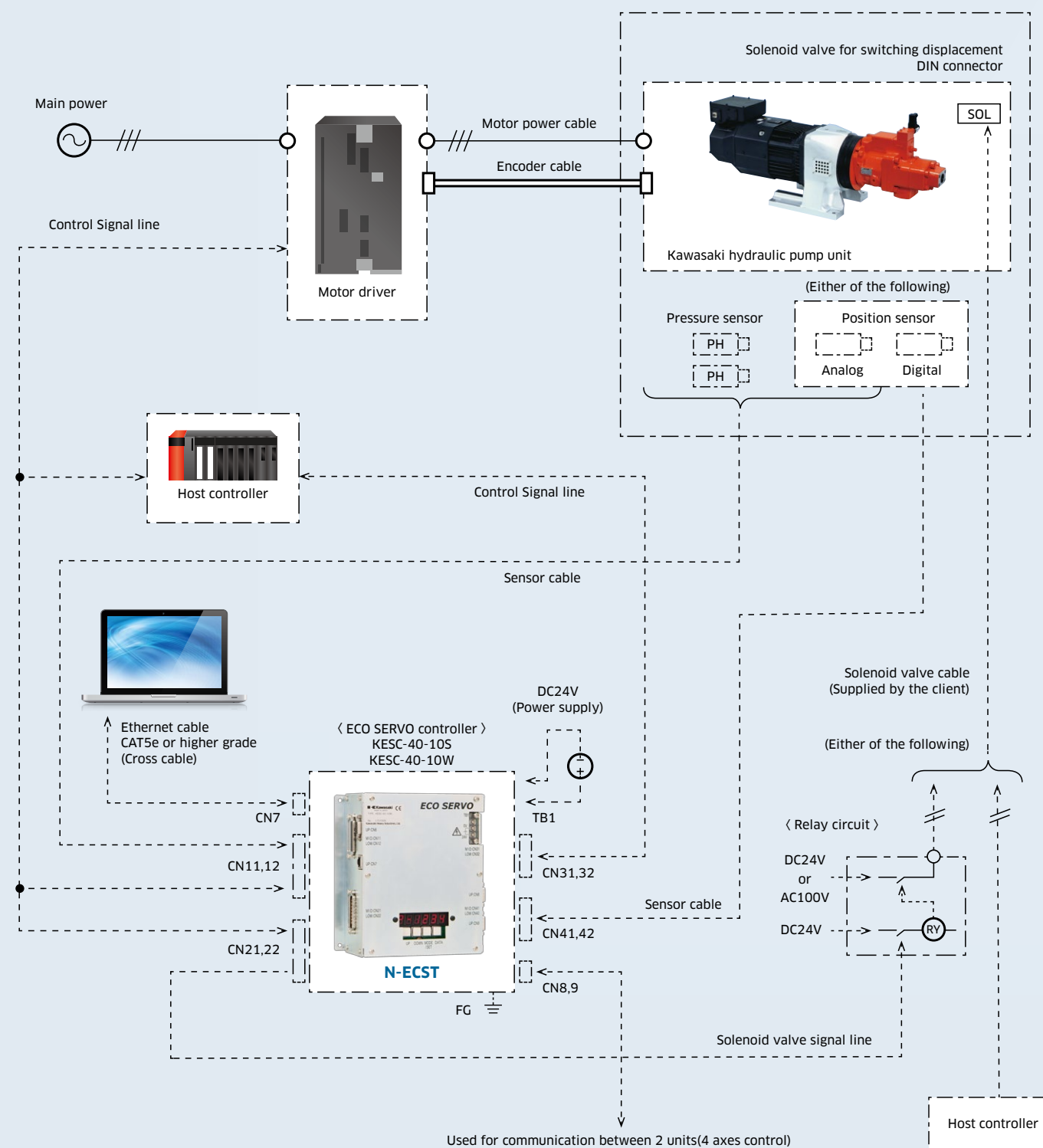
### Software tool and function

- Parameter edition and monitoring of internal variables are possible to connect with PC.
- Various signals can be logged and downloaded to PC with the maintenance tool.
- Digital type positional signals can respond to both binary and gray codes.

## Control function

- Automatic adaptive control can adjust control parameter automatically in position and pressure control.
- 2-axis type, synchronous control and back pressure control are applicable.
- Pressure control target (actual pressure in the cylinder head or rod side) is changeable.

## System configuration



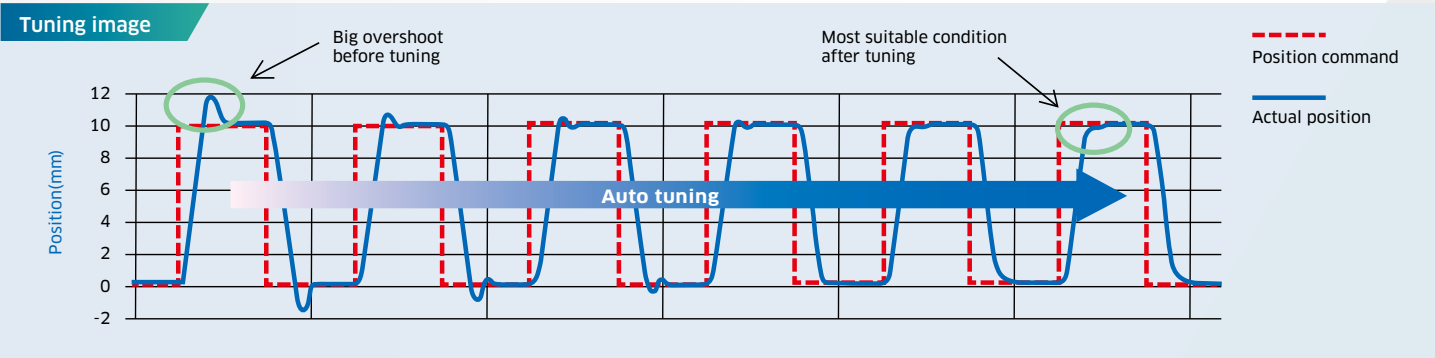


A variety of high-performance control function

Substantial application softwares and maintenance functions

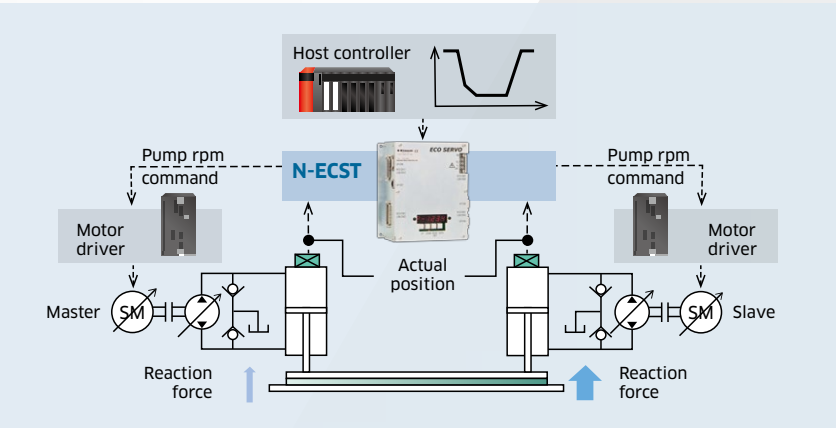
### Automatic adaptive control

Our original control logics are installed, which is based on a simple adaptive control(SAC).  
With only setting a response speed, it enables self-adjusting the control gain.



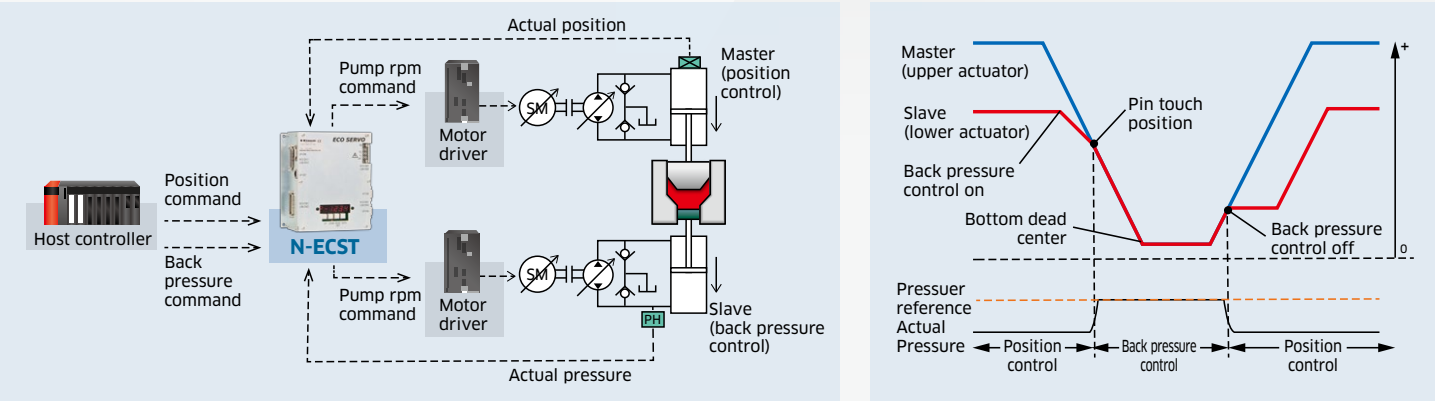
### Synchronous control

2-axis type controller has synchronous control between the two actuators.  
Even when different reaction forces acting on the cylinders, synchronous control of the two cylinders is achieved easily.



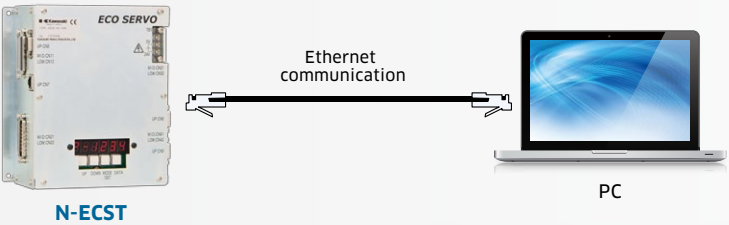
### Back pressure control

Pressure control correction of a slave axis is performed by a speed calculated from position results of a master axis.  
Pressure control in the moving state is achieved with high precision and high response.



### Ethernet communication

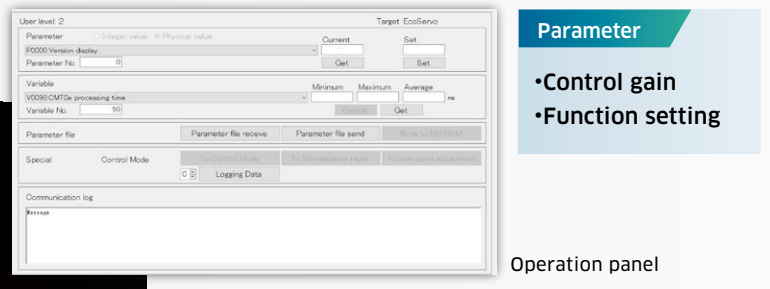
The logging function effective to analysis of abnormal condition and driving data management.



Application software convenient for start adjustment and maintenance.

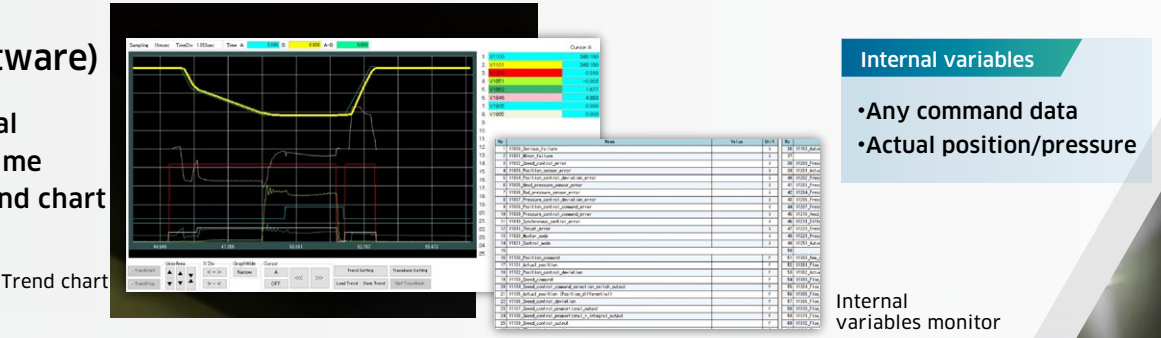
### Maintenance Tool (Software)

Lumping edit of parameters, preservation and individual edit are possible.  
Logging data (CSV file) download



### RTM (Software)

Monitoring internal variables in real time  
Indication of a trend chart

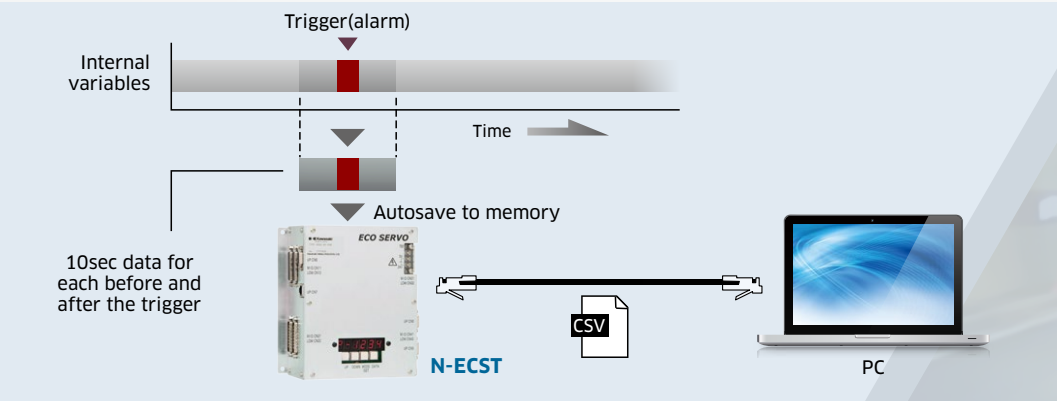


### Data Logging Function

Data before and after a trigger(alarm) occurred will be saved in a logging area.  
The data can be uploaded by the maintenance tool, and it can be preserved by a file in CSV format.

Logging spec

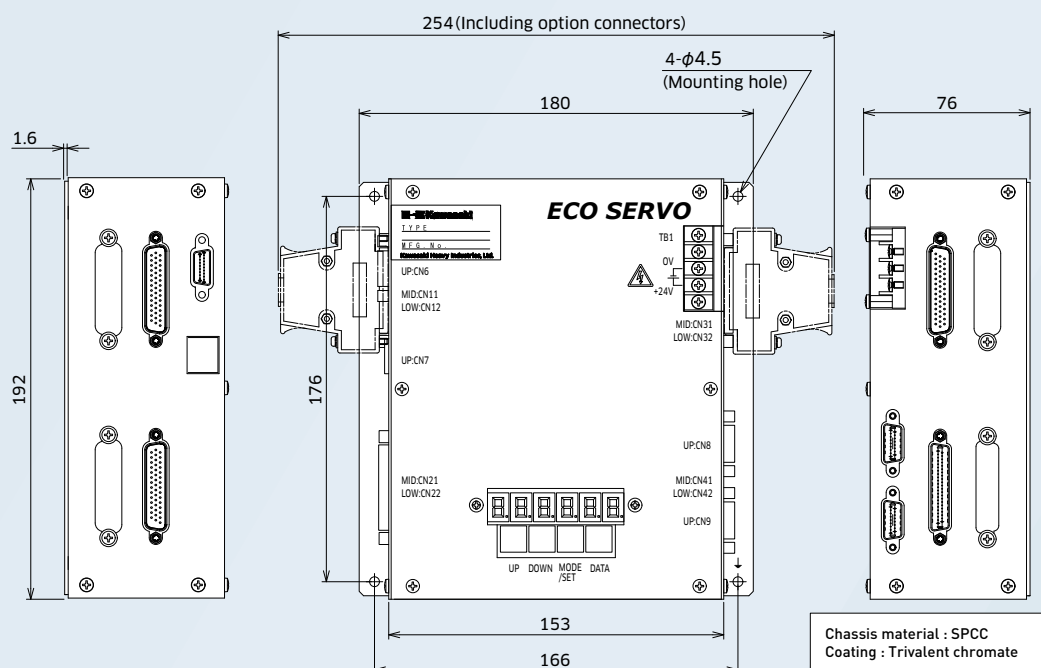
|                    |        |
|--------------------|--------|
| Number of channels | 16ch   |
| Sampling cycle     | 10msec |
| Sampling time      | 20sec  |
| Saving number      | 10     |



## Specification table

| Item                   | For 1 axis                                    | For 2 axes              |
|------------------------|-----------------------------------------------|-------------------------|
| Model                  | KESC-40-10S                                   | KESC-40-10W             |
| Control object         | 1 axis                                        | 2 axes                  |
| Mass                   | 1.65kg                                        | 1.8kg                   |
| Internal configuration | CPU board + IO board                          | CPU board + 2x IO board |
| Analog input/output    | 8ch 16bit $\pm 10V$                           | 16ch 16bit $\pm 10V$    |
| Digital input          | Control signal x13                            | Control signal x26      |
|                        | Position sensor x18                           | Position sensor x36     |
|                        | Position command x19                          | Position command x38    |
| Digital output         | Control signal x8                             | Control signal x16      |
|                        | Position sensor x1                            | Position sensor x2      |
|                        | Actual position x19                           | Actual position x38     |
| Communication          | RS232C x1ch, Ethernet x1ch, CAN x2ch          |                         |
| Indicator              | 7 segment LED x6                              |                         |
| Switch                 | Push button switch x4                         |                         |
| Input power            | +24V (Recommended power capacity $\geq 30W$ ) |                         |
| Operating temp.        | $-10 \sim +55^{\circ}C$                       |                         |
| Relative humidity      | $\sim 95\%$ (No condensation)                 |                         |

## Size



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