

B6_eMT3105_CANopen_Connection

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1. Overview

CANopen features: high speed and long distance transmission, resistance to electromagnetic interference, highly extensible, and highly reliable.

This demo project takes ICP DAS CANopen Module CAN-8223 as an example of connection.

CANopen

- High speed and long distance transmission
- Resistance to electromagnetic interference
- Multi-master structure
- High reliability

1. CAN-8223:
Turn the dip switches ON or OFF to read its value.
2. Turn the dip switches ON to light the lamps and the corresponding addresses will display accordingly.

CAN-8223

The diagram illustrates a CANopen system. A PC monitor displays a graphical interface. A CAN-8223 module is connected to the PC via a CANopen network. The module features a small LCD display showing '000' and 'ICP.com'. To the right of the module, there are two dip switches, each with a corresponding lamp below it. The top lamp is lit, and the bottom lamp is unlit. A green arrow points from the top lamp to the bottom lamp, indicating a transition or comparison.

2. Setting up the Screen

This demonstrates turning ON or OFF CAN-8223 dip switches can also turn ON or OFF PLC lamps and the value displayed will change accordingly.



Set Data Transfer (Time-based) in this project to regularly transmit data from TxPDO1 (read only) to RxPDO1 (write only). When turning ON or OFF the dip switches, TxPDO1 will read the status and send data to RxPDO1.

Data Transfer (Time-based) Object

Description :

Attribute

Address type : Word Interval : 0.5 second(s)

No. of word :

Active only when designated window opened

Source address

PLC name : CANopen Slave

Address : TxPDO1 0

Destination address

PLC name : CANopen Slave

Address : RxPDO1 0

3. Addresses

The object addresses used in this demo project are listed below, the addresses and object ID can be modified based on actual usage.

Object	Address	Object ID	Description
Window 4			
Toggle Switch	LB-9020	TS_0	Show (set ON)/hide (set OFF) system setting bar
	LB-9015	TS_1	FS window/button control [hide (ON)/show(OFF)]
Window 10			
Bit Lamp	TxPDO1 (Bit)-0	BL_0	Read DI0 status (read only)
	TxPDO1 (Bit)-01	BL_1	Read DI1 status (read only)
	TxPDO1 (Bit)-02	BL_2	Read DI2 status (read only)
	TxPDO1 (Bit)-03	BL_3	Read DI3 status (read only)
	TxPDO1 (Bit)-04	BL_4	Read DI4 status (read only)
	TxPDO1 (Bit)-05	BL_5	Read DI5 status (read only)
	TxPDO1 (Bit)-06	BL_6	Read DI6 status (read only)
	TxPDO1 (Bit)-07	BL_7	Read DI7 status (read only)
	RxPDO1 (Bit)-0	BL_8	Write DI0 status (write only)
	RxPDO1 (Bit)-01	BL_9	Write DI1 status (write only)
	RxPDO1 (Bit)-02	BL_10	Write DI2 status (write only)
	RxPDO1 (Bit)-03	BL_11	Write DI3 status (write only)

Object	Address	Object ID	Description
Bit Lamp	RxPDO1 (Bit)-04	BL_12	Write DI4 status (write only)
	RxPDO1 (Bit)-05	BL_13	Write DI5 status (write only)
	RxPDO1 (Bit)-06	BL_14	Write DI6 status (write only)
	RxPDO1 (Bit)-07	BL_15	Write DI7 status (write only)
	LB-2	BL_16	Display background image
Numeric Display	TxPDO1-0	ND_0	Read TxPDO1 register value
	RxPDO1-0	ND_1	Send TxPDO1 value to this address
Window 4			
Set Bit	LB-9020	SB_0	Show (set ON)/hide (set OFF) system setting bar