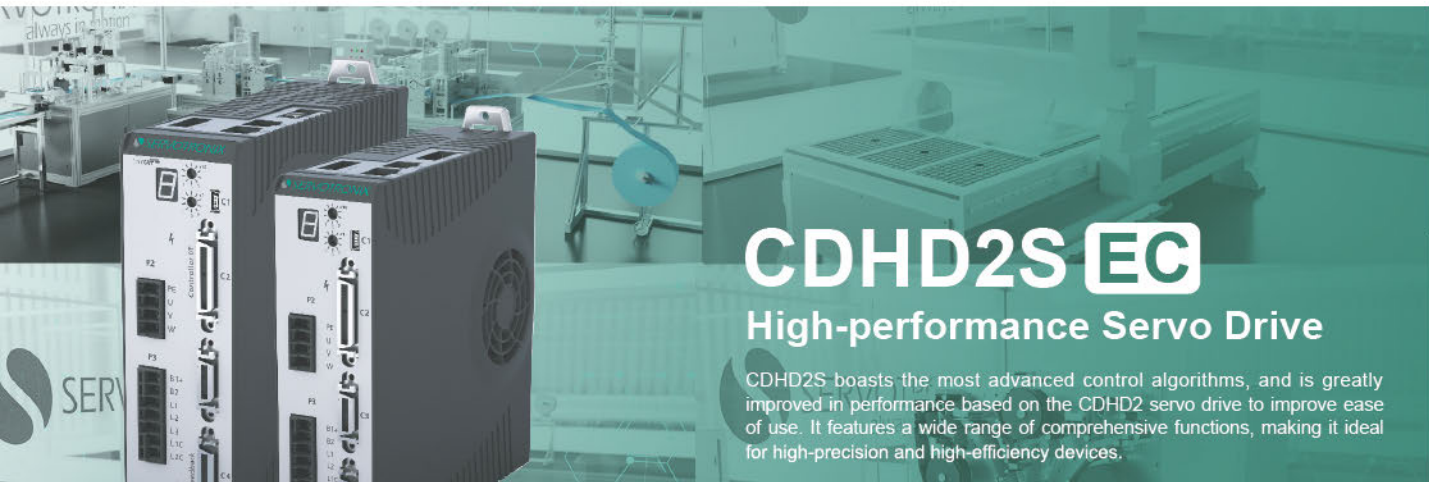




CDHD2S EC

High-performance Servo Drive

CDHD2S boasts the most advanced control algorithms, and is greatly improved in performance based on the CDHD2 servo drive to improve ease of use. It features a wide range of comprehensive functions, making it ideal for high-precision and high-efficiency devices.



Minimum position error Setting time of almost zero No oscillations at stand-still

Features

- High-performance control of motor
- Multiple feedback interface
- Secondary feedback interface for high-precision closed-loop control
- Position comparison output module
- 1D error correction and compensation table
- Advanced nonlinear control algorithms to minimize position error and shorten positioning time to about zero
- High power density
- Frequency domain analysis available to effectively identify system resonance points and automatically design optimal parameters
- STO (Safe Torque Off) function
- ServoStudio™ 2.0 GUI adopted to debugging, with comprehensive integrated parameters

A special solution for linear motors to optimize performance



CDHD2S Servo Drive

HD control loop for optimizing servo control

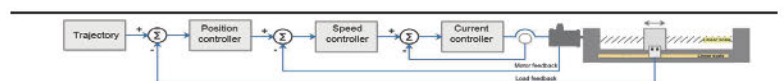
An adaptive nonlinear control algorithm has been developed to enhance servo performance in high-precision motion applications. This proprietary algorithm utilizes a parallel configuration where the position and speed branches operate on the same level and are executed within the same sampling period. In addition, various multiple gain parameters are incorporated into this algorithm and automatically optimized to achieve a high gain and stability. Consequently, the position error and setting time are minimized to levels far superior to other control algorithms.

High-bandwidth current loop with industry-leading frequency response

The current loop design delivers an outstanding frequency response ranging from 3 kHz to 5 kHz. High sampling rates and flexible filtering options guarantee a quicker response, significantly enhanced precision, and increased throughput for the device.

Dual closed-loop control to eliminate mechanical errors and enhance system stability

The dual-loop control algorithm for position and speed enhances the overall performance of the motion system. CDHD2S supports both linear and rotary secondary encoders, including incremental and absolute types. Dual closed-loop control is a core feature of the CDHD2S, eliminating the need for additional add-on options.



Gantry mode

The CDHD2S servo drive is built-in with a support for rigid and flexible gantry mechanical systems. The gantry system synchronizes two Y axes through two CDHD2S drives working in series, and through high-speed communication, generates and controls movement along Y axis. Each of the two Y axes can carry a linear motor or a rotary motor.



ServoStudio™ Wizard for simple commissioning



- Step-by-step guidance for motor setup, application configuration, and commissioning process
- Innovative and self-explanatory user interface
- Excellent teaching results for novice users in minutes
- Real-time data recording and plotting
- Easy integration of servo shaft
- Plug-and-play motor library

Power specifications and dimensions

Model	Input Voltage (VAC)	Main Circuit Input Power Supply	Continuous Current (Arms)	Peak Current (Arms)	Width (mm)	Height (mm)	Depth (mm)
CDHD2S-0031D	Logic PS 120/240VAC Bus PS 20-90VDC	/	3	9	48.2	150	152.2
CDHD2S-1D52A	120/240	Single-phase	1.5	4.5	48.2	150	152.2
CDHD2S-0032A	120/240	Single-phase	3	9	48.2	150	152.2
CDHD2S-4D52A	120/240	single/three-phase	4.5	18	53.2	150	161.1
CDHD2S-0062A	120/240	single/three-phase	6	18	53.2	150	161.1
CDHD2S-0082A	120/240	single/three-phase	8	31.8	60.3	170.2	181.1
CDHD2S-0102A	120/240	single/three-phase	10	31.8	60.3	170.2	181.1
CDHD2S-0132A	120/240	three-phase	13	31.8	60.3	170.2	181.1
CDHD2S-0202A	120/240	three-phase	20	72	116.4	234.2	193.5
CDHD2S-0242A	120/240	three-phase	24	72	116.4	234.2	193.5
CDHD2S-0034D	380/480	three-phase	3	9	110	162.8	193.1
CDHD2S-0064D	380/480	three-phase	6	18	110	162.8	193.1
CDHD2S-0124D	380/480	three-phase	12	24	116.4	234.2	193.5
CDHD2S-0244D	380/480	three-phase	24	72	163.3	353	209.3
CDHD2S-0304D	380/480	three-phase	30	90	163.3	353	209.3
CDHD2S-0404D	380/480	three-phase	40	120	163.3	353	209.3
CDHD2S-0404D(UL version)	380/480	three-phase	40	120	179.3	351.5	209.3
CDHD2S-0604D	380/460	three-phase	60	180	330	610	310

Communication:

EtherCAT*, USB, RS232, Daisy chain

Input/Output:

Digital: 11x Input Port, 8x Output Port; Analog: 2x Output, 1x Output; Pulse and Direction; Equivalent Encoder Output; Second Feedback.

(* Some features may not be available for all models.)

Motor Feedback:

SensAR absolute encoder, incremental encoder, Hall sensor, sinusoidal encoder (such as EnDat®, HIPERFACE®), SSI encoder (such as EnDat®, Nikon®, Tamagawa®), motor temperature sensor, Biss-C

Order Information

CDHD2S - 006 2A EC2 - RO - 000

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① CDHD2S Servo Drive - HD Series

② Power specification

	120/240 VAC			380/480 VAC			20/90 VDC	
	Continuous current [Arms]	Peak current [Arms]		Continuous current [Arms]	Peak current [Arms]		Continuous current [Arms]	Peak current [Arms]
1D5	1.5	4.5	003	3	9	003	3	9
003	3	9	006	6	18			
4D5	4.5	18	012	12	24			
006	6	18	024	24	72			
008	8	31.8	030	30	90			
010	10	31.8	040	40	120			
013	13	31.8	060	60	180			
020	20	72						
024	24	72						

*CDHD2S-060 Voltage 380VAC/460VAC

④ Communication interface

	Communication interface	analog input
ECx	EtherCAT, analog voltage, pulse, USB, RS232	1 or 2*
AP1	analog voltage, pulse, USB, RS232	1
	x= 1: A 16-bit analog input x= 2: Two analog input ports	* Standard configuration

③ Input power supply

1D	Low-voltage input power supply power board input 20-90 VDC control board input single-phase 120/240 L-N VAC +10% -15% 50/60 Hz
2A	Medium-voltage input power single-phase input 120 L-N VAC +10% -15% 50/60HZ single-phase input 240 L-N VAC +10% -15% 50/60HZ three-phase input 120-240 L-L VAC +10% -15% 50/60HZ
4D	AC power input three-phase input 380 L-L VAC +10% -15% 50/60 HZ three-phase input 460 L-L VAC +10% -15% 50/60 HZ three-phase input 480 L-L VAC +10% -15% 50/60 HZ 24VDC power supply for the control board

⑤ Motor type

[blank]	Rotary servo motor and linear motor
RO	Only rotary servo motor available
RR	Support for resolver

⑥ Special standard

[blank]	standard
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