I-7242D

I-7242D

DeviceNet / Modbus RTU Gateway

Introduction

The I-7242D is one of CAN bus products in ICP DAS. The device allows a master located on a DeviceNet network to enter into a dialogue with the slaves on a Modbus RTU network In DeviceNet network, it is a Group 2 Only Slave device, and supports “Predefined Master/Slave Connection Set”. It is a general protocol converter operating in a way that is transparent to the user. In addition, we also provide the utility software for users to configure the I-7242Ds parameters and build the EDS file. Users can easily apply Modbus RTU devices in DeviceNet applications with the I-7242D.

Applications

- Control System
- Building Automation
- Factory Automation
- Distributed data acquisition

Features

- Group two only server DeviceNet subscriber
- Dynamic Assembly Objects Mapping
- On-line change baud rate and MAC ID of CAN
- NS, MS and IO LED indicators
- 7-segmemt LED to show operation mode, MAC ID, baud rate and error code
- Connection supported:
  1 “Explicit Connection”
  1 “Polled Command/Response” connection
  1”Bit-Strobed Command/Response” connection
  1”Cnange-of-State/Cyclic” connection
- Configuration facilitated by the use of specific EDS files
- Dedicated Explicit message interface for full Modbus interface

Modbus RTU Features

- Maximum number of subscribers: 10 Modbus slaves
- Communication speed: 1200,2400,4800,9600,19200,38400,57600 or 115200 bits/s, configured using Utility.
- Data bits: 8 bits, configured using Utility
- Parity bits: None, even or odd, configured using Utility
- Stop bits: 1 or 2 bits, configured using Utility

Utility

The I-7242D Utility is help users to configure the modules, and has following features:

- Support DeviceNet node ID, baud rate setting
- Support Modbus RTU parameters setting
- Show Modbus RTU devices configuration
- Show DeviceNet application and assembly objects configuration
- Support DeviceNet Polling, Bit-Strobe and COS/Cyclic Produced and Consumed connection path setting
- Dynamic produce EDS file

Modules Support

Code	Name	Description
01 (0x01)	Read Coil Status	Read the ON/OFF status of discrete outputs in the slave
02 (0x02)	Read Input Status	Read the ON/OFF status of discrete inputs in the slave
03 (0x03)	Read Holding Registers	Read the binary contents of holding registers in the slaves
04 (0x04)	Read Input Registers	Read the binary contents of input registers in the slaves
15 (0x0F)	Force Multi Coils	Forces each coil in a sequence of coils to either ON or OFF
16 (0x10)	Preset Multi Registers	Preset value into a sequence of holding registers

Specifications

CPU	80188, 40MHz
Flash	512K bytes
SRAM	512K bytes
EERROM	2K bytes (Can upto 128K bytes or change to 2K/8K FRAM)
NVRAM	31 bytes
Real Time Clock	16 bit
Watch Dog Timer	CPU Built-in
COM1	RS232: TXD,RXD,RTS,CTS,GND
COM2	RS485: D2+, D2-
Communication Speed	115200 max
CAN Controller	Phillip SJA1000T CAN Controller
CAN Transceiver	Phillip 82C250/251CAN Transceiver
LED Directors	NS, MS, IO
Display	7-segment LED: 5digit
Isolated	2500Vrms on CAN side
Power Supply	3.9W unregulated +10VDC to +30Vdc
Operating Temp	-25C to 75C
Storage Temp	-30C to 85C
Humidity	5 ~ 95%
Dimensions	133 x 72 x 33 mm

Ordering Information

I-7242D	DeviceNet Slave / Modbus RTU Master Gateway