

EMD-8216

Ethernet Digital I/O module

User's Manual (V1.0)

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Correction record

Version	Record
1.0	firmware version 1.0 up

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Notes on hardware installation

Please register as user's club member to download the
“Step_by_step_installation_of_Ethernet_module” document from <http://automation.com.tw>

1. **Forward**

Thank you for your selection of Ethernet module 8216 digital input output interface.

Thanks to the booming of network, Ethernet become a reliable and low cost solution for data communication. To utilize the Ethernet as data communication highway of industrial control devices is more attractive than ever. We also provide the dll's of Window's or Linux system, enabling you coding the flexible application as you need. Stable, high reliability and remote addressable module give you a new approach of application.

In the same series:

EMD-8204 4 Isolated input and 4 relay output Ethernet DIO module

EMD-8208 8 Isolated input and 8 relay output Ethernet DIO module

Any comment is welcome,

please visit our website

<http://www.automation.com.tw/>

<http://www.automation-js.com/> for the up to date information.

2. Features

- Over-voltage protection on digital input
- Various IO combinations : 16 bit configurable I/O's, any bit can be input or output
- High drive capacity on digital output
- Digital I/P as counter input
- WDT for communication discontinuity detect
- Wide power range
- Standalone mode : step sequence control
- IP re-assignment
- 10/100M auto detection
- Software key function

3. Specifications

3.1 Digital input

- 3.1.1 Input points: max 16 (Configurable)
- 3.1.2 Logic high level: 3.15V(min)
- 3.1.3 Logic low level: 1.35V(max)
- 3.1.4 Over-voltage protection: 60Vdc(max)
- 3.1.5 Over-current protection: 50mA(max)

3.2 Digital output

- 3.2.1 Transistor output: max 16 (Configurable)
- 3.2.2 Transistor capacity: 500mA(peak), 45Vdc(max)

3.3 Ethernet

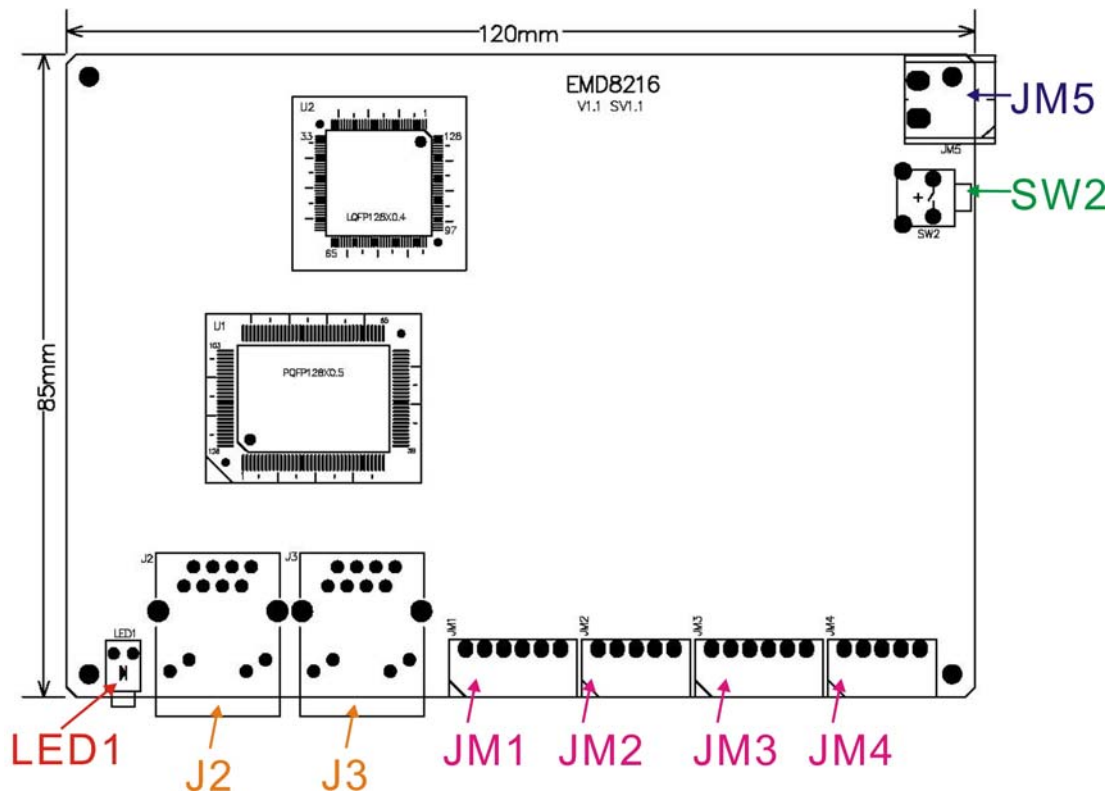
- 3.3.1 10/100M auto switch x 2 port
- 3.3.2 WDT : 1~65535ms for communication discontinuity detect

3.4 General

- 3.4.1 Power requirement: 12Vdc ~24Vdc
- 3.4.2 Operation Temperature: 0 ~ +70 degree C
- 3.4.3 Storage Temperature: -20 ~ +80 degree C
- 3.4.4 Operation Humidity: 5~95% RH, non-condensing
- 3.4.5 Dimension: 107.6(D)*135.8(W)*34(H) mm
4.3(D)*5.4(W)*1.4(H) in

4. Layout and dimensions

4.1 EMD-8216



LED1: system active LED

J2,J3: Ethernet RJ45 socket

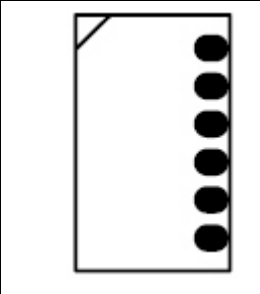
JM1, JM2, JM3, JM4: I/O connector

JM5: external power 24V connector

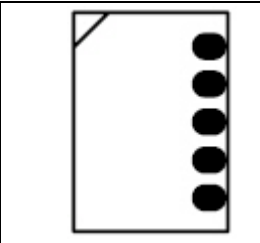
SW2: system reset switch

5. Pin definitions

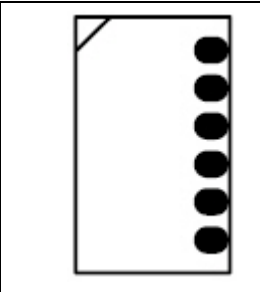
5.1 JM1 pin definitions

+Ve0*	1	
IO_00	2	
IO_01	3	
IO_02	4	
IO_03	5	
GND	6	

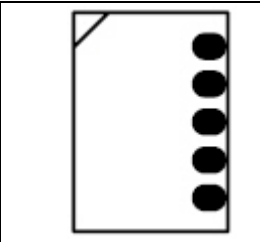
5.2 JM2 pin definitions

IO_04	1	
IO_05	2	
IO_06	3	
IO_07	4	
GND	5	

5.3 JM3 pin definitions

+Ve1*	1	
IO_10	2	
IO_11	3	
IO_12	4	
IO_13	5	
GND	6	

5.4 JM4 pin definitions

IO_14	1	
IO_15	2	
IO_16	3	
IO_17	4	
GND	5	

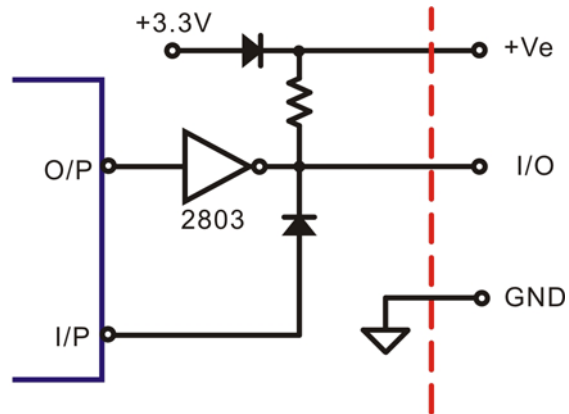
* +Ve0 and +Ve1 can floating or voltage input (voltage range +3.3V ~ +24V)

* +Ve0 is used for IO_00~IO_07, +Ve1 is used for IO_10~IO_17.

* +Ve0 and +Ve1 can apply different voltage as you need.

6. I/O Interface diagram

6.1 I/O diagram



Note: If +Ve0 is externally applied +24V then the IO_00 ~ IO07 will be also applied.
Same to +Ve1 for IO_10~IO_17

7. Applications

- For remote contact sensing
 - window or door open/close signal sensing
 - alarm signal sensing
 - fire detector signal sensing
- For remote contact make or break control
 - window or door open close control
 - light control
 - power on/off control

8. **Ordering information**

PRODUCT	DESCRIPTIONS
EMD-8216	Ethernet module, 16 I/O
JD52000	110/220Vac to 24Vdc @1.5A power supply
JS52026	110/220Vac to 24Vdc @0.75A power adapter