



GW-7828

Modbus RTU Slave to M-Bus Master Gateway

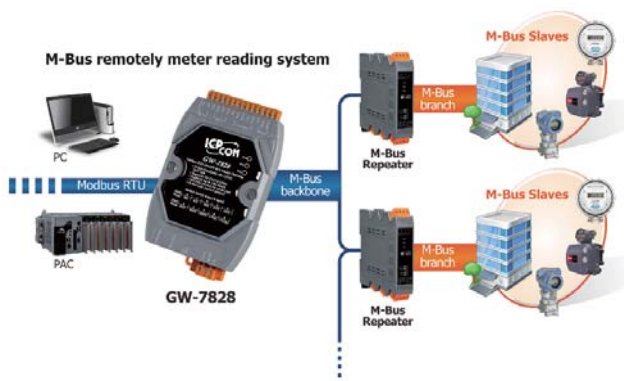
Introduction

The M-Bus ("Meter-Bus") is a standard for remote reading of meters. It is usable for most types of consumption meters as well as for various sensors and actuators. The GW-7828 is specially designed for M-Bus slave device. It offers Modbus RTU communication by three kinds of interface, RS-232, RS-422 and RS-485. On hardware the GW-7828 has two rotary switches for serial port and M-Bus port baud rate. GW-7828 supports Modbus RTU function code 0x03 and 0x04 to read data of M-Bus meters. Through this design, it is easy to communicate with any standard M-Bus slave.



Applications

The M-Bus (Meter-Bus) is a bus optimized for the reading of measurement instruments like: energy counters, hot and cold water counters, gas, pressure, sensors and actuators, etc.....



Features

- Supports M-Bus standard: EN-13757, CJ/T -188
- Supports Modbus RTU function code 0x03 and 0x04 to read Meter data
- Baud rate: Adjustable by rotary switch from 300 to 115200 bps
- Supports up to 100 M-Bus slaves
- M-Bus over current protection
- Short-circuit protection on the M-Bus
- Update firmware from serial port
- Provides PWR, MTX and MRX 3 LED indicators



Specifications

M-Bus Interface	
Channel	1
Baud Rate (bps)	300 bps ~ 2400 bps
Data bit	5, 6, 7, 8
Stop bit	1, 2
Parity	None, Even, Odd, Space, Mark
Isolation	3750 Vrms for photo-couple
ESD Protection	Contact ±4 kv class B
Current Protection	short-circuit protection
UART Interface	
Channel	1 RS-232 / RS-422 / RS-485 (can't be used simultaneously)
Baud Rate (bps)	300 bps ~ 115200 bps
Data bit	5, 6, 7, 8
Stop bit	1, 2
Parity	None, Even, Odd, Space, Mark
ESD Protection	Contact ±4 kv class B
Power	
Power Supply	Unregulated +10 ~ +30 VDC
Protection	Power reverse polarity protection, Over-voltage brown-out protection
Power Consumption	1.8 W @ 24 VDC (with 1 slave device) 11.8 W @ 24 VDC (with 100 slave devices)
Mechanical	
Installation	DIN-Rail
Dimension (W x L x H)	72mm x 122mm x 33mm
Environment	
Operating Temperature	-25 to +60°C
Storage Temperature	-40 to +80°C
Relative Humidity	10 to 90% RH, Non-condensing

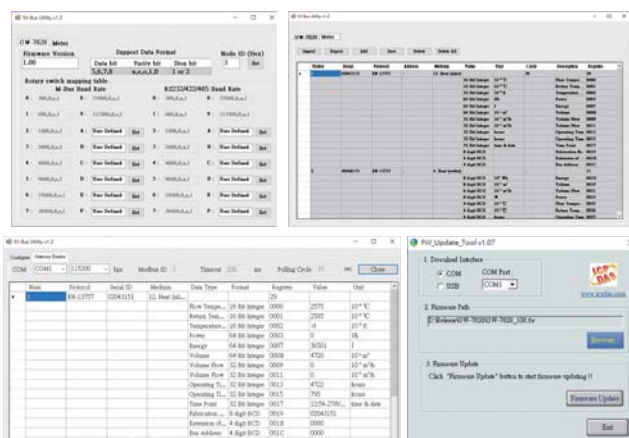
Support Meter

The following meters have been tested with the ICP DAS M-Bus module:

Manufacture	Picture	Model Type	Meter Type
Danfoss		SONOMETER 500	Heat Meter
SENSUS		405S	Water Meter
WESER		PUL	Heat Meter
DIEHL		ALTAIR V4	Water Meter
Wason		LXZD-Y3	Water Meter

Utility

- Provide M-Bus and serial bus user-defined baud rate
- Check firmware version
- Configure meters list of M-Bus gateway
- Test reading meters data
- Update firmware



Baud Rate Selection by Rotary Switch

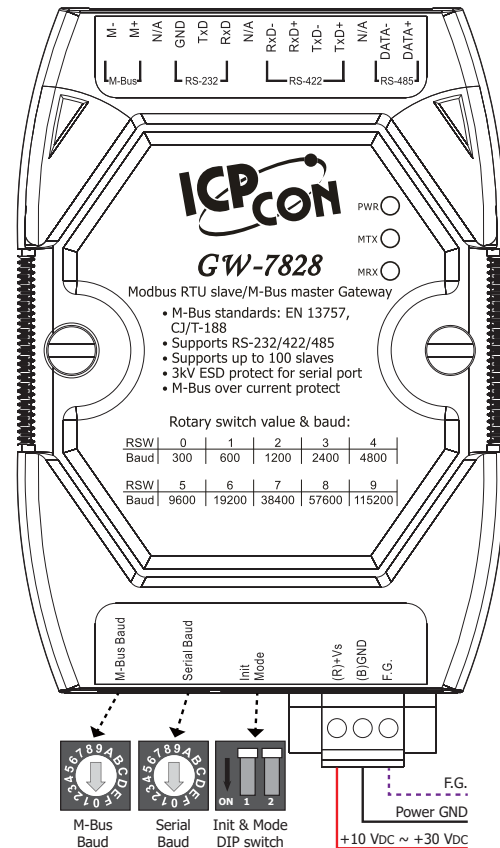
Switch Value	0	1	2	3	4	5
Baud [bps]	300	600	1200	2400	4800	9600
Switch Value	6	7	8	9	A ~ F	
Baud [bps]	19200	38400	57600	115200	User-defined	

The data format of serial bus baud rate of switch value 0 ~ 9 is 8, n, 1.
The data format of M-Bus bus baud rate of switch value 0 ~ 9 is 8, e, 1.

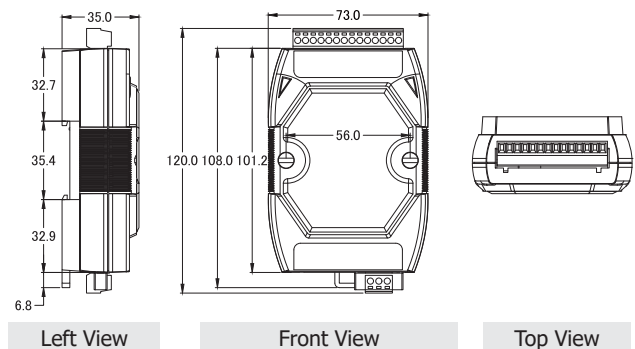
Execution Mode by DIP Switch

DIP 1 (Init)	DIP 2 (Mode)	Description
OFF	OFF	Run Firmware
OFF	ON	Configure
ON	OFF	Update Firmware

Appearance



Dimensions (Units: mm)



Ordering Information

GW-7828 CR	Modbus RTU Slave to M-Bus Master Gateway (RoHS)
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Accessories

CA-0910	9-pin Female D-sub & 3-wire RS-232 cable (1M)
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