

Multi-axis Motion Controller

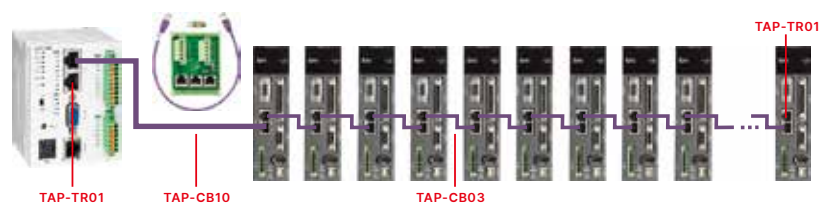
DVP-MC

16-axis Motion Controller

DVP10MC11T

Perfect controller to offer highly stable multi-axis motion control solutions through CANopen communication

- ▶ Built-in 12 I/O points
(8 sets of high-speed inputs,
4 sets of high-speed outputs)
- ▶ Up to 16 axes synchronous control through
CANopen communication
- ▶ Synchronization time: 4 axes in 2ms / 8 axes in
4ms
- ▶ Built-in motion control instructions of electronic
cam, flying shear, rotary cut for easy operation
- ▶ High precision control with interpolation function



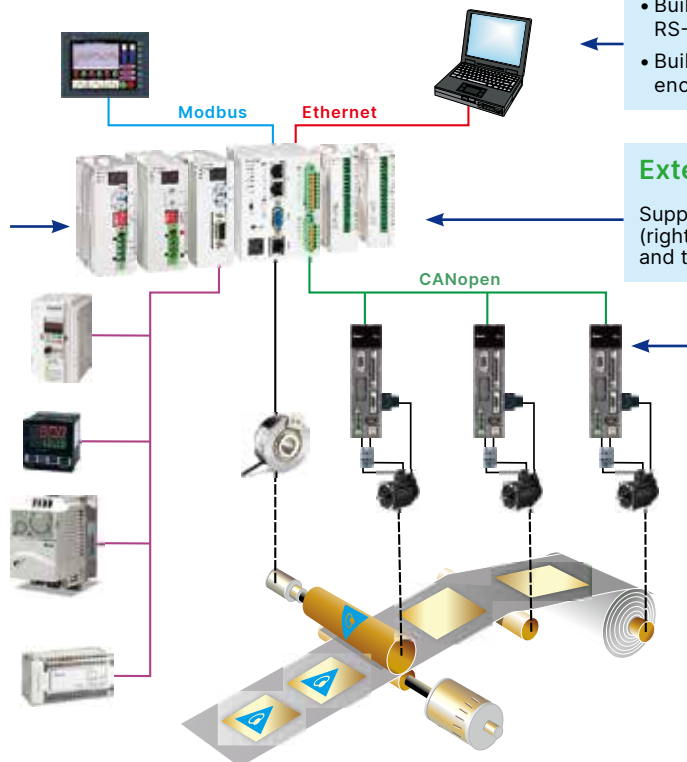
System Control Architecture

Extensions (left-side)

- Supports DVP-S Series
modules (left-side):
— CANopen master
— DeviceNet master
— PROFIBUS slave
— load cell modules

Accessories

Standard CANopen
communication cables,
terminal resistor
and distribution box



Built-in Functions

- Built-in Ethernet, RS-232 and
RS-485 communication ports
- Built-in CANopen and
encoder interface

Extensions (right-side)

Supports DVP-S Series modules
(right-side): digital, analog
and temperature modules

Motion Control

- Speed, position, torque control
- Supports Electronic gear,
E-Cam (2,048 points),
flying shear and rotary
cut applications
- Compatible with G-code,
3 axes arc / helical interpolation,
8 axes linear interpolation
- High speed position capture
and error compensation

CANopen Accessories

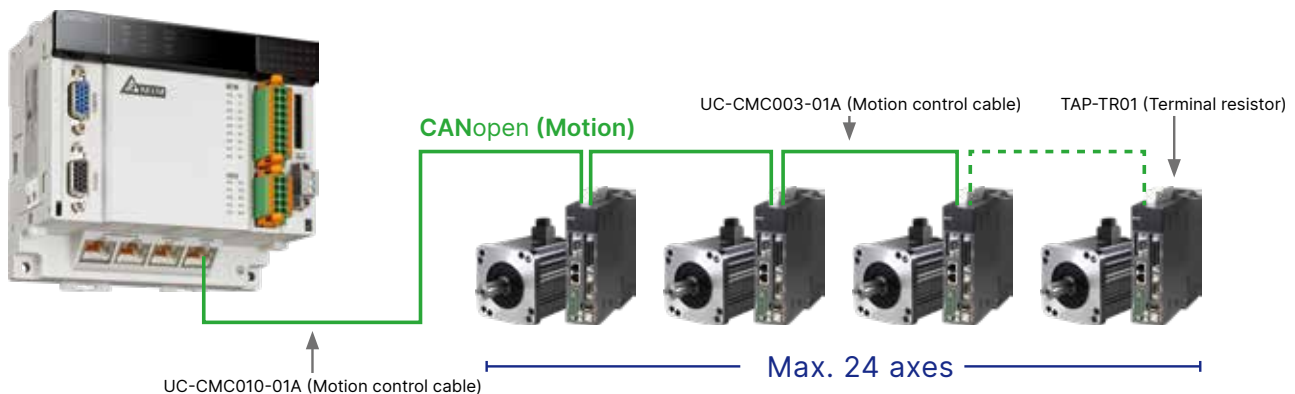
Model Name	Specifications	Features
UC-CMCXXX-01A	CANopen sub-line	RJ45 connector for both ends
UC-DN01Z-01A/02A	CANopen main-line / sub-line	AWG18 / AWG24 CANopen cables for long distance communication via CANopen
TAP-CN01/02/03	Distribution box	Built-in terminal resistor 120 Ω
TAP-TR01	Terminal resistor	Terminal resistor 120 Ω

Simple Wiring, Plug-and-Play Motion Control Network

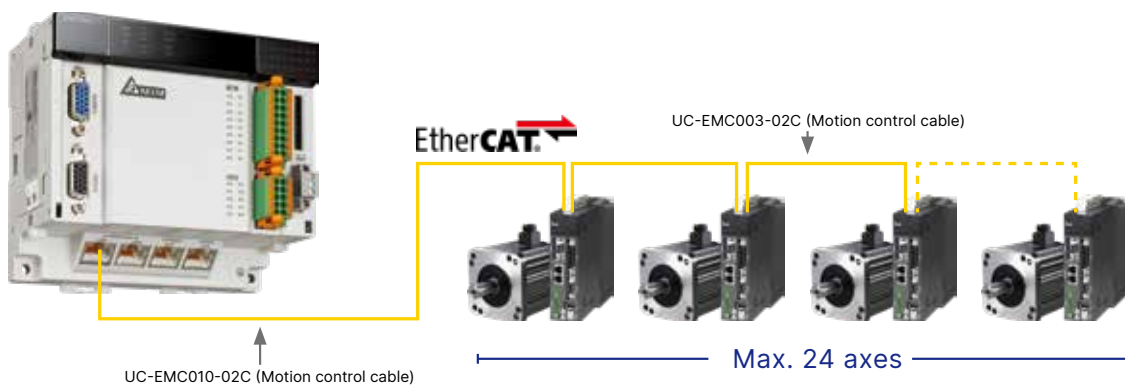
The DVP15MC / DVP50MC features stable CANopen / EtherCAT communication, simple wiring, plug-and-play functions, and communicates with servo drives (axes) via CANopen/EtherCAT network. Delta provides communication cable, terminal resistor and distribution box.

*Please refer to "Accessories" for detailed information

DVP15MC:



DVP50MC:



Compatible with Servo Drives via Motion Port

- Delta's AC Motor Drives ASDA-A2-XXXX*-M / ASDA-A2-XXXX*-MN models support CANopen communication, and they are the only models that can be connected to a DVP10MC11T for motion control networks.
- Delta's AC Motor Drives ASDA-A3-XXXX*-M / ASDA-A2-XXXX*-M / ASDA-B3-XXXX*-M models support CANopen communication, and they are the only models that can be connected to a DVP15MC CANopen (Motion) port for motion control networks.
- Delta's AC Motor Drives ASDA-A3-XXXX*-E / ASDA-A2-XXXX*-E / ASDA-B3-XXXX*-E models support EtherCAT communication, and they are the only models that can be connected to a DVP50MC EtherCAT (Motion) port for motion control networks.

The standard CANopen port of DVP15MC / DVP50MC can be connected to all equipment that supports CANopen networks. The ASDA-A3 / A2 / B3 Series models provide high positioning accuracy and low-speed operation stability.

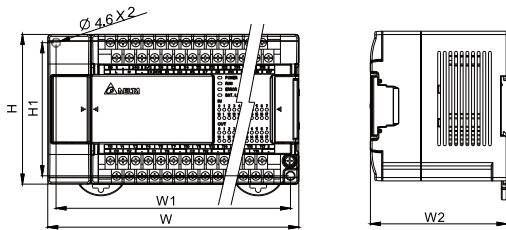
* XXXX represents output power and input voltage



DVP-EH3 Series

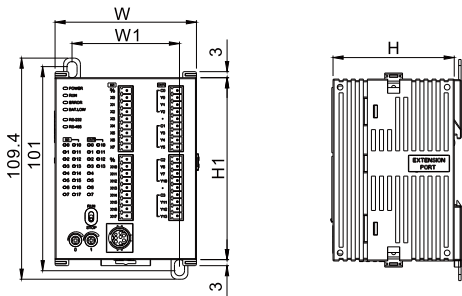
Model Name (mm)	H	H1	W	W1	W2
DVP16EH00R3 / T3	90	80	113	103	82
DVP20EH00R3/T3	90	80	113	103	82
DVP32EH00M3	90	80	143.5	133.5	82
DVP32EH00R3/T3	90	80	143.5	133.5	82
DVP32EH00R3-L	90	80	143.5	133.5	82
DVP32EH00T3-L	90	80	143.5	133.5	82
DVP40EH00R3/T3	90	80	158.8	153.8	82
DVP48EH00R3/T3	90	80	174	164	82
DVP64EH00R3/T3	90	80	212	202	82
DVP80EH00R3/T3	90	80	276	266	82

*The dimensions of the DVP-EH3 and DVP-EH2 Series are the same.

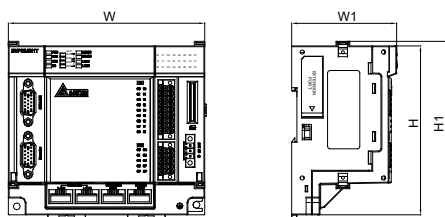


DVP-SV / SX2 / MC Series

Model Name (mm)	H	H1	W	W1
DVP28SV11R2/T2	60	90	70	53.2
DVP20SX211R/T/S	60	90	70	53.2
DVP10MC11T	60	90	70	53.2



Model Name (mm)	H	H1	W	W1
DVP15MC11T	110	116.2	128	68.4
DVP15MC11T-06	110	116.2	128	68.4
DVP50MC11T/P	110	116.2	128	68.4
DVP50MC11T/P-06	110	116.2	128	68.4
DVP50MC11T-04S/16S	110	116.2	128	68.4

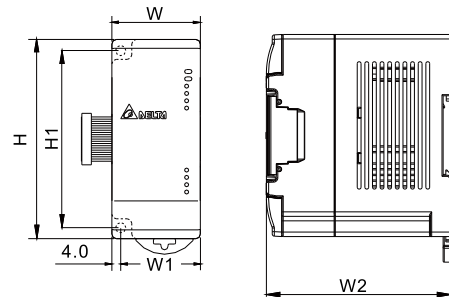


DVP-EH3 Series I/O & Extension Modules

Model Name (mm)	H	H1	W	W1	W2
DVP08HM11N	90	80	40	36	82
DVP16HM11N	90	80	55	51	82
DVP08HN11R/T	90	80	40	36	82
DVP08HP11R/T	90	80	40	36	82
DVP16HP11R/T	90	80	55	51	82
DVP32HP00R/T	90	80	143.5	133.5	82.2

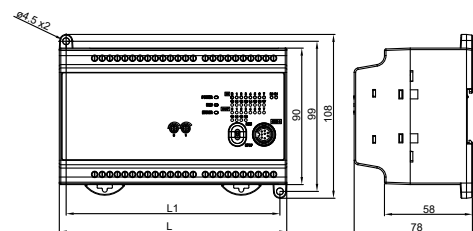
Model Name (mm)	H	H1	W	W1	W2
DVP04AD-H2	90	80	60	56	82
DVP04DA-H2	90	80	60	56	82
DVP06XA-H2	90	80	60	56	82
DVP04PT-H2	90	80	60	56	82
DVP04TC-H2	90	80	60	56	82
DVP01PU-H2	90	80	60	56	82
DVP04AD-H3	90	80	60	56	82
DVP04DA-H3	90	80	60	56	82
DVP06XA-H3	90	80	60	56	82

*The dimensions of the DVP-EH3 and DVP-EH2 Series are the same.



DVP-EC3 Series

Model Name (mm)	L	L1
DVP10EC00R3/T3	95	86
DVP14EC00R3/T3	95	86
DVP16EC00R3/T3	95	86
DVP20EC00R3/T3	150	141
DVP24EC00R3/T3	150	141
DVP30EC00R3/T3	150	141
DVP32EC00R3/T3	150	141
DVP40EC00R3/T3	164	155
DVP48EC00R3/T3	240	231
DVP60EC00R3/T3	240	231



Ordering Information

DVP-PM Series

Product Name	Power Supply	Output Method	Inputs	Outputs	Model Name	Certificates
Standard Motion Controller	100 ~ 240V _{AC}	Differential (Built-in 4-axis of independent 1MHz pulse output)	16	16	DVP10PM00M	
Advanced Motion Controller	100 ~ 240V _{AC}	Differential (Built-in 2-axis of independent 500 kHz pulse output)	8	8	DVP20PM00DT	
		(Built-in 3-axis of independent 500 kHz pulse output)			DVP20PM00M	
					DVP20PM00M	
Extension Module		Description			Model Name	
DVP-PM communication card		Ethernet / CANopen communication card			DVP-FPMC	
Execution time of basic instructions		0.13 μs		Execution time of MOV instruction		3.74 μs

DVP-MC Series

Product Name	Power Supply	Communication Protocol	Axes Controlled	Inputs	Outputs	Model Name	Certificates
Multi-axis Motion Controller	24 V _{DC}	CANopen DS402	16	8	4 (NPN)	DVP10MC11T	
			24	16	8 (NPN)	DVP15MC11T	
			6	16	8 (NPN)	DVP15MC11T-06	
		EtherCAT	24	16	8 (NPN)	DVP50MC11T	
			24	16	8 (PNP)	DVP50MC11P	
			6	16	8 (PNP)	DVP50MC11P-06	
			6	16	8 (NPN)	DVP50MC11T-06	
			4 (Point-to-Point)	16	8 (NPN)	DVP50MC11T-4S	
			16 (Point-to-Point)	16	8 (NPN)	DVP50MC11T-16S	

TP Series

Product Name	Description									Model	Certificates
TP02	Resolution: 160 x 32, Serial COM ports: RS-232 & RS-485									TP02G-AS1	
TP04	Resolution: 128 x 64, Serial COM ports: RS-232 & RS-422 / RS-485									TP04G-AS2	
	Resolution: 192 x 64, Serial COM ports: RS-232 & RS-422 / RS-485									TP04G-AL2	
	Resolution: 192 x 64, Serial COM ports: RS-232									TP04G-AL-C	
	Resolution: 192 x 64, Serial COM ports: RS-232 & RS-422 / RS-485, 0 ~ 9 numeric keys available									TP04G-BL-C	
TP04											
Product Name	Description	DI	DO	AI ^{*2}	AO ^{*2}	PT	AX ^{*1}	LC	Output Type	Model	Certificates
		8	8						Relay	TP04P-16TP1R	
		16	16						Relay	TP04P-32TP1R	
		8	8	4 (V/I)	2 (V/I)				Relay	TP04P-22XA1R	
		8	8	2 (I)	1 (I)	2			Relay	TP04P-21EX1R	
		8	8						Transistor	TP04P-16TP1T	
		16	16						Transistor	TP04P-32TP1T	
		8	8	4 (V/I)	2 (V/I)				Transistor	TP04P-22XA1T	
		8	8	2 (I)	1 (I)	2			Transistor	TP04P-21EX1T	
		9	16	4 (V/I)	2 (V/I) 4 (I)		2	1	Transistor	TP04P-20EXL1T ^{*3}	
TP70P	Resolution: 800 x 400 Serial COM ports: USB & RS-485*2	8	8						Relay	TP70P-16TP1R	
		16	16						Relay	TP70P-32TP1R	
		8	8	4 (V/I)	2 (V/I)				Relay	TP70P-22XA1R	
		8	8	2 (I)	1 (I)	2			Relay	TP70P-21EX1R	
		8	8						Transistor	TP70P-16TP1T	
		16	16						Transistor	TP70P-32TP1T	
		8	8	4 (V/I)	2 (V/I)				Transistor	TP70P-22XA1T	
		8	8	2 (I)	1 (I)	2			Transistor	TP70P-21EX1T	
		17	24		4 (I)		2	1	Transistor	TP70P-211LC1T ^{*3}	
TP08	Resolution: 240 x 128 / Serial COM ports: RS-232, RS-422 & RS-485 / 0~9 numeric numeric keypad									TP08G-BT2	

*1: Universal analog input (mA, V, RTD)

*2: V (Voltage), I (Current)

*3: USB & RS-485 are design with isolation

Ordering Information

Accessories

Type	Model Name	Description	Specification		Applicable Modules
			Length	Connector / Terminal Block	
I/O External Terminal Module	UC-ET010-24A	I/O extension cable for connecting external terminal modules	1m	PLC (MIL IDC40↔IDC40) external terminal modules	DVP32SM11N↔UB-10-ID32A DVP32SN11TN↔UB-10-OT32A
	UC-ET010-24B	I/O extension cable for connecting external terminal modules	1m	PLC (MIL IDC40↔IDC40) external terminal modules (shielded wire)	DVP32SM11N↔UB-10-ID32A DVP32SN11TN↔UB-10-OT32A
	UC-ET010-24C	I/O extension cable for connecting external terminal modules	1m	PLC (MIL IDC40↔IDC20 x 2) external terminal modules	DVP32SN11TN↔UB-10-OR16A
	UC-ET010-24D	I/O extension cable for connecting external terminal modules	1m	PLC (MIL IDC40↔IDC20 x 2) external terminal modules (shielded wire)	DVP32SN11TN↔UB-10-OR16A
	UC-ET020-24B	I/O extension cable for connecting external terminal modules	2m	PLC (MIL IDC40↔IDC40) external terminal modules (shielded wire)	DVP32SM11N↔UB-10-ID32A DVP32SN11TN↔UB-10-OT32A
	UC-ET020-24D	I/O extension cable for connecting external terminal modules	2m	PLC (MIL IDC40↔IDC20 x 2) external terminal modules (shielded wire)	DVP32SN11TN↔UB-10-OR16A
	UC-ET030-24B	I/O extension cable for connecting external terminal modules	3m	PLC (MIL IDC40 ↔ IDC40) external terminal modules (shielded wire)	DVP32SM11N↔UB-10-ID32A DVP32SN11TN↔UB-10-OT32A
	UC-ET030-24D	I/O extension cable for connecting external terminal modules	3m	PLC (MIL IDC40 to IDC20 x 2) external terminal modules (shielded wire)	DVP32SN11TN↔UB-10-OR16A
Motion Control Cable / Industrial Communication Cable	UC-CMC003-01A	CANopen communication cable	0.3m	RJ45	DVPCOPM-SL DVP10MC11T DVP15MC11T DVP15MC11T-06 DVPCP02-H2 TAP-CN03
	UC-CMC005-01A		0.5m		
	UC-CMC010-01A		1m		
	UC-CMC015-01A		1.5m		
	UC-CMC020-01A		2m		
	UC-CMC030-01A		3m		
	UC-CMC050-01A		5m		
	UC-CMC100-01A		10m		
	UC-CMC200-01A		20m		
	UC-EMC003-02C	EtherCAT communication cable (High anti-interference)	0.3m	RJ45	DVP50MC11T DVP50MC11T-06
	UC-EMC005-02C		0.5m		
	UC-EMC010-02C		1m		
	UC-EMC020-02C		2m		
	UC-EMC050-02C		5m		
	UC-EMC100-02C		10m		
	UC-EMC200-02C		20m		
	UC-EMC003-02B	EtherCAT communication cable	0.3m	RJ45	
	UC-EMC005-02B		0.5m		
UC-EMC010-02B	1m				
UC-EMC020-02B	2m				
UC-EMC030-02B	3m				
UC-EMC050-02B	5m				
UC-EMC100-02B	10m				
Industrial Communication Cable	UC-DN01Z-01A ^{*1}	DeviceNet / CANopen communication cable (Trunk cable - thick)	On customer's demand (up to 305 m)	--	DeviceNet / CANopen related models
	UC-DN01Z-02A ^{*1}	DeviceNet / CANopen communication cable (Drop cable - thin)		--	
External Terminal Module	UB-10-OR16A	external terminal module for DVP32SN output module	--	16-point relay output, 20-pin MIL	DVP32SN11TN
	UB-10-OT32A	external terminal module for DVP32SN output module	--	32-point transistor output, 40-pin MIL	DVP32SN11TN
	UB-10-ID32A	external terminal module for DVP32SM digital input module	--	32-point input, MIL	DVP32SM11TN
Connector	UN-03EN-04A	RJ45 connector	--	--	--
Data backup memory card (DVP-ES2 only)					DVP-E64FM
Data backup memory card (64k words)					DVPPCC01
Communication cable for PC (9-pin & 25-pin D-Sub) and PLC, 1.5m					DVPACAB215
Communication cable for PC (9-pin & 25-pin D-Sub) and PLC, 3m					DVPACAB230
4 types of RS-485 connectors					ADP485-01
Connection cable for ADP485-01 and ASDA-A series servo					ADPCAB03A
Connection cable for ADP485-01 and ASDA-B series servo					ADPCAB03B
I/O extension cable for DVP-ES/EX Series, 0.3 m					DVPACAB403
Extension cable for DVP-EH series PLC and extension module, 0.7m					DVPACAB4A07
DeviceNet / CANopen distribution box, 1 for 2					TAP-CN01
DeviceNet / CANopen distribution box, 2 for 3					TAP-CN02
DeviceNet / CANopen distribution box, 2 for 3 RJ45					TAP-CN03
3.6V lithium battery (unchargeable) for DVP-EH/10SX/PM Series PLC and RTU-EN01					DVPABT01
Terminal resistance for CANopen communication (RJ45)					TAP-TR01
Programming cable for TP Series					UCPRG030-10A

*1: Not available in Taiwan