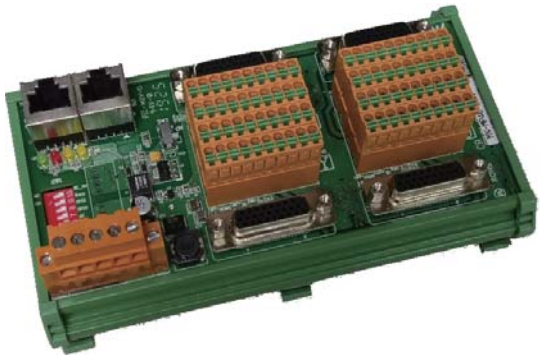


MN-MP4U-DIN

Distributed Motionnet Four-axis Universal Motion Control Module

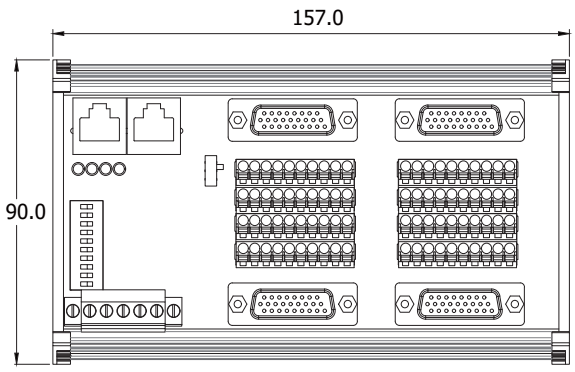
Features

- Maximum communication speed: 20 Mbps
- Pulse Output Rate: 6.6 MHz (Max.)
- Control up to 64 axes per line
- Multi-axis linear interpolation function
- 2-axis circular interpolation function
- T/S-curve acceleration and deceleration
- Change speed and position on the fly
- Slow down sensor, home sensor, positive and negative limit sensors for each axis
- Software limit and compare trigger output
- Three-way isolation for power, communication and I/O (Provide better noise immunity and device protection)
- Suitable for controlling a variety of servo drivers and stepper drivers

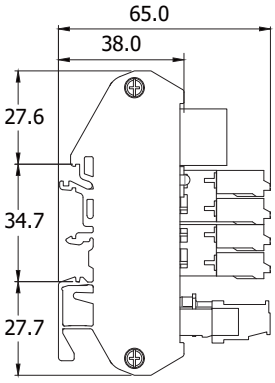
Introduction

The **MN-MP4U-DIN** is used to expand the number of axes for distributed motion control on a Motionnet field bus. These extension slave modules are serially connected to the controller using a simple and affordable Cat.5 LAN cable, and one serial line can support up to 16 four-axis modules. The 26-pin HD D-Sub connector can be used to easily connect with various servo drivers and stepper drivers. ICP DAS also provides a variety of cables suitable for a range of brands of servo drivers, which further reduces the amount of wiring required between the drivers and the controller, making this an ideal solution for highly integrated machine automation applications.

Dimensions: (Units: mm)



Front View



Left Side View

Specifications

Model	MN-MP4U-DIN
LED Indicators	
Status	Communication state (Link, Error) Internal 3.3 V Power Termination Resistor Switch Mechanic Switch Input
General	
Speed Profile	Trapezoidal/S-shaped Acc/Dec Driving
Auto-Home Search	13 Types
Axis I/O	
Servo Interface Output	SVON, ERC, ALM_RST
Latch Input	Yes (shared with SD)
Mechanical Switch Input	LMT+, LMT-, HOME, SD, EMG
Position Compare Output	High-Speed 5 V TTL or 24 V open collector
Servo Interface Input	ALM, RDY, INP

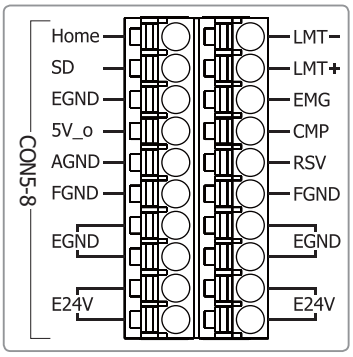
Model	MN-MP4U-DIN
Encoder Input	
Mode	CW/CCW, A/B phase
Counter Width	28-bit
Pulse Output	
Mode	OUT/DIR, CW/CCW
Counter Width	28-bit
Rate	6.6 MHz (Max.)
Motionnet	
Communication Connectors	RJ-45 x2
Transfer Speed	2.5, 5, 10, 20 Mbps
Power	
Input Range	24VDC +/-5% (1000 V isolated)
Environment	
Operating Temperature	0 ~ +60 °C
Storage Temperature	-20 ~ +80°C
Humidity	10 ~ 90% RH, Non-condensing

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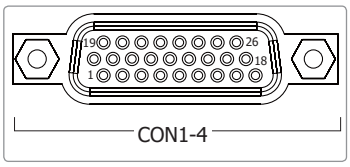
Pin Assignments

No.	Name	Description	I/O Define.
CON5-8A (the upper one)			
1	LMT-	Negative end limit	Input
2	LMT+	Positive end limit	Input
3	EMG*	Emergency stop	Input
4	CMP	High-speed position compare	Output
5	RSV	Reserved signal (no internal connection)	Connect to CON1-4 only
6	FGND	Frame ground	None
7 ~ 8	EGND	External ground	Input
9 ~ 10	E24V	External power 24V	Input
CON5-8B (the lower one)			
1	HOME	Home position	Input
2	SD	Slowdown	Input
3	EGND	External ground	Input
4	5V_o	Internal 5V power derived from 24V supply	Output
5	AGND	Optional analog ground , no internal connection	Connect to CON1-4 only
6	FGND	Frame ground	None
7 ~ 8	EGND	External ground	Input
9 ~ 10	E24V	External power 24V	Input

***Note:** The EMG signal is only accessible at CON5, this pin is not connected on CON6-8.



No.	Name	Description	I/O Define.
1	SRV_ON	Servo On	Output
2	INP	In Position	Input
3	ERC	Error Counter Clear	Output
4	RDY	Servo Ready	Input
5	P-	Forward rotation pulse train (differential line driver)	Output
6	P+		Output
7	A-	Encoder A-phase pulse	Input
8	A+		Input
9	N.C.	No internal connection	N.C.
10	RESET	Alarm Reset	Output
11	ALARM	Servo Alarm	Input
12	E24V	External power 24V	Input
13	EGND	External ground	Input
14	N.C.	No internal connection	N.C.
15	AGND	Optional analog ground (no internal connection)	Connect to CON5-8 only
16	B-	Encoder B-phase pulse	Input
17	B+		Input
18	N.C.	No internal connection	N.C.
19	EMG	Emergency stop	Input
20	RSV	Reserved signal (no internal connection)	Connect to CON5-8 only
21	EGND	External ground	Input
22	EGND	External ground	Input
23	N-	Forward rotation pulse train (differential line driver)	Output
24	N+		Output
25	Z-	Encoder Z-phase pulse	Input
26	Z+		Input



Ordering Information

MN-MP4U-DIN CR	Distributed Motionnet Four-axis Universal Motion Control Module with RJ-45 Connector Includes 4x "CA-PC26M" (RoHS)

Related Products

PISO-MN200(T/EC) CR	PCI Bus, Dual-line Motionnet Master Card (RoHS)
Distributed Motionnet Modules	
MN-SERVO-xxx(-EC) Series CR	Single-axis Motion Control Modules (-MJ3 / -PA4 / -YSV / -DAA) (RoHS)
MN-2091U(-T) CR	Single-axis Universal Motion Control Module (RoHS)
MN-HUB4(EC) CR	4 Port Hub Module (RoHS)
MN-3254(T) CR MN-D622-DIN CR	16-ch Isolated DI, 16-ch Isolated DO Module (RoHS)
MN-3253(T) CR MN-D640-DIN CR	32-ch Isolated DI Module (RoHS)
MN-3257(T) CR MN-D604-DIN CR	32-ch Isolated DO Module (RoHS)
MN-AD8-DIN CR	8-ch Analog Input Module (RoHS)
MN-DA2-DIN CR	2-ch Analog Output Module (RoHS)

Accessories

CA-PC26M	26-pin HD D-Sub solder cup Male connector with plastic cover
HD DB26 Male Cable, 1.5/3/5 M	
CA-26-MJ3-15/30/50(B)	For Mitsubishi servo amplifier (MELSERVO-J3/J4 series)
CA-26-YSV-15/30/50(B)	For Yaskawa servo amplifier (Sigma II/III/V series)
CA-26-PA4-15/30/50(B)	For Panasonic servo amplifier (MINAS A4/A5 series)
CA-26-DAA2-15/30/50(B)	For Delta A2 servo amplifier (ASDA-A2 series)
CA-26-DAB2-15/30/50(B)	For Delta B2 servo amplifier (ASDA-B2 series)
CA-26-FFW-15/30/50	For Fuji servo amplifier (FALDIC-W and ALPHA5 Smart series)
CA-26-TTA-15/30/50	For Teco servo amplifier (TSTA-A/A+ series)

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