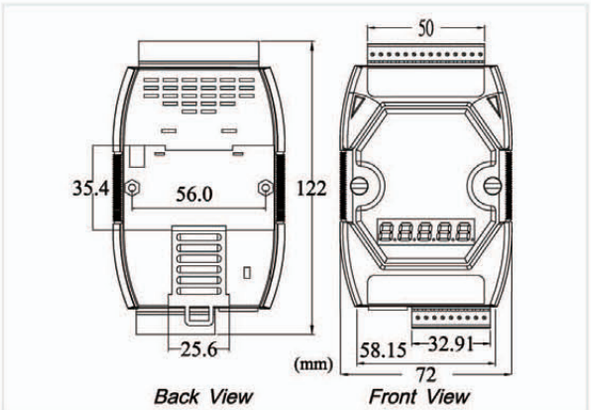
DeviceNet Gateway

DeviceNet Slave / Modbus Master Gateway

GW-7243D



Dimensions

The GW-7243D is one of DeviceNet products in ICP DAS and it stands as a DeviceNet slave to Modbus TCP/RTU/ASCII master gateway device. It allows a master located on a DeviceNet network to enter a dialogue with slave devices on the Modbus TCP/RTU/ASCII network. In DeviceNet network, it functions as a "Group 2 Only Server" device. In Modbus network, GW-7243D represents a master device and sends request message to access the Modbus TCP/RTU/ASCII slave device by DeviceNet object definition. In order to simplify the protocol converting mechanism, we also provide the GW-7243D Utility tool to configure the device and build EDS file for the DeviceNet slave device.

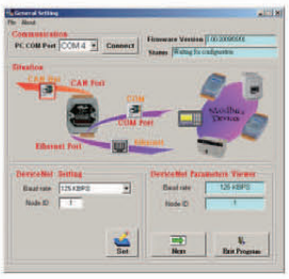
Features

- Group 2 Only Server DeviceNet subscriber
- Support Explicit and Poll Connection
- User can select the Modbus RTU/ASCII protocol for each COM port
- Maximum support 10 Modbus RTU/ASCII commands for each COM port
- Maximum support 4 Modbus TCP devices
- Maximum support 5 Modbus TCP commands for each Modbus TCP device
- Support Modbus function codes: 0x01 , 0x02 , 0x03 , 0x04 , 0x05 , 0x06 , 0x0F and 0x10
- Maximum support 2048 channels DI , 2048 channels DO , 1024 channels AI and 1024 channels AO for each Modbus TCP device

Modbus Command Support

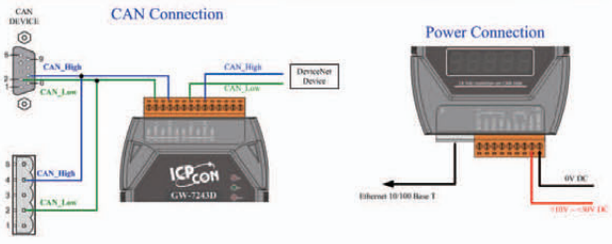
Function code.	Description
01 (0x01)	Read Coil Status
02 (0x02)	Read Input Status
03 (0x03)	Read Holding Registers
04 (0x04)	Read input Registers
05 (0x05)	Force Single Coils
06 (0x06)	Preset Single Register
15 (0x0F)	Force Multi Coils
16 (0x10)	Preset Multi Registers

Utility Features

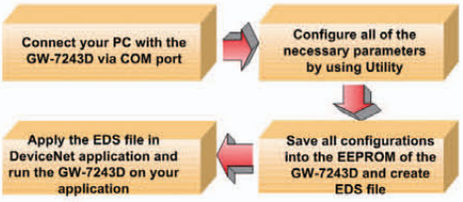


- Support module IP/Gateway/Mask setting.
- Support Modbus TCP/RTU/ASCII protocol communication parameters setting.
- Support DeviceNet Polling I/O path setting.
- Dynamic produce EDS file after setting.

Pin Assignments



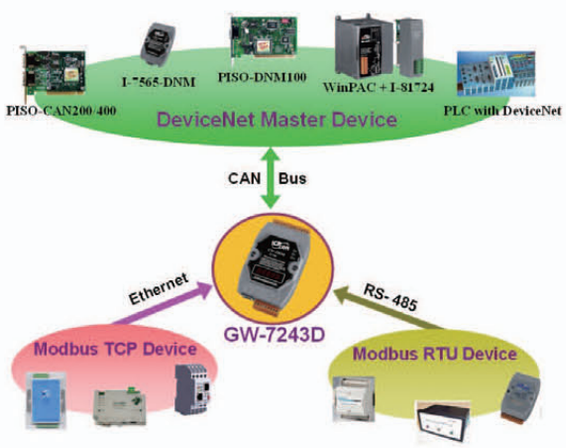
Design Flowchart



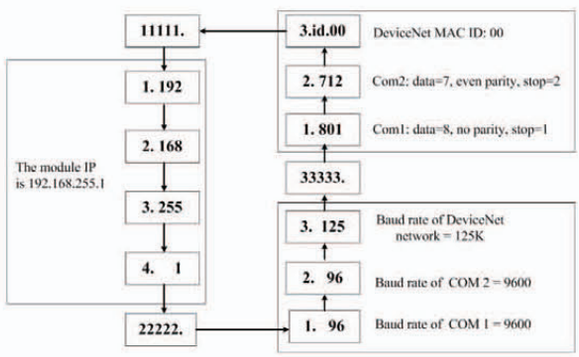
Hardware Specifications

Hardware	
CPU	80186, 80 MHz or compatible
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	DeviceNet Volumn I ver2.0, Volumn II ver2.0
UART Interface	
COM 1	RS-232
COM 1 Connector	5-pin screwed terminal block (TxD, RxD, RTS, CTS, GND)
COM 2	RS-485 (Self-turner inside)
COM 2 Connector	2-pin screwed terminal block (DATA+, DATA-)
Protocol	Modbus ASCII / Modbus RTU
Ethernet Interface	
Controller	10/100Base-TX Ethernet Controller (Auto-negotiating, Auto_MDIX)
Connector	RJ-45 with LED indicator
Protocol	Modbus TCP
Power	
Power supply	Unregulated +10 ~ +30 V_{DC}
Protection	Power reverse polarity protection, Over-voltage brown-out protection
Power Consumption	2.5 W
Mechanism	
Dimensions	72mm x 33mm x 122mm (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 Display



Ordering Information

GW-7243D-G	DeviceNet Slave / Modbus Master Gateway
GW-7243D-G CR	DeviceNet Slave / Modbus Master Gateway (RoHS)