

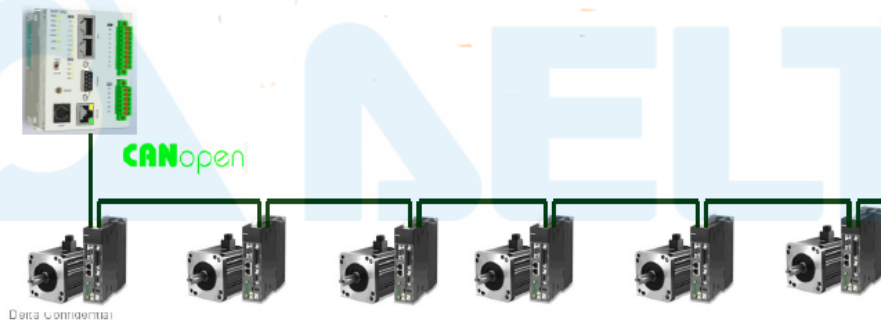
Case	Application: Delta PLC DVP Series Applied in Six Axes Motion Control with G-code				
Issued by	Solution Center	Date	September, 2014	Pages	5
Applicable to	Delta Programmable Logic Controller DVP-10MC Series, AC Servo Drive ASDA-A2 Series				
Key words	Motion Controller, Servo Motor, G-Code, CANopen				

【Introduction】

This application describes the use of Delta PLCs and AC servo drives for continuous gluing or adhesive dispensing processes in the touch panel industry.

For six axes motion control, this application uses one Delta CANopen motion controller DVP-10MC Series and six Delta ASDA-A2 Series advanced servo drives for high-end motion systems to simulate gluing and adhesive dispensing. Two of the six axes of the ASDA-A2 Series can perform X-Axis and Y-Axis continuous motion control with G-Code.

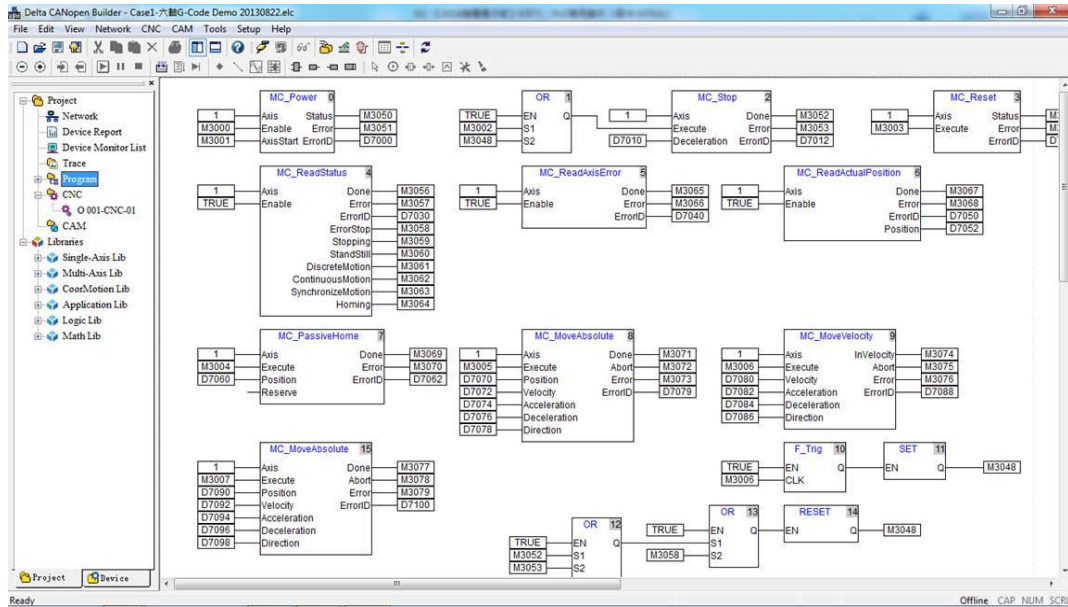
Six axes of the AC servo drives can be controlled through CANopen communication, saving wiring and maintenance time.



The DVP-10MC Series has built-in function blocks for motion control, which can speed up program editing efficiency for users. It also supports CANopen Builder software and provides function blocks for single and multi-axis, homing, and synchronous interpolation for program developers.

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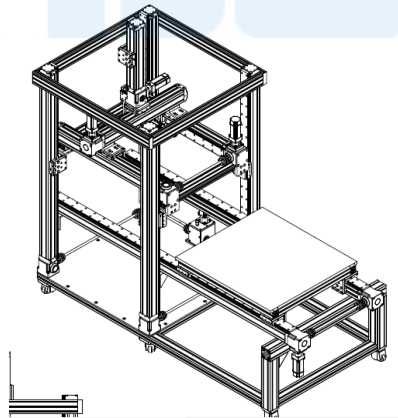


【Application】

The synchronous interpolation functions of the DVP-10MC Series can control a continuous path and simulate linear and arc interpolation in the adhesive dispensing processes.

Equipment

Six axes servo control + G-Code Demo Kit



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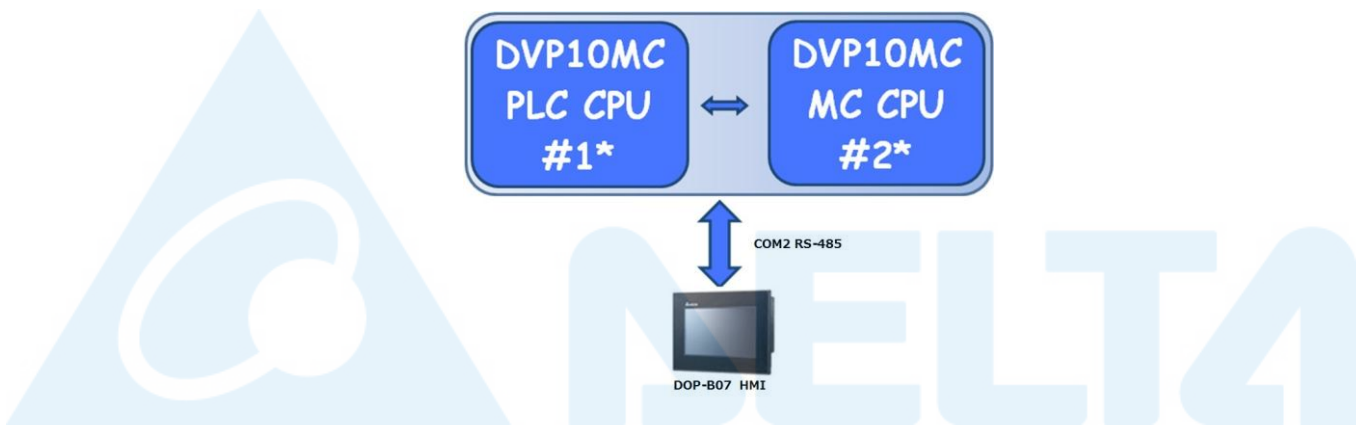
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System Structure

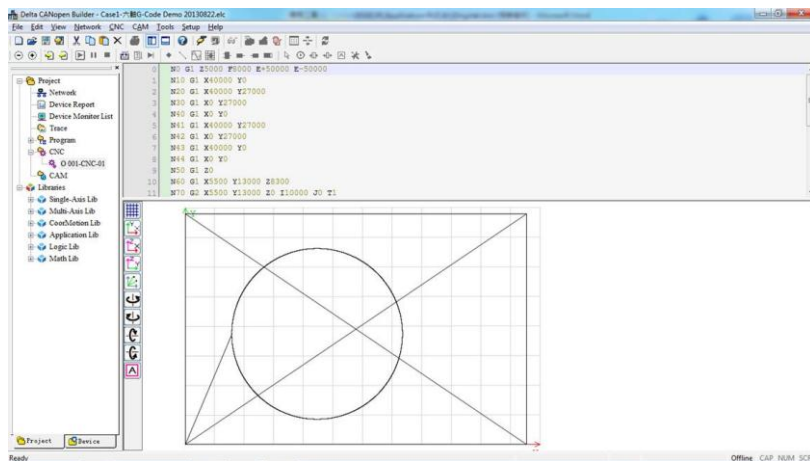


The DVP-10MC Series PLC controls ASDA-A2 AC Servo Drives through CANopen communication to achieve six axes control of motors at a time.

Control Structure

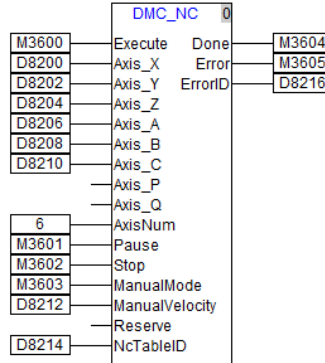


The DVP-10MC Series has two CPUs that run different software. One CPU is for a programmable logic controller (PLC) and supports WPLSoft for ladder diagram editing. The other CPU is for a motion controller (MC) that can run CANopen Builder, to complete servo control programs.

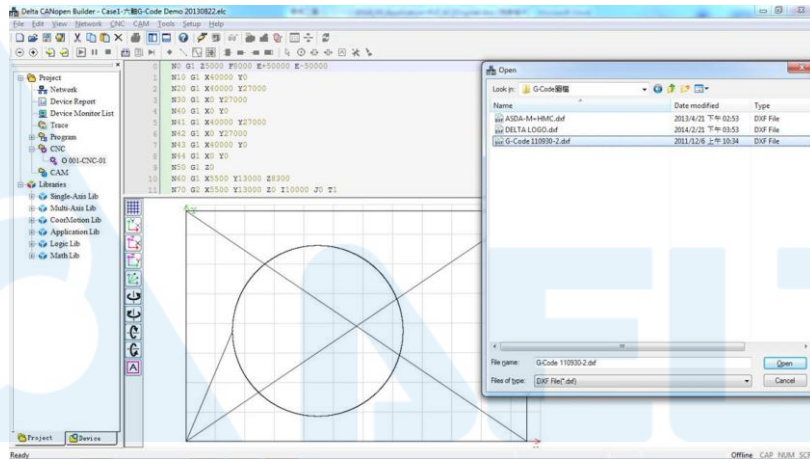


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The main functions of the MC CPU is to control servo drives to complete jogging, absolute motion, homing with the function blocks in CANopen Builder. It also works with G-code to achieve three axes synchronous interpolation.



Users can edit G-Code paths by using the built-in DMC_NC function blocks in CANopen Builder.



CANopen Builder provides a DXF files import function that can automatically convert DXF files into G-Code after users complete editing in CAD software.

Applications

Gluing process, pick and place robot arms for conveyors, engraving machines

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Delta Products in this Application

Products	Model	Quantity	Capacity	Software
AC Servo Motor & Drive	ASDA-A2-M ECMA	6 6	400W	ASDASoft_V4
Programmable Logic Controller	DVP10MC11T	1	-	CANopen Builder_V2.05
Human Machine Interface	DOP-B	1	-	DOPSoft 1.01.10

【Benefits】

The software's built-in function blocks save program developing time for engineers. Using CANopen motion controllers can save more working hours and wiring costs compared with traditional pulse-train motion controllers.

For more information on Delta's industrial automation products, please visit our website at: www.deltaww.com/ia

