How to communicate with Modbus RTU slave device in LabVIEW?

1. Make sure the Modbus ID and Baudrate used in the Modbus RTU slave device. If there are multiple Modbus salve devices on the RS-485 network, each of them needs be assigned with a unique Modbus ID.

For ICP DAS Modbus RTU slave devices, the DCON Utility Pro is free download at http://ftp.icpdas.com/pub/cd/8000cd/napdos/driver/dcon_utility/ to search modules out and configure the searched devices.

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Start Address 0 End Address 255						
ID	Address	Baud Rate	Checksum	Format	Status	Description
DL301	1[1h]	9600	Disable	N,8,1	Remote I/O	[Modbus RTU]1*CO + 1*Humidity + 1*Temp
DL302	2[2h]	9600	Disable	N,8,1	Remote I/O	[Modbus RTU]1*CO2 + 1*Humidity + 1*Tem
DL303	3[3h]	9600	Disable	N,8,1	Remote I/O	[Modbus RTU]1*CO + 1*CO2 + 1*Humidity
COM:5 Parity [N,8,1] Address:136[88h] Baud Rate:9600 Checksum:Disable						

2. Unzip the ModbusRTU.zip, open a suitable demo for the I/O type on the module, the COM port and Baud Rate settings on the front panel need be the same as what the module used in the DCON_Utility_pro. The modbus ID is 1 in the demo. (The NI Modbus.Ilb is free download on the NI web site.)



3. On the Block Diagram, the first vi is MB Serial Init used to configure the COM port connection parameters such as COM port, Baud Rate, Parity and Timeout.



4. Read/Write data with MB Serial Master Query.vi.



5. Close the connection at the end of the program.

