

3-9 Modbus Data Concentrator, MDC-700 series

MDC-711

Modbus data concentrator with 1x Ethernet and 1 x RS-232, 1 x RS-485

MDC-714

Modbus data concentrator with 1x Ethernet and 1 x RS-232, 4 x RS-485

MDC-711

MDC-714



Features ▶▶▶

- Modbus Data Concentrator
- Great Capability of Shared Memory
- Config.CSV to Ease Hard Work of Editing a lot of Definition
- Web Sever to Ease the Operating and Show Clear Information

Introduction

MDC-700 series is a Modbus Data Concentrator that has ability to perform up to 200 Modbus/RTU commands to read/write from/to Modbus slave devices via RS-232/485 and allows up to 8 Modbus/TCP masters to get the polled data via the Ethernet.

MDC-700 series provide a built-in web server to ease the configuring and provide clear information for the performed results of each Modbus/RTU command on the RS-232/485.

Modbus Data Concentrator

The MDC performs the pre-defined Modbus/RTU commands to read/write data from/to the Modbus/RTU slave devices via the RS-232/485. It mirrors the data of the slave devices to its own shared memory. And it accepts up to 8 Modbus/TCP masters to directly read/write data form/to the shared memory instead of polling each Modbus/RTU slave device one by one.

This way not only makes the data on the RS-232/485 sharable to multiple Modbus/TCP master but also shorten the time to read/write data from/to multiple Modbus/RTU slave devices.

Great Capability of Shared Memory

The MDC can perform up to 200 polling definitions. And the internal shared memory has four tables to store the polled AI, AO, DI and DO data. Each table can store up to 4000 registers.

Config.CSV to Ease Hard Work of Editing a lot of Definition

The Modbus polling definition is defined in a Config.CSV file. Editing/checking a lot of polling definitions is a hard work and may have chance to make a mistake. A CSV format file can ease the work by using Excel. Furthermore, the built-in web server allows users import/export the Config.CSV via a simple mouse-click action.

Web Sever to Ease the Operating and Show Clear Information

The IP address, configuration file, Config.CSV can be simply configured via the Web server. And the performed results of all Modbus polling definition are shown on the web page. It is very easy to debug which Modbus/RTU device has communication problem. And the MDC firmware will skip the abnormal Modbus polling definition for a while to smoothly perform the whole polling without distribution.

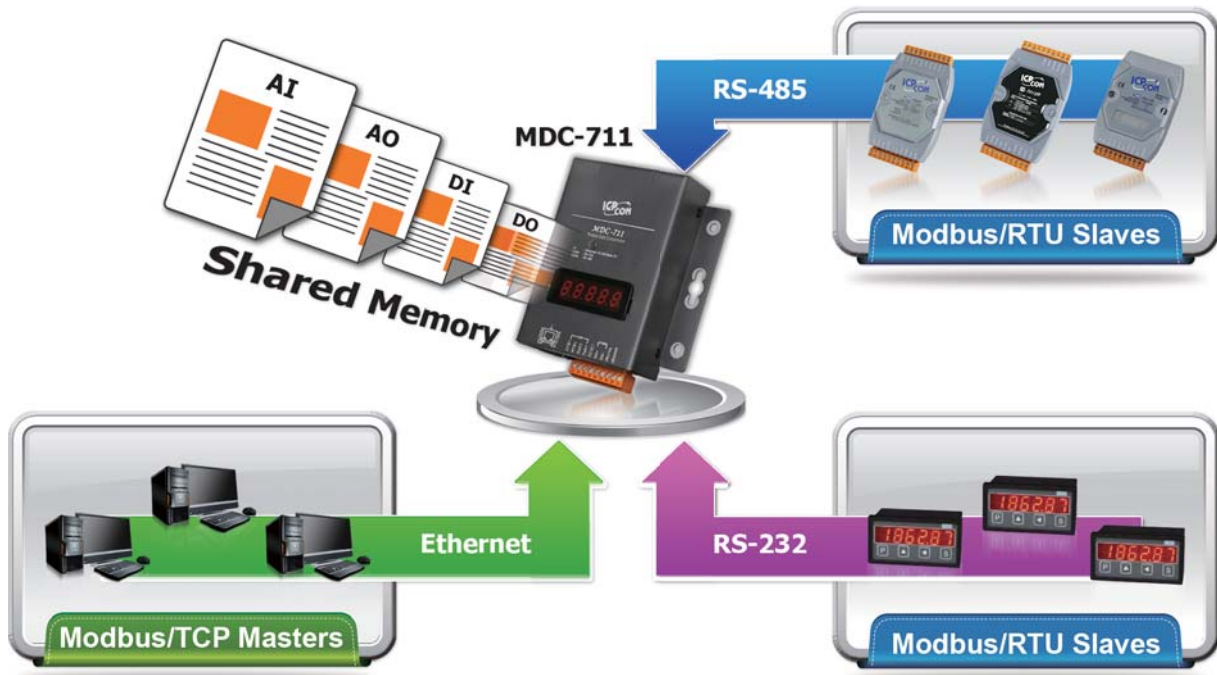
#	TCPPort	ModbusID					
1	502	1					
* this is my data concentrator							
#	ComPortNo	BaudRate	DataBit	Parity	StopBit	TimeOut	PollDelay/Mode
1	1	115200	8	0	1	50	20/Master
2	2	115200	8	0	1	50	20/Master
3	3	9600	8	0	1	100	20/Master
4	4	9600	8	0	1	100	20/Master
5	5	9600	8	0	1	100	20/Master
#	UseComPort	SlaveModbusID	FunctionCo	RegStartAddr	RegCount		
1	2	1	1	0	4		
2	2	2	2	0	4		
3	2	3	3	0	4		
4	2	4	4	0	4		
5	2	4	4	4	8		

Communication status between host PC and MDC-711: GOOD

Polling Definition

- COM1
 - Def. #001 - ID [01], Register [00000:00007] ⇒ Local Register [00000:00007] GOOD
 - Def. #002 - ID [01], Register [10000:10007] ⇒ Local Register [10000:10007] GOOD
- COM2
 - Def. #003 - ID [01], Register [00000:00003] ⇒ Local Register [00008:00011] GOOD
 - Def. #004 - ID [02], Register [10000:10003] ⇒ Local Register [10008:10011] GOOD
 - Def. #005 - ID [03], Register [40000:40003] ⇒ Local Register [40000:40003] GOOD
 - Def. #006 - ID [04], Register [30000:30003] ⇒ Local Register [30000:30003] GOOD

Applications



System Specifications

Models	MDC-711	MDC-714
Ethernet		
Port	x1, 10/100 Base-TX	
Protocol	Modbus/TCP Slave	
Max. connection	8	
COM port		
RS-232	x1, (TXD, RXD, RTS, CTS, GND)	
RS-485	x1, (Data+, Data-)	x4, (Data+, Data-)
Baudrate	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200	
Data Format	N81, E81, O81	
Protocol	Modbus/RTU Master	
Max. Node	32 nodes for each RS-485 port	
Polling Definition	200 definitions for all RS-232/485 ports	
Shared Memory	4000 registers for each of AI, AO, DI and DO data	
System		
5-Digit 7 Segment LED Display	Yes, to display IP address	
System LED Indicator	Yes, to display hear beat	
Mechanical		
Dimension (W x H x D)	102 mm x 101 mm x 28 mm	102 mm x 125 mm x 28 mm
Installation	Wall Mount	
Power		
Required Supply Voltage	+10 V _{DC} ~ +30 V _{DC} (non-regulated)	
Power Consumption	2.5 W	
Environment		
Operating Temperature	-25 °C ~ +75 °C	
Storage Temperature	-40 °C ~ +80 °C	
Humidity	5 ~ 95% RH, non-condensing	

Ordering Information

MDC-711 CR	Modbus data concentrator with 1x Ethernet and 1 x RS-232, 1 x RS-485 (RoHS)
MDC-714 CR	Modbus data concentrator with 1x Ethernet and 1 x RS-232, 4 x RS-485 (RoHS)