

# ETS Hardware Reference Manual



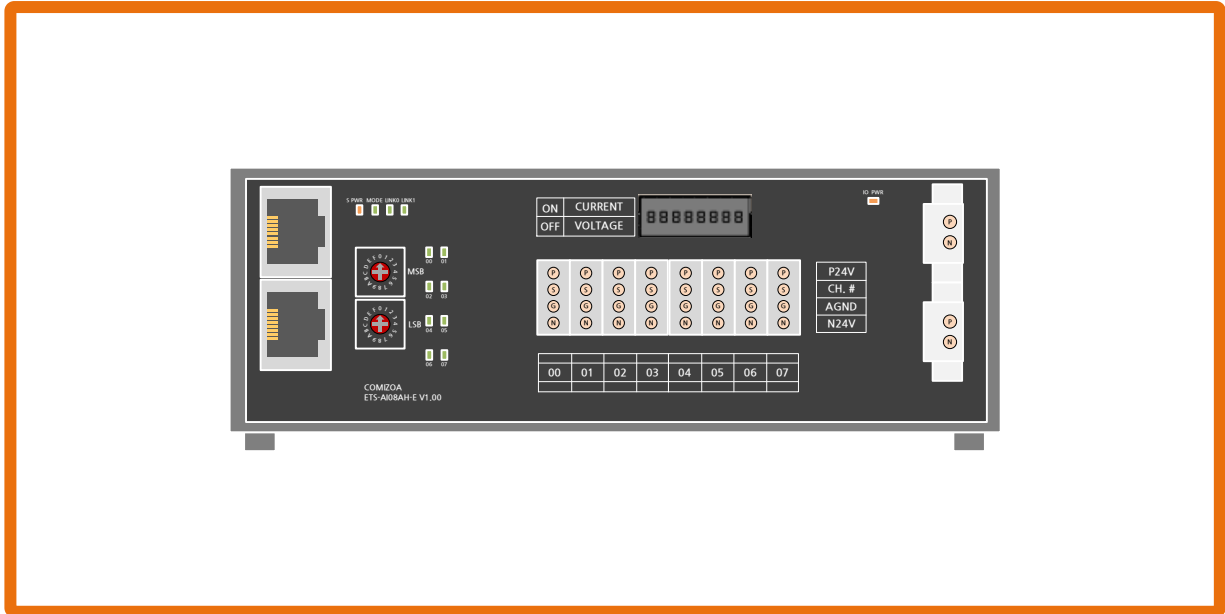
8CHANNEL ANALOG INPUT MODULE

ETS-AI08AH-E

OCT 2017  
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## Table Of Contents

1	개요 .....	1
2	제품사양 .....	2
3	Block diagram .....	3
4	Interface Connect .....	4
5	Device ID Setting .....	4
6	Connector .....	5
7	Status LED .....	6
8	Circuit Diagram .....	7

**개요**

**ETS - AI08AH - E (Analog Input 8ch)**

ETS-AI08AH-E는 커미조아의 EtherCAT 기반 제어기의 8채널 Analog 입력 모듈입니다.

각 채널은 최대  $-10 \sim +10(V)$ 의 전압 혹은  $4 \sim 20mA$ ,  $4 \sim 24mA$ ,  $0 \sim 20mA$ 의 전류를 선택적으로 입력 받을 수 있습니다.

본 매뉴얼은 ETS-AI08AH-E의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼입니다.

- EtherCAT Slave Module
- CiA Standard 401 and ETG.5001 Modular Device Profile
- Supports Terminal Device ID
- 16bit(2's Compliment) Resolution
- Analog Input 8(Voltage/Current)
- Independent System Power

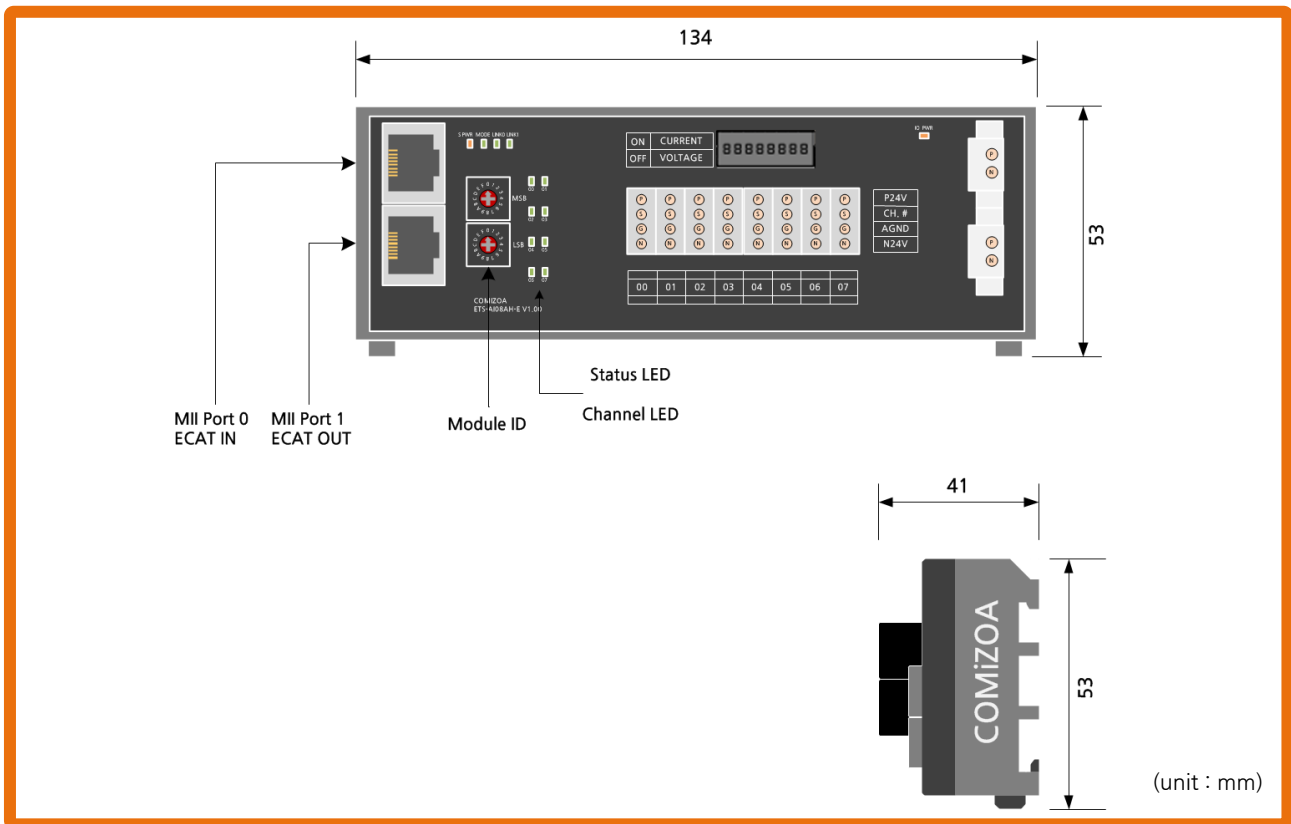
제품사양

Contents	Details
Dimension	134 * 53 * 41 (mm)
Operating Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 80°C
Humidity	5% ~ 90%, non-condensing
Power consumption	System Power : 62 mA @ DC 24V ± 5% Analog Power : 41 mA @ DC 24V ± 5%

Environmental Specification

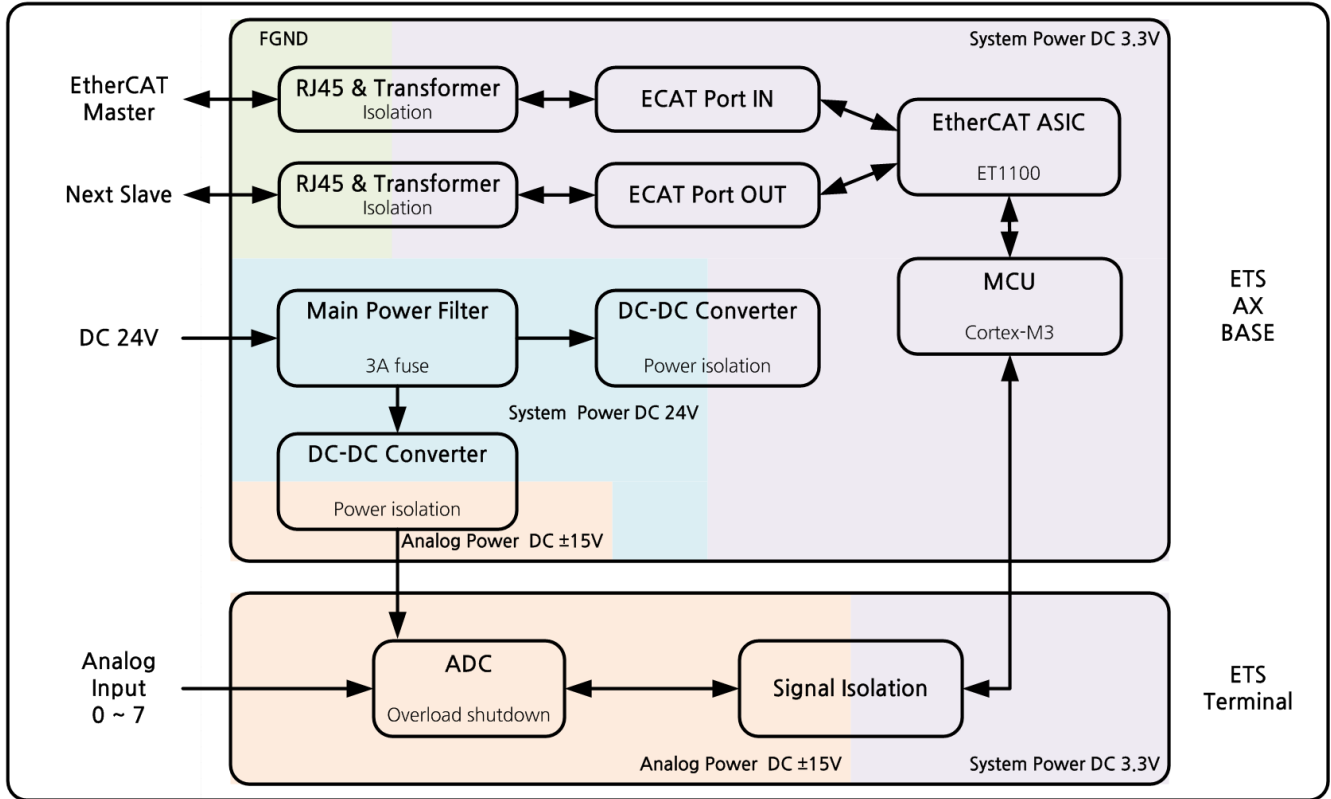
Contents	Details
Number of Inputs	8 Input
Input type	Single-ended
Isolation	I/O to Logic : Photo-coupler ( $V_{iso} = 3,000V_{rms}$ )
Resolution	16bit(2's Complement)
Voltage Input Range	$\pm 10.24V, \pm 5.12V, \pm 2.56V, 0 \sim 10.24V, 0 \sim 5.12V$
Current Input Range	4 ~ 20mA, 0 ~ 20mA, 4 ~ 24mA
Error	Offset Error : $\pm 0.01V, 0.05mA$ Gain Error : $\pm 0.45\%$
Wiring Contact	I/O : 4-Pin E-CON / Power : USL-3FBS-2P

Analog Input Specification



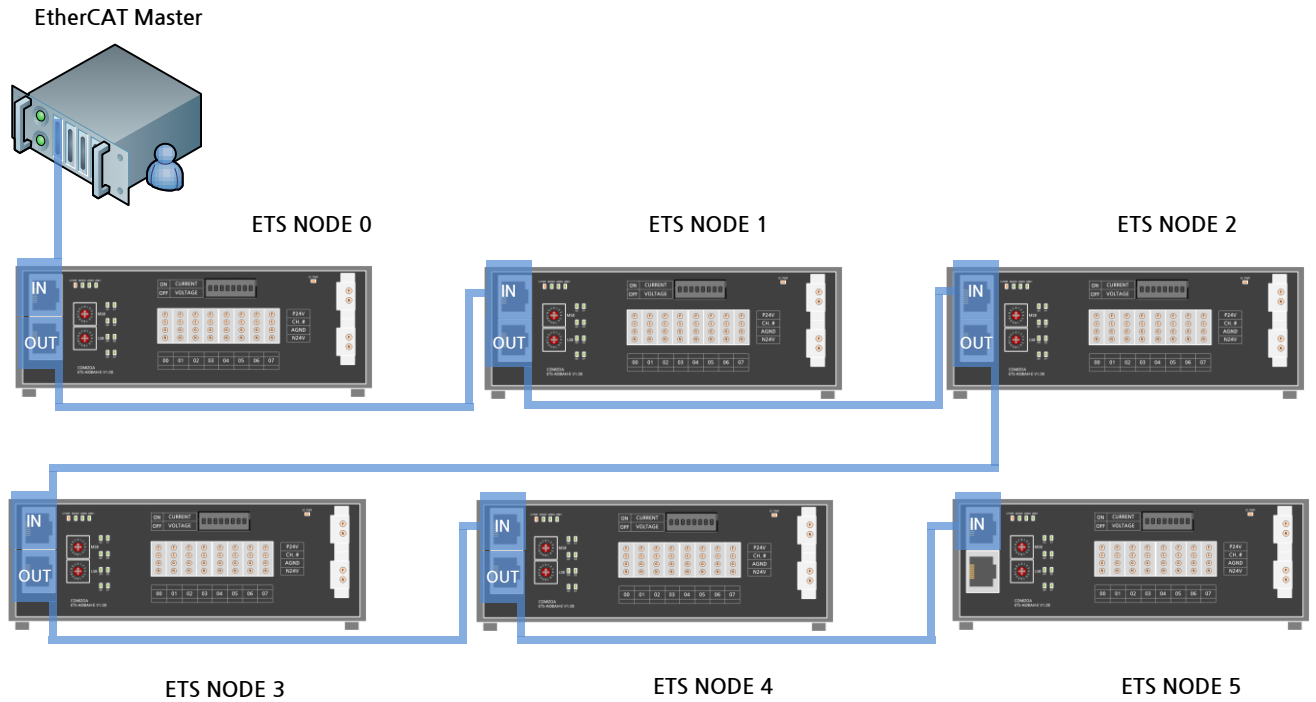
Dimension

Block diagram



ETS-AI08AH-E Block diagram

Interface Connect

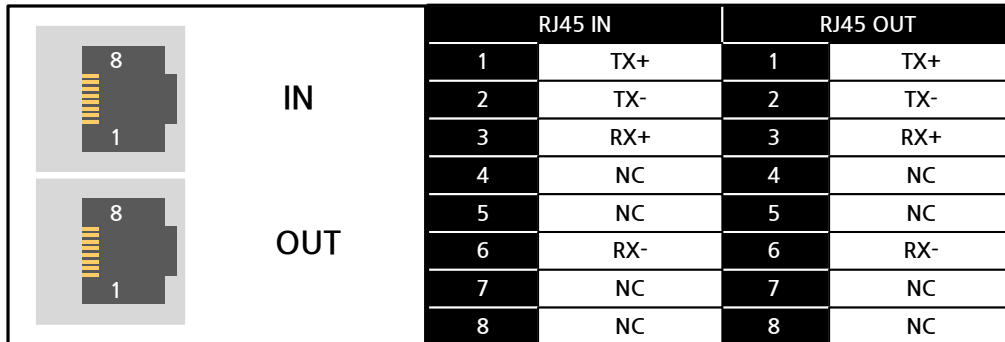


Device ID Setting

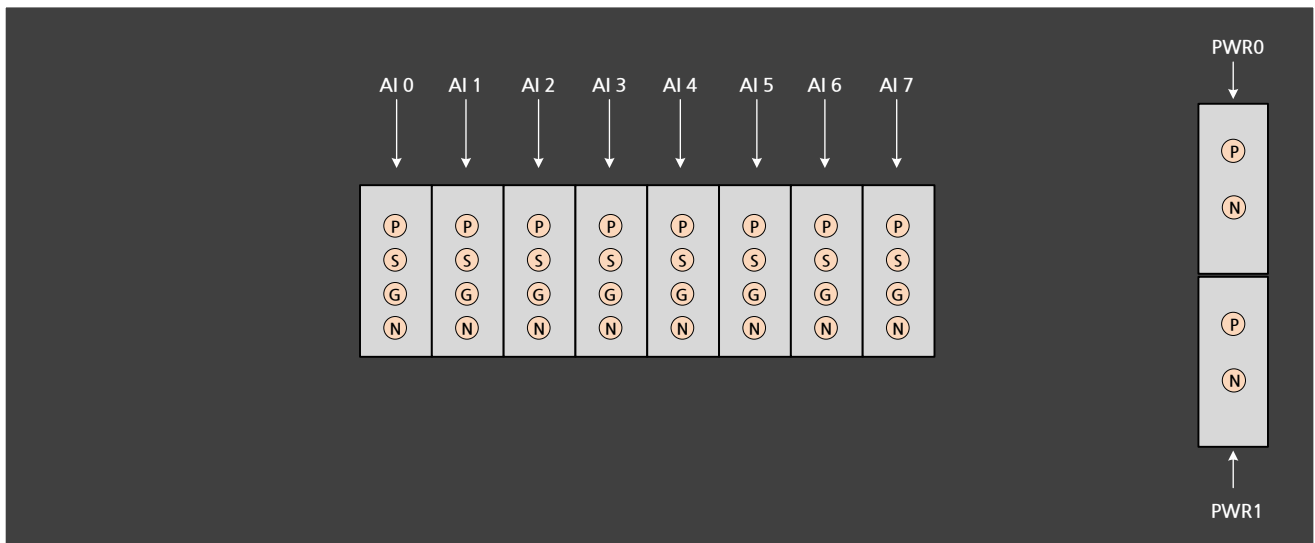
	NODE ID setting	$I.P = MSB * 16 + LSB$
	NODE ID range	1 ~ 256

Connector

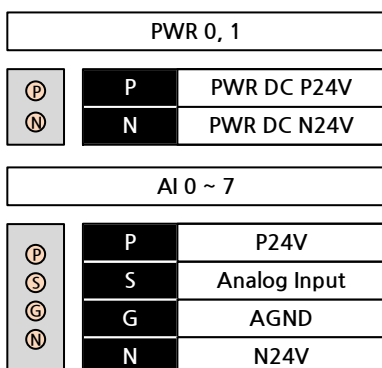
RJ45 Connector



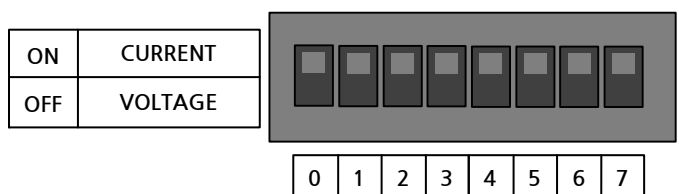
Contact Number



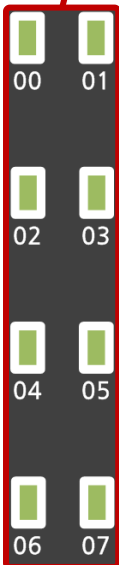
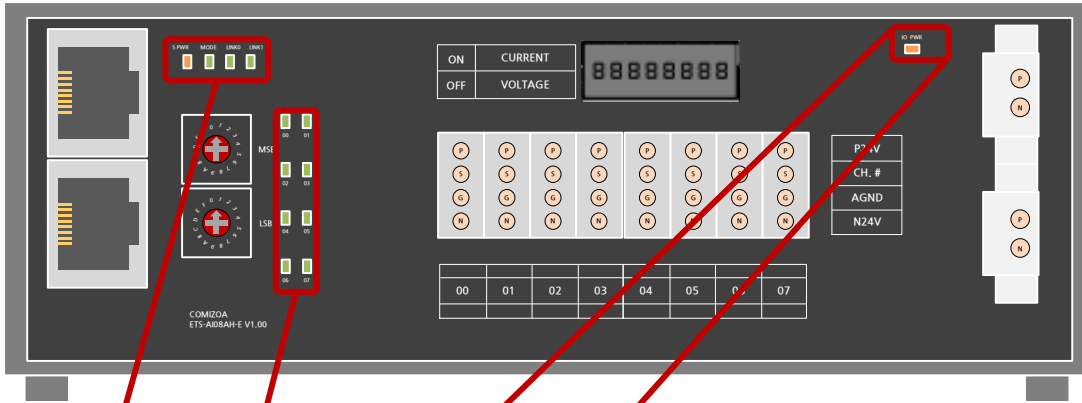
PIN MAP



SWITCH



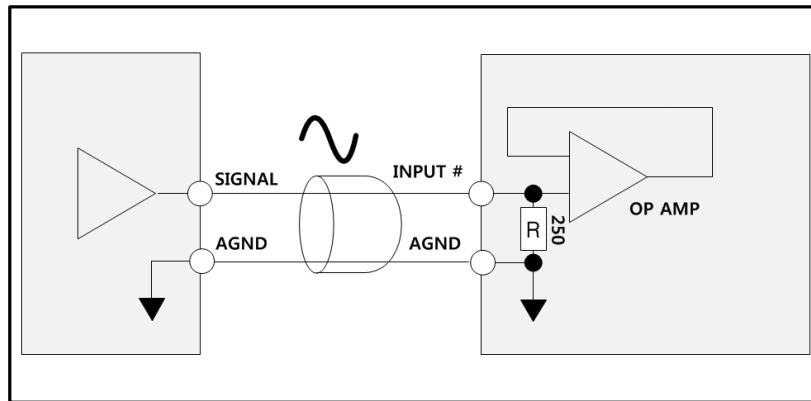
Status LED



IO PWR	I/O POWER LED	ON	DIGITAL I/O POWER(24V DC) ON
		OFF	DIGITAL I/O POWER(24V DC) OFF
S PWR	SYSTEM POWER LED	ON	SYSTEM POWER(3.3V DC) ON
		OFF	SYSTEM POWER(3.3V DC) OFF
MODE	EtherCAT AL STATE LED	OFF	INIT
		Blinking(slow)	PRE-OP
		Single Flash	SAFE-OP
		ON	OP
		Flickering(fast)	BOOTSTRAP
LINK 0(1)	LINK 0(1) STATE LED	Blinking(slow)	MII Port 0(1) OPEN
		OFF	MII Port 0(1) Closed
AI 0-7	INPUT STATE LED	ON	Activated
		OFF	Inactivated



Circuit Diagram (Analog Input)



## Hardware Reference Manual Update List

No.	Version	Date	Changes in
1	1.00	2016.04.25	First Edition
2	1.01	2017.10.24	RJ-45 Connector Update

# ETS Reference Manual

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