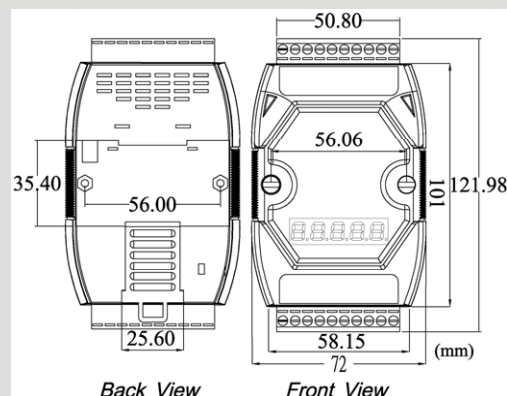


CANopen Slave/Modbus RTU Gateway



I-7232D



Dimensions

The I-7232D is specially designed for the slave device of CANopen protocol. It follows the CANopen Spec DS-301 V4.02 and DSP-401 V2.1, and supplies many features for users, such as dynamic PDO, EMCY object, error output value, SYNC cyclic and acyclic ... etc. The I-7232D supports up to 10 Modbus/RTU modules for I/O expansion. User can choose DI/DO/AI/AO modules of Modbus/RTU series to fit the customized practice applications. In addition, we also provide I-7232D Utility to allow users to create the EDS file dynamically.

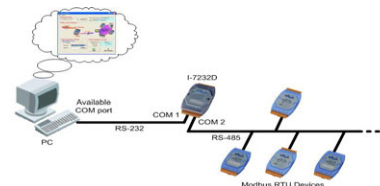
Features

- NMT: Slave
- Error Control: Node Guarding Protocol
- No. of SDOs: 1 Server, 0 Client
- PDO Mapping: variable
- PDO Modes: Event Triggered, Remotely requested, Cyclic and Acyclic SYNC
- Emergency Message: available
- CANopen Version: DS-301 v4.02
- Device Profile: DSP-401 v2.1
- Produce EDS file Dynamically
- Run, ERR, and Overrun indicator
- Support Max 10 Modbus RTU series modules

Modbus RTU Command Support

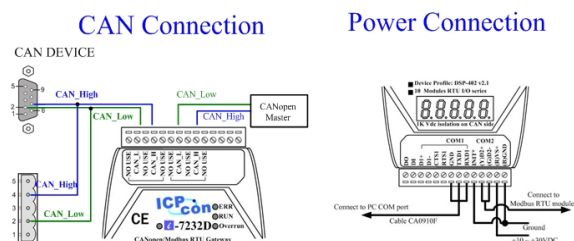
Function code.	Description
01 (0x01)	Read Coil Status
02 (0x02)	Read Input Status
04 (0x04)	Read input Registers
06 (0x06)	Preset Single Register
15 (0x0F)	Preset Multi Registers

Utility Features

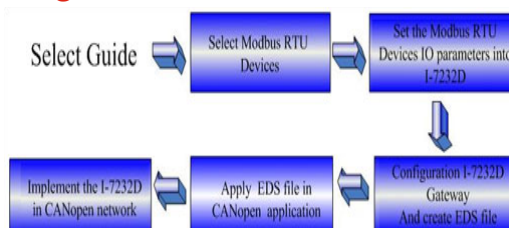


- Support CANopen node ID, baud rate setting
- Provide Modbus RTU parameters setting
- Display Modbus RTU devices configuration
- Show CANopen application objects configuration
- Produce EDS file dynamically.

Pin Assignments



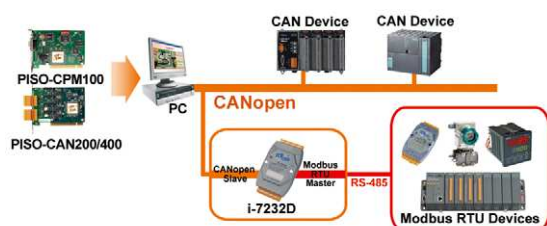
Design Flowchart



Hardware Specifications

Hardware	
CPU	80188, 40 MHz or compatible
SRAM/Flash/EEPROM	512 KB / 512 KB / 16 KB
Watchdog	Watchdog IC
CAN Interface	
Controller	NXP SJA1000T with 16 MHz clock
Transceiver	NXP 82C250
Connector	5-pin screwed terminal block (CAN_L, CAN_H, N/A for others)
Isolation	1000 V _{DC} for DC-to-DC, 2500 Vrms for photo-couple
Protocol	CANopen DS-301 ver4.02, DS-401 ver2.1
UART Interface	
COM 1	RS-232 (For configuration)
COM 2	RS-485 (Self-turner inside)
Baud Rate (bps)	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
Data bit	7, 8
Stop bit	1, 2
Parity	None, Even, Odd
Protocol	Modbus RTU
LED	
Round LED	MS LED, NS LED, IO LED
5-digit 7 Segment	Yes
Power	
Power supply	Unregulated +10 ~ +30 V _{DC}
Protection	Power reverse polarity protection, Over-voltage brown-out protection
Power Consumption	3 W
Mechanism	
Dimensions	72mm x 122mm x 33mm (W x L x H)
Environment	
Operating Temp.	-25 ~ 75 °C
Storage Temp.	-30 ~ 80 °C
Humidity	10 ~ 90% RH, non-condensing

Application



5-digit 7-Segment LED Display

7-segment LED Number	CAN Baud rate	RS-485 Baud rate
0	10 K bps	1200 bps
1	20 K bps	2400 bps
2	50 K bps	4800 bps
3	125 K bps	9600 bps
4	250 K bps	19200 bps
5	500 K bps	38400 bps
6	800 K bps	57600 bps
7	1000 K bps	115200 bps

n: Normal
 Node ID: 0x00 (0) ~ 0x7F (127)
 CAN Baud rate: Refer to the right hand side table
 RS-485 Baud rate: Refer to the right hand side table

LED indicators

LED.	Description
RUN	Indicates the status of the physical layer
ERR	Indicates the condition of the CANopen network state mechanism
OVERRUN	Indicates CAN message loading is heavy and cause buffer overrun

Ordering Information

I-7232D	CANopen Slave/Modbus RTU Gateway
I-7232D CR	CANopen Slave/Modbus RTU Gateway (RoHS)