

Hardware Reference Manual



EtherCAT Master BOARD

COMI-LX558-SE/PE

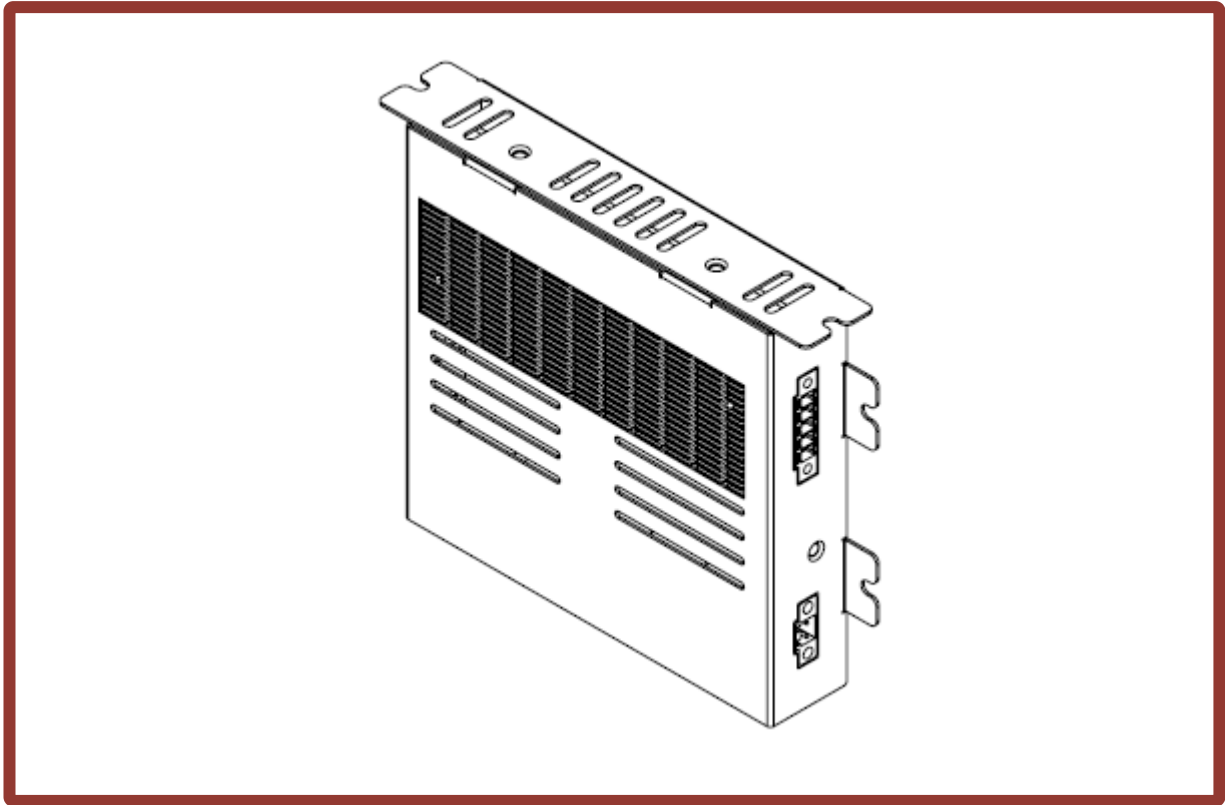
Dec 2020

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개요



**COMI-LX558
(EtherCAT Master)**

COMI-LX558는 커미조아의 Embedded 형태의 EtherCAT Master Controller로 ,
상위와 Ethernet을 통하여 인터페이스를 합니다.

내부에 EtherCAT 허브를 내장하여 총 3개의 포트를 통해 EtherCAT System을 구성 가능하며
추가적으로 RS232C 기반의 시리얼 통신을 1 포트 지원합니다.

본 매뉴얼은 COMI-LX558의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼 입니다.

제품사양

Contents	Details
Dimension	140x112x25 (mm)
Operating Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 80°C
Humidity	5% ~ 90%, non-condensing
Power Input	BOARD MAIN : ECH381VM-02P, DC 24V
Power consumption	Typical : 400 mA @ DC 24V ± 5% Maximum : 600 mA @ DC 24V ± 5%

Environmental Specification

Contents	Details
Processor	TI DSP (1Ghz, Dual Core, Max 20GPFLOPs)
Memory	System Memory : DDR3 512MB(4Gb)
	Flash Memory : 128Mb NOR Flash
Ethernet	1 Port (RJ-45 Connector)
	100 Mbps, Full-Duplex 지원

Processor & Memory specification

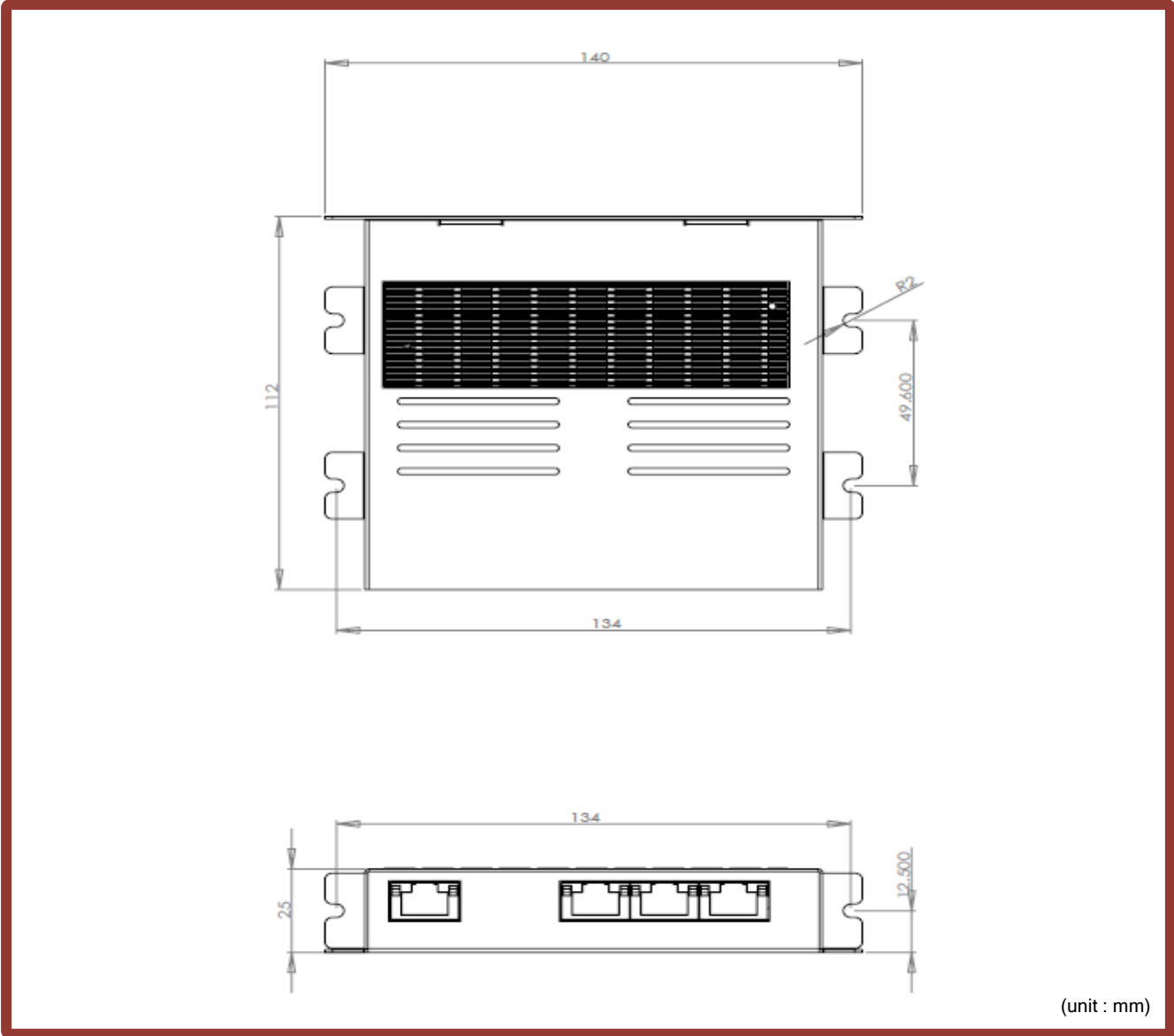
Contents	Details
Data Frame	1500 Byte
Contol	Motion : Max 16 Axes
	IO : UP to 1024 nodes
Port	3 Port (RJ-45 Connector)
	10/100 Mbps Auto-Negotiation
Communication Cycle	0.1 ms ~ 50 ms

EtherCAT Specification

Contents	Details
Number of Channel	1 Channels
Protocol	RS-232
Isolation	Digital Isolators ($V_{iso} = 2500 V_{rms}$)
Baud-rate	2400 bps ~ 38400 bps (optional 115200)
Wiring Contact	ECH381VM-05P, DC 24V

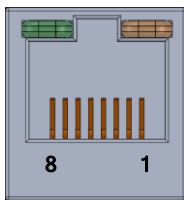
Serial Comm Specification

제품사양



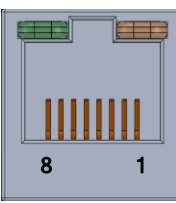
Dimension

Connector
EtherCAT Connector

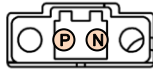
 <p>RJ-45</p> <p>8 1</p>	MASTER		SLAVE 1, 2, 3	
	1	TX+	1	TX+
	2	TX-	2	TX-
	3	RX+	3	RX+
	4	NC	4	NC
	5	NC	5	NC
	6	RX-	6	RX-
	7	NC	7	NC
	8	NC	8	NC

* EtherCAT용 통신 Cable CAT.5E 이상 사용

Ethernet Connector

 <p>RJ-45</p> <p>8 1</p>	Pin #	Description	Wiring Color
	1	RX+	W / Orange
	2	RX-	Orange
	3	TX+	W / Green
	4	-	Blue
	5	-	W / Blue
	6	TX-	Green
	7	-	W / Brown
	8	-	Brown

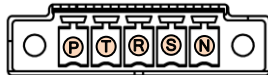
Power Connector



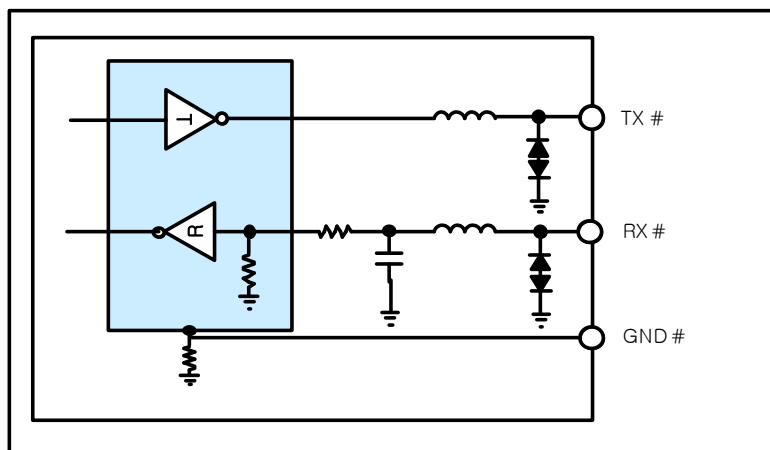
P	PWR DC P24V
N	PWR DC N24V

※ 전원의 양극을 반대로 입력한 경우 제품에 심각한 손상을 초래할 수 있습니다.

Serial Comm Connector & Switch



P	P5V
T	TX (RS232)
R	RX(RS232)
S	N.C.
N	COM_GND



Serial Comm. (RS232) Circuit

Hardware Reference Manual Update List

No.	Version	Date	Changes in
1	1.00	2020.04.01	First Edition
2	1.00	2020.12.15	-

Hardware Reference Manual

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