ETS Hardware Reference Manual
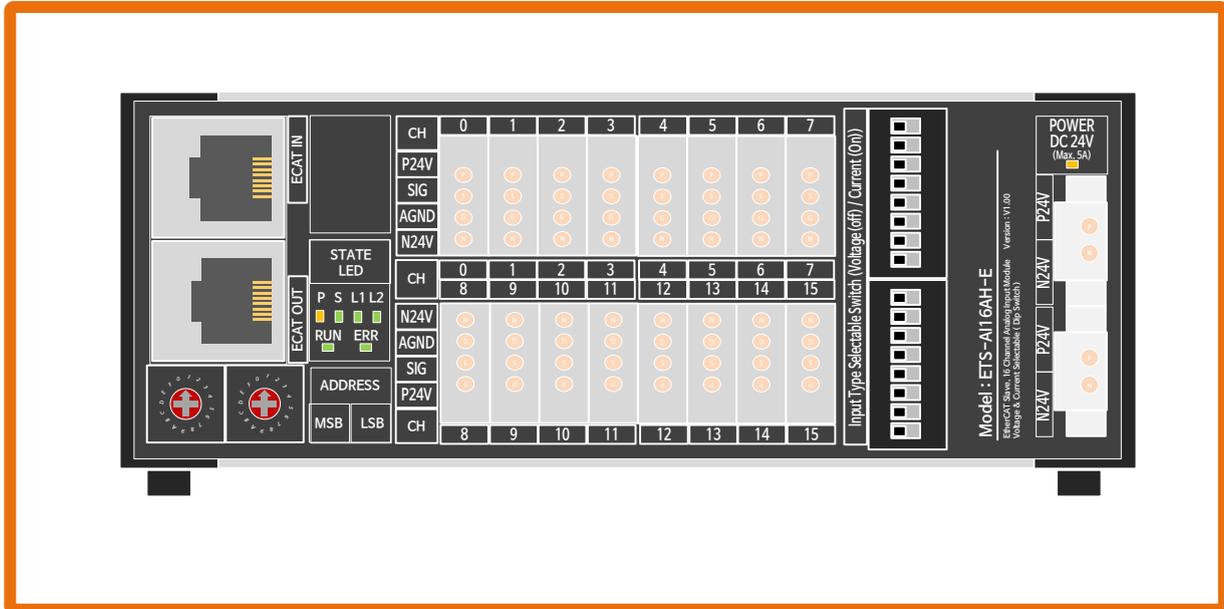
◈◈ COMIZOA

16CHANNEL ANALOG INPUT MODULE

ETS-AI16AH-E

Table Of Contents

개요

ETS - AI16AH - E (Analog Input 16ch)

ETS-AI16AH-E는 커미조아의 **EtherCAT** 기반 제어기의 16 채널 **Analog** 입력 모듈입니다.

각 채널은 최대 **-10 ~ +10(V)**의 전압 혹은 **4~20mA, 4~24mA, 0~20mA**의 전류를

선택적(DIP SWITCH 설정)으로 입력 받을 수 있습니다.

본 매뉴얼은 **ETS-AI16 AH-E**의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼 입니다.

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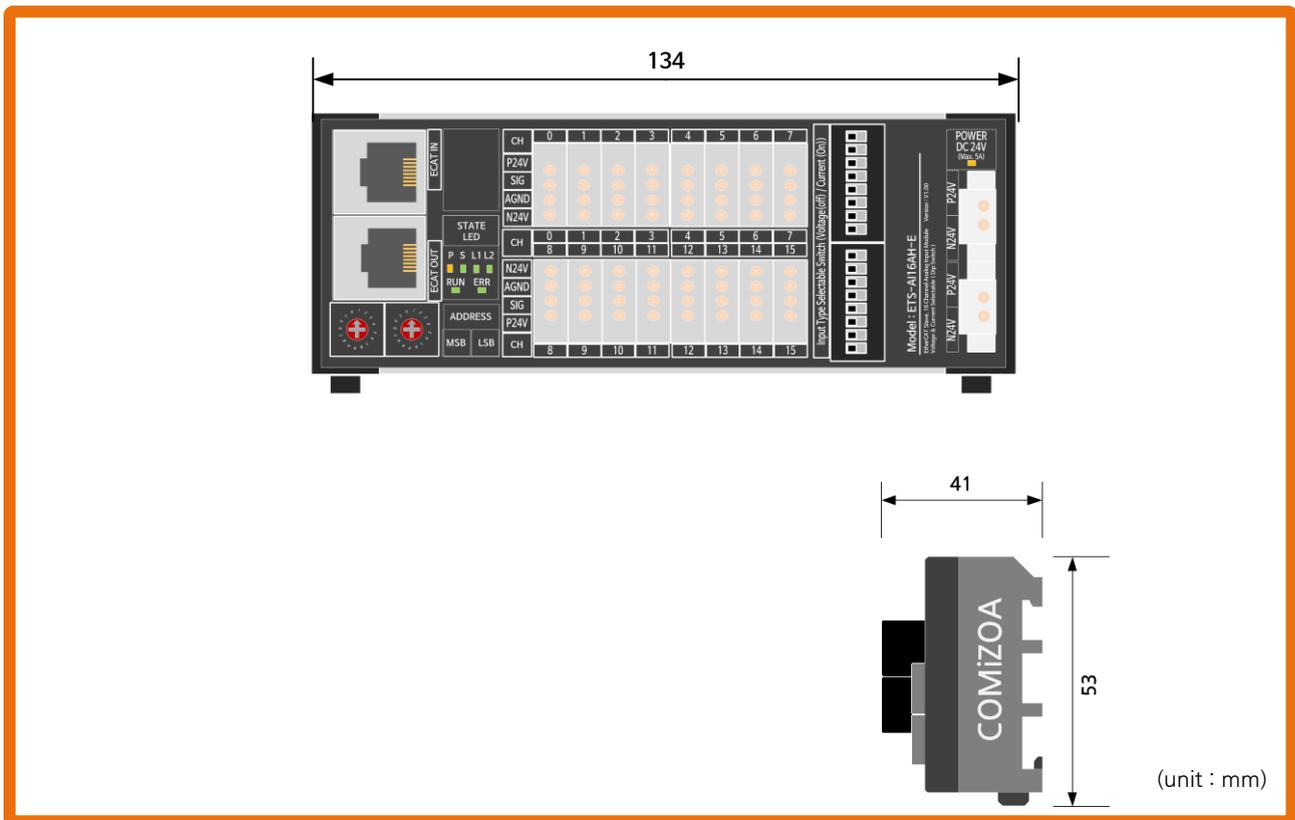◉ Independent System Power

제품사양

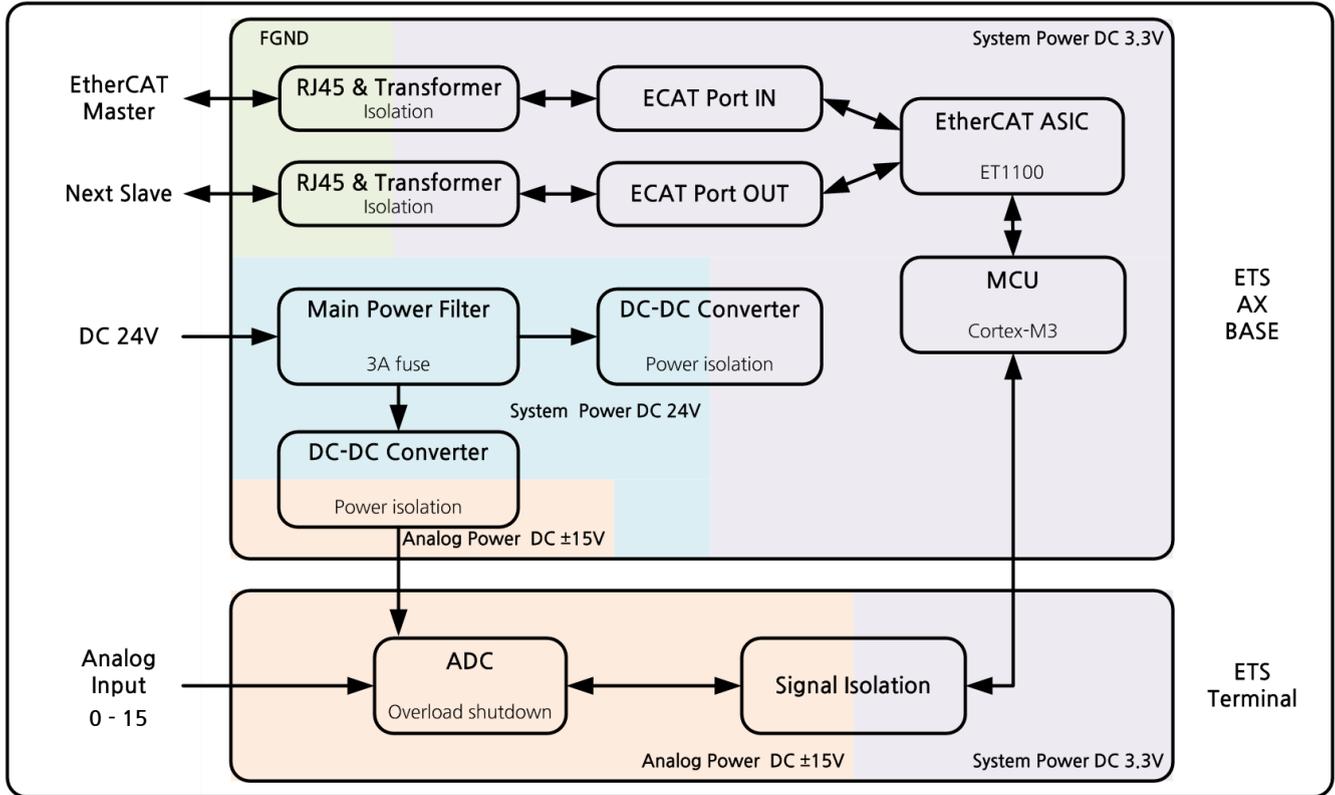| Contents	Details
Dimension	134 * 53 * 41 (mm)
Operating Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 80°C
Humidity	5% ~ 90%, non-condensing
Power consumption	System Power : 62 mA @ DC 24V ± 5% Analog Power : 41 mA @ DC 24V ± 5%

Environmental Specification

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

Analog Input Specification

Dimension

Block diagram
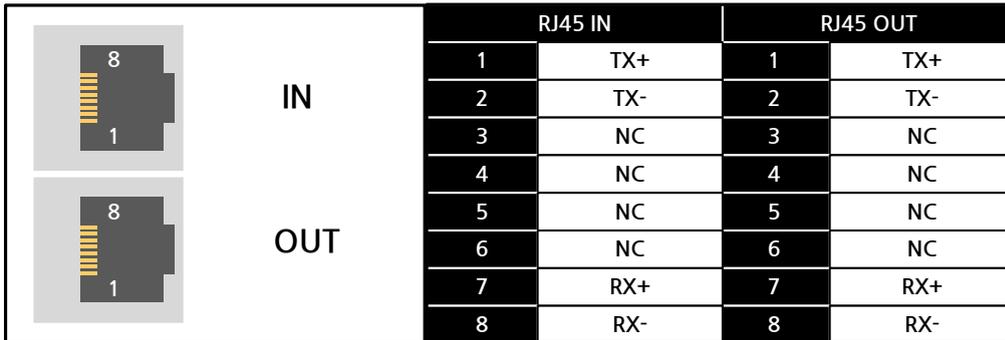

ETS-AI16AH-E Block diagram

Interface Connect

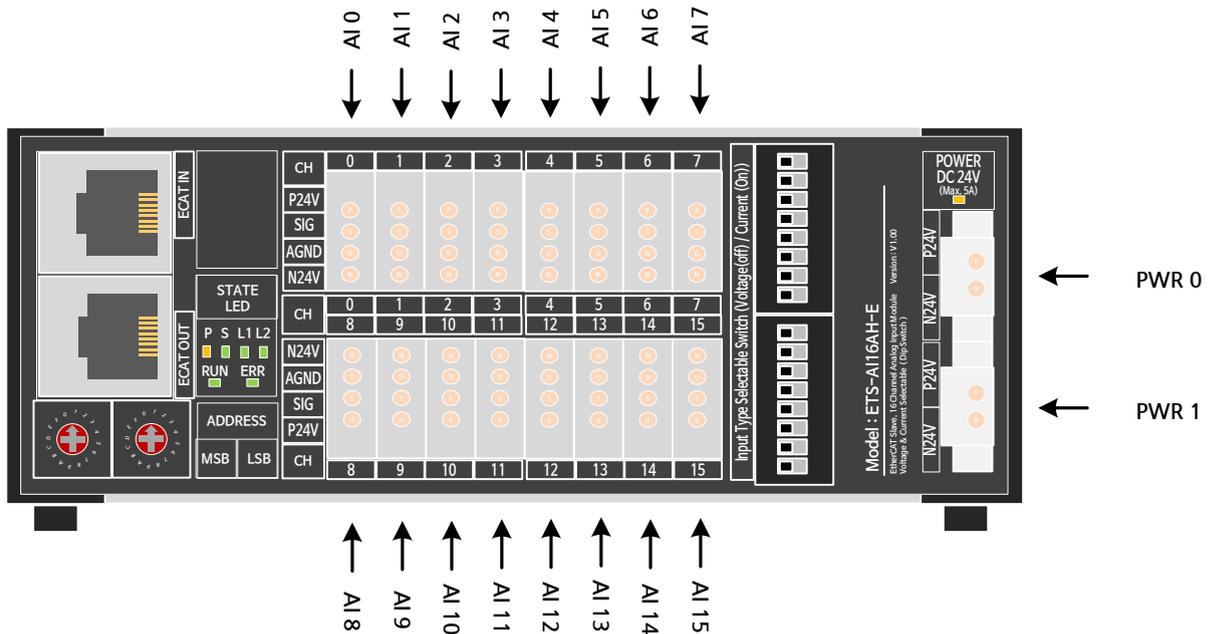EtherCAT Master

ETS NODE 0   ETS NODE 1   ETS NODE 2

ETS NODE 3   ETS NODE 4   ETS NODE 5
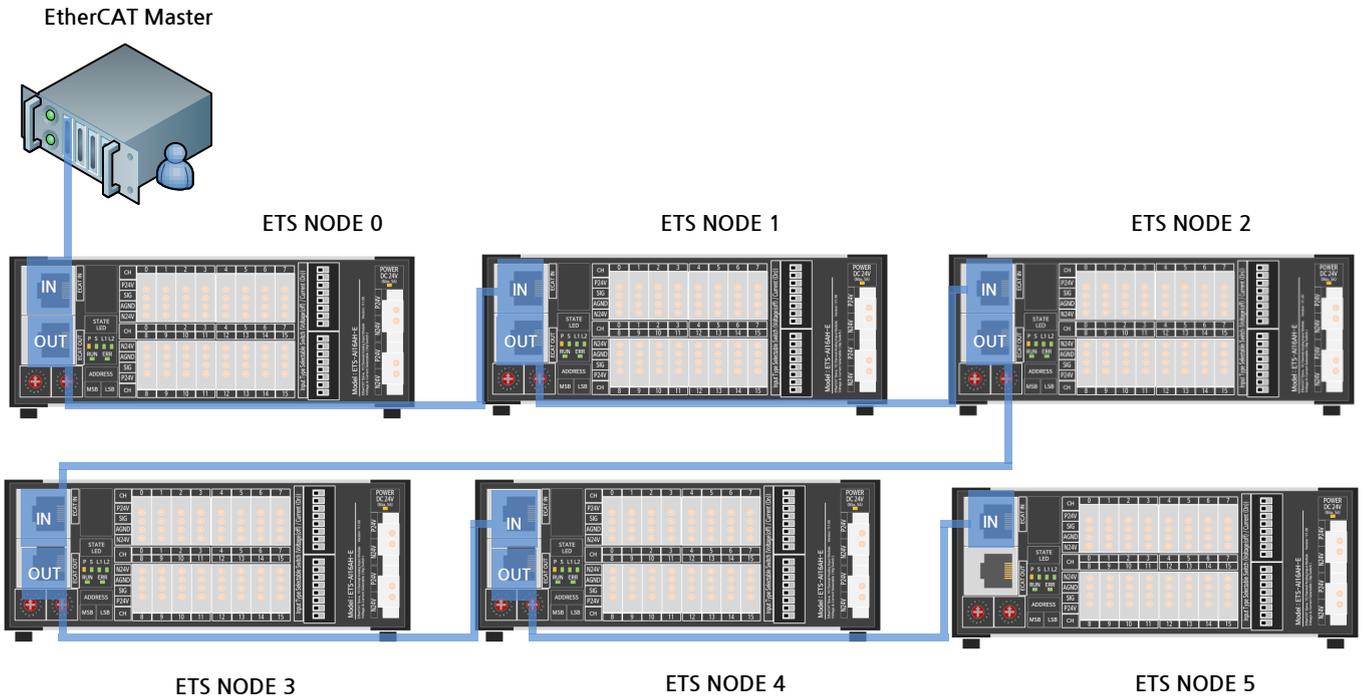
Device ID Setting

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

Connector

◾ RJ45 Connector

	RJ45 IN		RJ45 OUT	
1	TX+	1	TX+
2	TX-	2	TX-
3	NC	3	NC
4	NC	4	NC
5	NC	5	NC
6	NC	6	NC
7	RX+	7	RX+
8	RX-	8	RX-

◾ Contact Number

◾ PIN MAP

PWR 0, 1		
P	P	PWR DC P24V
N	N	PWR DC N24V

AI 0 ~ 15		
P	P	P24V
S	S	Analog Input
G	G	AGND
N	N	N24V

◾ SWITCH

ON	CURRENT
OFF	VOLTAGE

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

ON	CURRENT
OFF	VOLTAGE

| 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
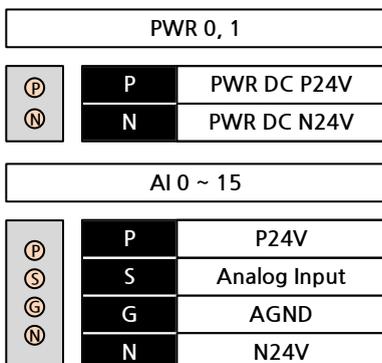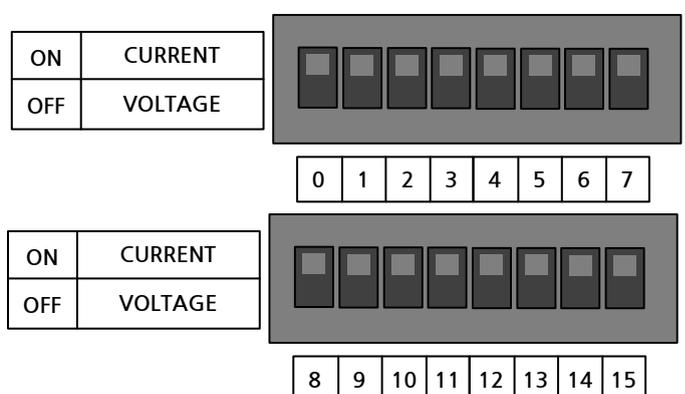
Status LED
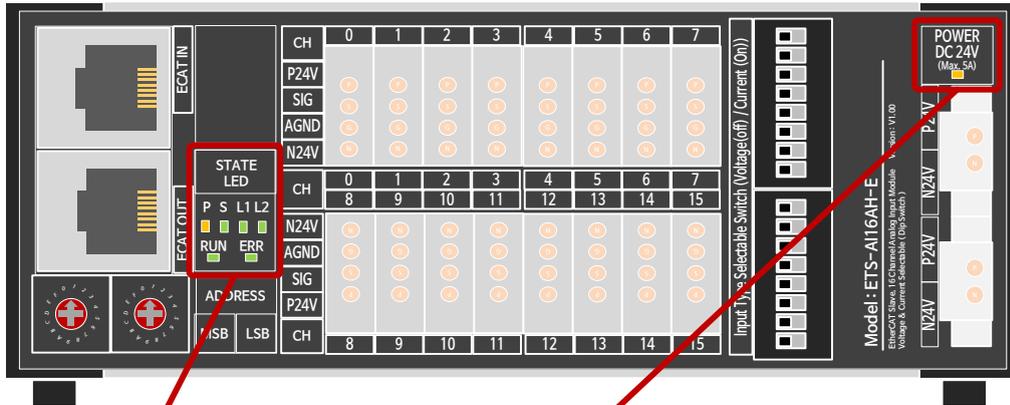
IO PWR

IO PWR	I/O POWER LED	ON	DIGITAL I/O POWER(24V DC) ON
		OFF	DIGITAL I/O POWER(24V DC) OFF
P	SYSTEM POWER LED	ON	SYSTEM POWER(3.3V DC) ON
		OFF	SYSTEM POWER(3.3V DC) OFF
S	EtherCAT AL STATE LED	OFF	INIT
		Blinking(slow)	PRE-OP
		Single Flash	SAFE-OP
		ON	OP
		Flickering(fast)	BOOTSTRAP
L1(2)	LINK 0(1) STATE LED	Blinking(slow)	MII Port 0(1) OPEN
		OFF	MII Port 0(1) Closed
RUN	INPUT STATE LED	ON	Activated
		OFF	Inactivated
ERR	ERROR STATE LED	ON	ERROR
		OFF	Inactivated

Circuit Diagram (Analog Input)

SIGNAL   INPUT #

AGND   AGND

V-I Select
S/W

R

Analog Output
Device

ETS-AI16AH
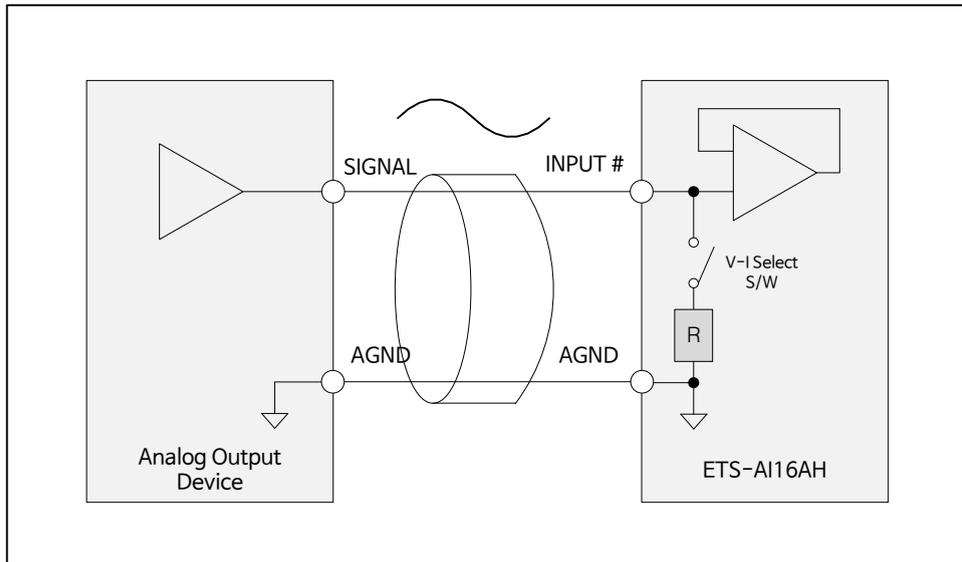
Hardware Reference Manual Update List

No.	Version	Date	Changes in
1	1.00	2019.05.08	First Edition

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