

ETS Hardware Reference Manual



32CHANNEL DIGITAL NPN TYPE INPUT MODULE

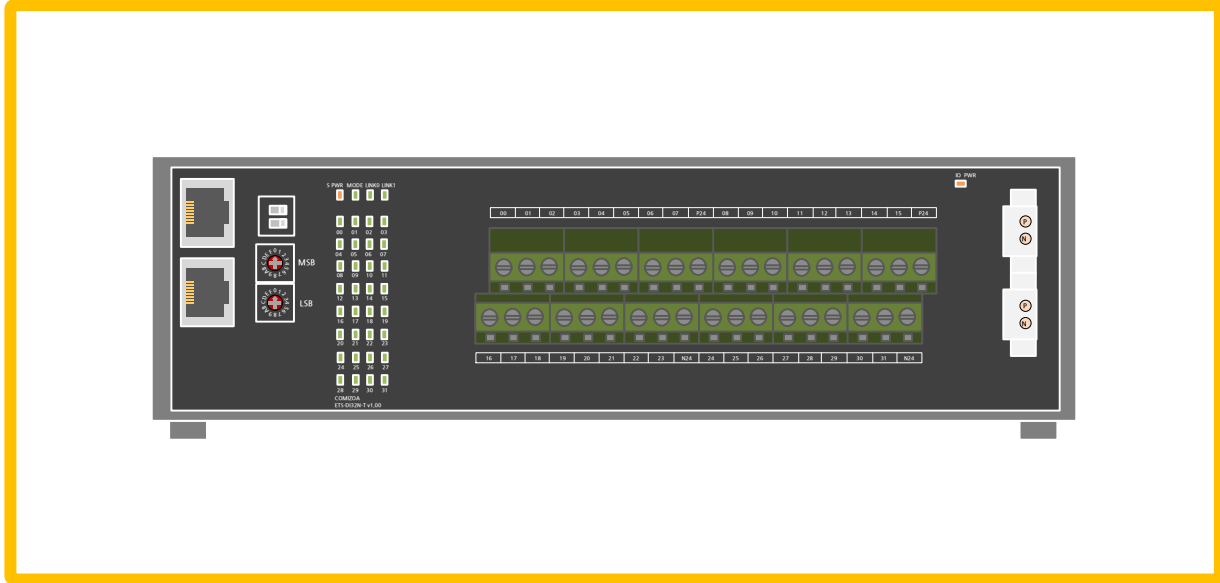
ETS-DI32N-T (v1.00)

OCT 2017
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개요



ETS - DI32N - T (Digital NPN Input 32ch)

ETS-DI32N-T는 커미조아의 EtherCAT 기반 제어기의 32채널 Digital 입력 모듈입니다.

각 채널의 내부 제어신호와 외부 입출력 신호는 포토커플러를 사용하여 절연됩니다.

본 매뉴얼은 ETS-DI32N-T의 하드웨어 구성과 기능에 대해 설명하는 하드웨어 매뉴얼입니다.

- EtherCAT Slave Module
- CiA Standard 401 and ETG.5001 Modular Device Profile
- Supports Terminal Device ID
- Digital I/O Power Over Current Protection
- Digital Input 32(NPN)
- Independent System Power

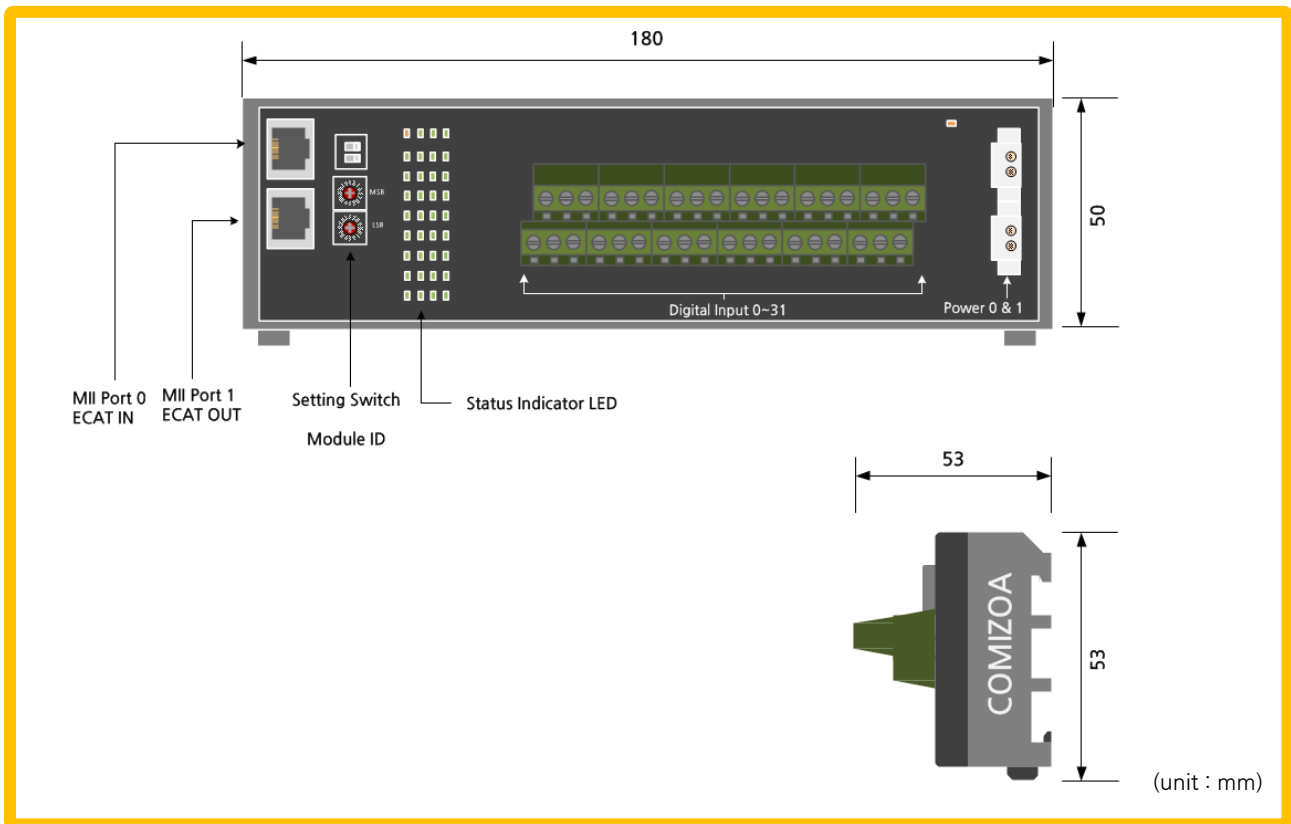
Specification

Contents	Details
Dimension	180 * 53 * 53 (mm)
Operating Temperature	0°C ~ 50°C
Storage Temperature	-20°C ~ 80°C
Humidity	5% ~ 90%, non-condensing
Power consumption	System Power : 47mA @ DC 24V ± 5% I/O Power : 180mA @ DC 24V ± 5%

Environmental Specification

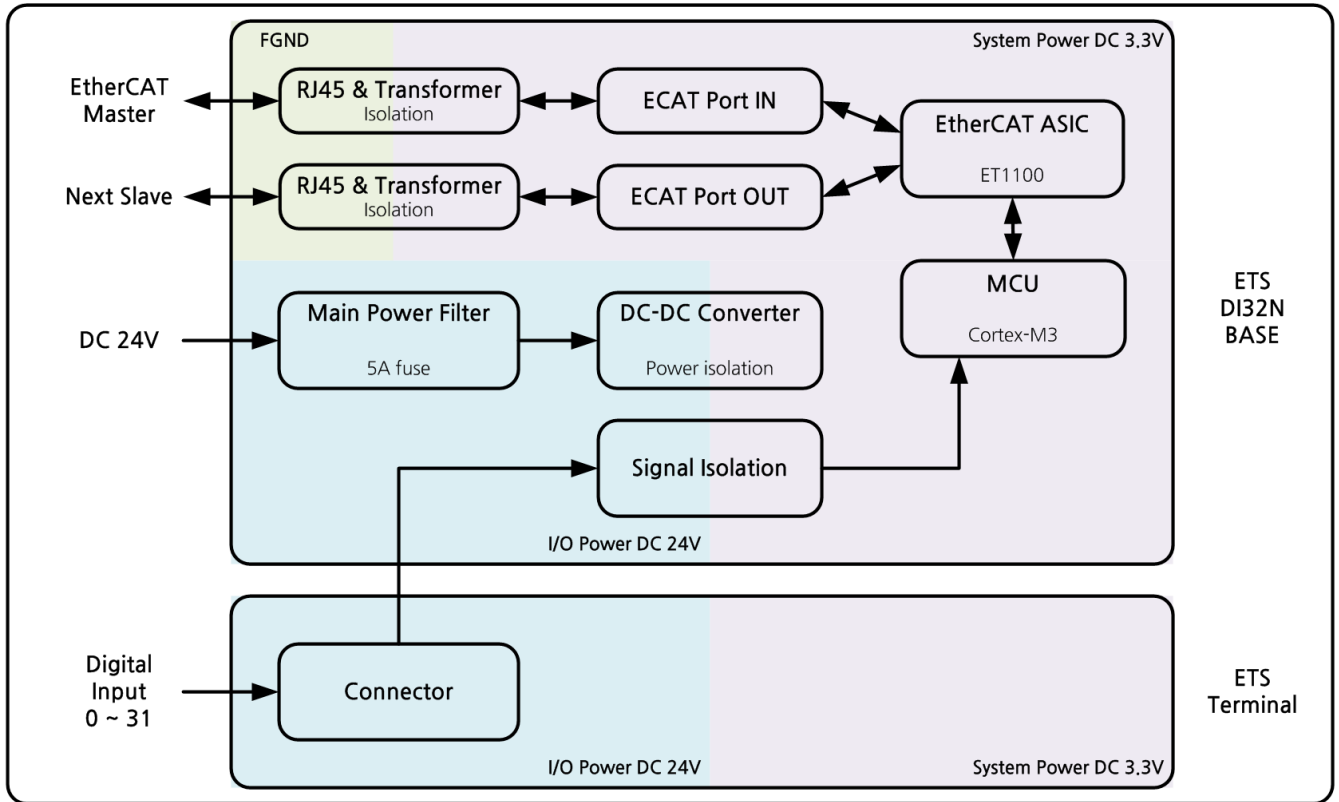
Contents	Details
Number of Inputs	32 Input
Input type	Current Sinking type (NPN)
Isolation	Photo-coupler (V _{iso} = 3,000V _{rms})
OFF State Voltage (logic ' 1')	Min. 11V DC ~ Max. 28.8 V DC (EN 61131-2, type 1/3)
On State Voltage (logic ' 0')	Min. 0V DC ~ Max. 5V DC (EN 61131-2, type 1/3)
Input Current	Max. 4.56mA per @ 24V DC
Input Impedance	Approx. 5KΩ (±5%)
Wiring Contact	I/O : 36P Screw Type Terminal / Power : USL-3FBS-2P

Digital Input Specification



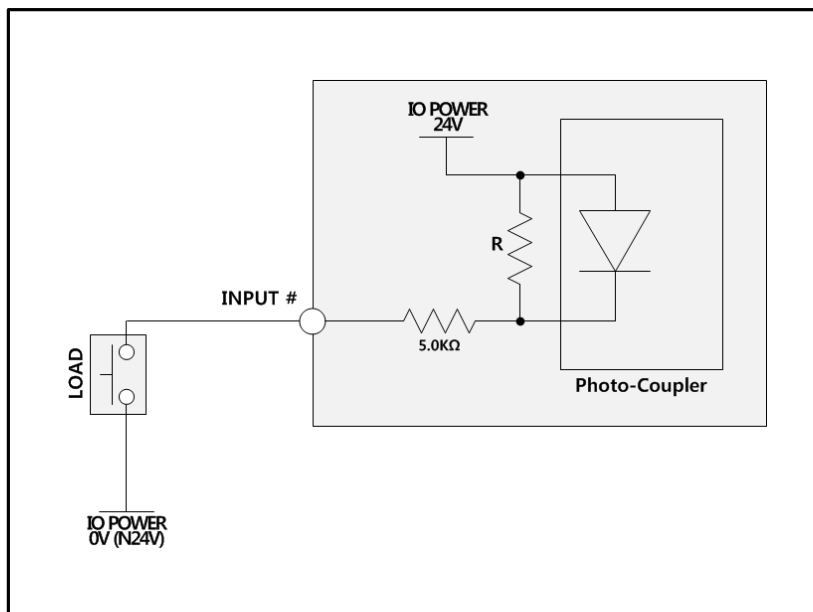
Dimension

Block Diagram

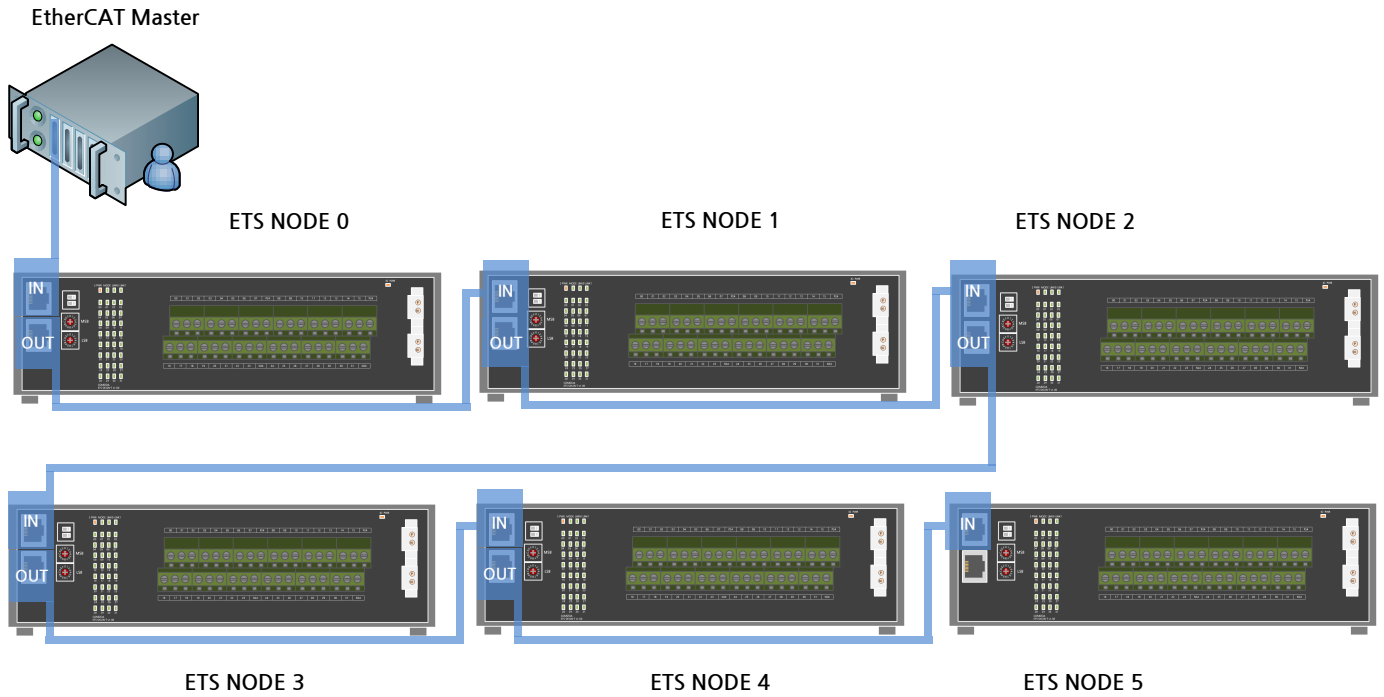


ETS-DI32N-T Block diagram

Circuit Diagram (Digital Input)



Interface Connect

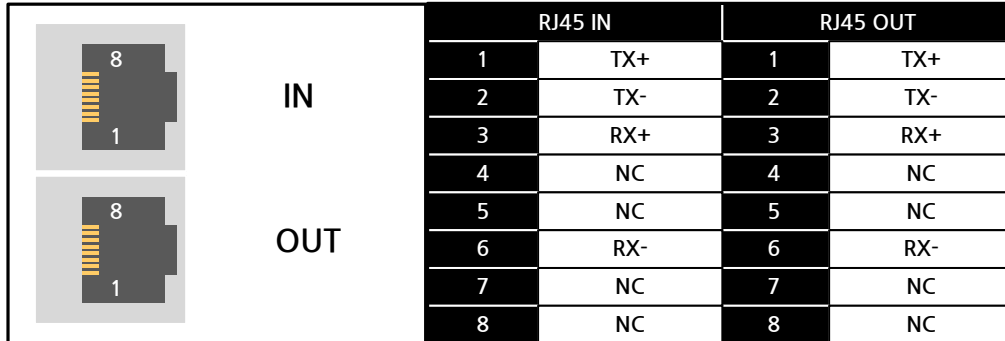


Device ID Setting

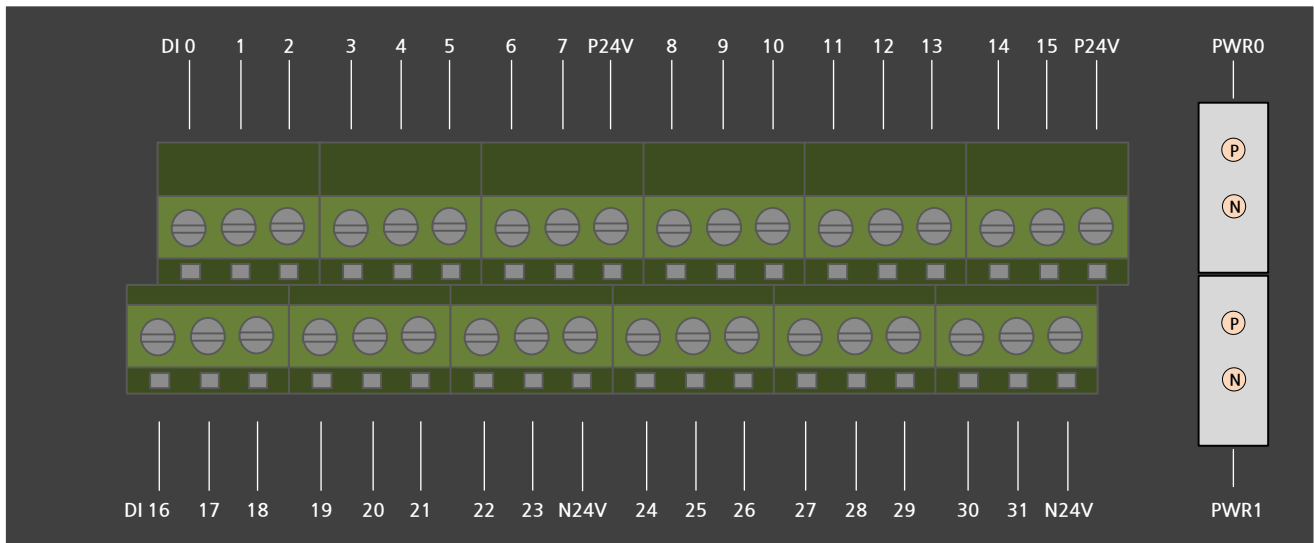
	NODE ID setting	$I.P = MSB * 16 + LSB$
	NODE ID range	1 ~ 256

Connector

▣ RJ45 Connector



▣ Contact Number

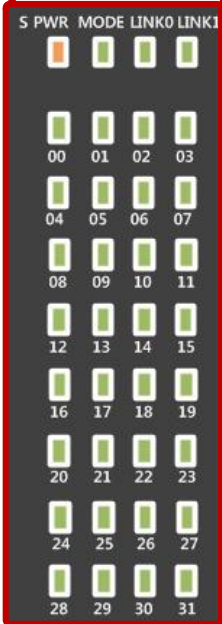
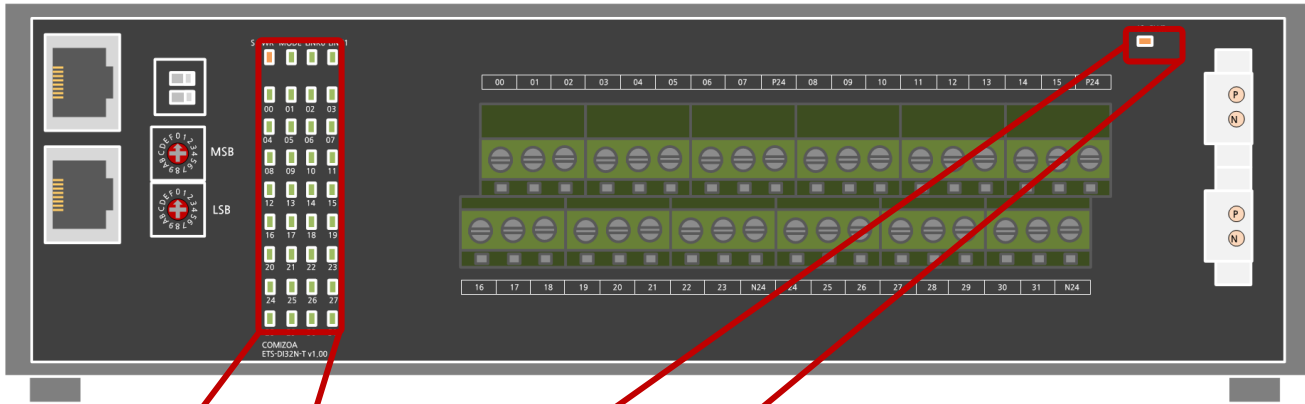


▣ PIN MAP

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

P24V, N24V	
P24V	PWR DC P24V OUTPUT
N24V	PWR DC N24V OUTPUT

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
DI 0-31	INPUT STATE LED	ON	INPUT ON STATE (LOGIC ' 1')
		OFF	INPUT OFF STATE (LOGIC ' 0')

Hardware Reference Manual Update List

No.	Version	Date	Changes in
1	1.00	2016.03.08	First Edition
2	1.01	2017.10.24	RJ-45 Connector Update

ETS Reference Manual

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