



Making Data Acquisition Easy

CAGE/NCAGE CODE: 3FNFO

# M-7019R

## 8-channel Thermocouple, Current and Voltage Analog Input Module

### Quick Start Guide

Product Website:

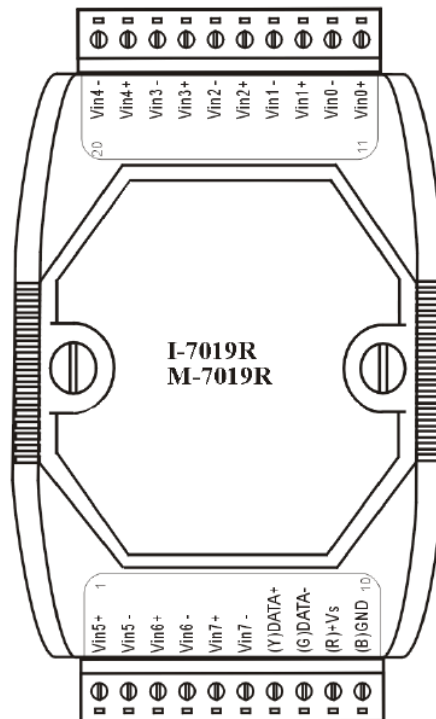
[http://www.icpdas-usa.com/m\\_7019r.html](http://www.icpdas-usa.com/m_7019r.html)

[http://www.icpdas-usa.com/dcon\\_utility\\_pro.html](http://www.icpdas-usa.com/dcon_utility_pro.html)

## 1. Introduction

The M-7019 is a 8-channel Universal Analog Input Data Acquisition Module, supports current input, voltage input, and thermocouple input. Communicable over Modbus RTU, RS-485 and DCON protocol. It comes with free EZ Data Logger software for PC based data logging and monitoring systems. Supports operating temperatures between -25°C ~ +75°C (-13°F ~ +167°F). The ICP DAS M-7000 family of network data acquisition and control modules support Modbus RTU. They can be remotely controlled using a set of commands called DCON protocol. With the Modbus RTU protocol, it can easily communicate with most popular SCADA/HMI software and PLCs.

## 2. Terminal Assignment

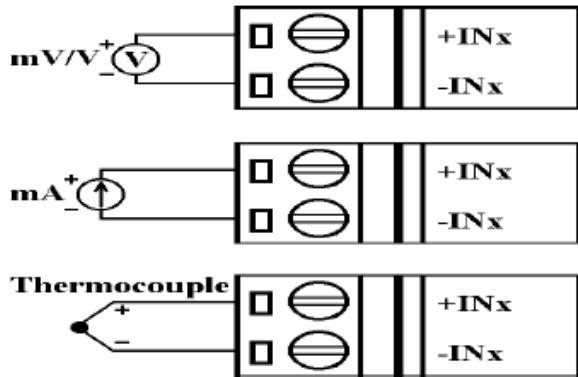
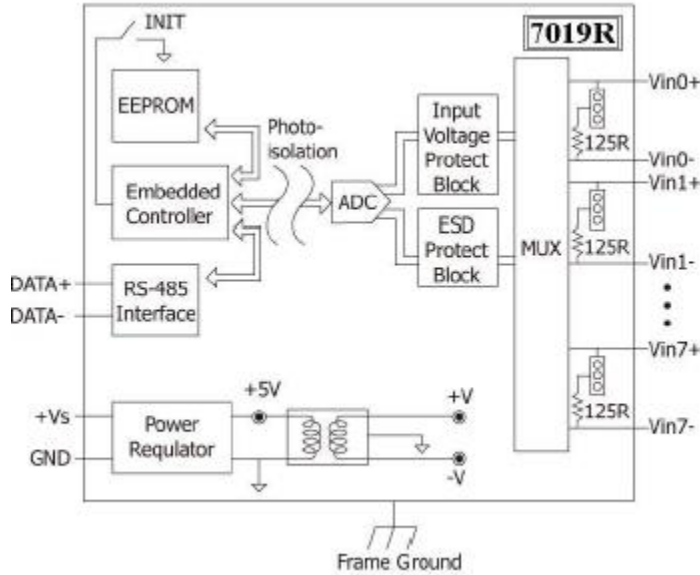


M-7019R 8-channel Thermocouple, Current and Voltage AI Module- QuickStart (Feb/2016)

ICP DAS USA, Inc. | [www.icpdas-usa.com](http://www.icpdas-usa.com) | 1-310-517-9888 | 24309 Narbonne Ave. Suite 200. Lomita, CA 90717



### 3. Block/ Wiring Diagram



### 4. Default Settings

Default settings for the M-7017, M-7018 and M-7019 series modules are:

- Protocol: Modbus RTU
- Module address: 01
- Analog input type:
  - Type 08, -10V to 10V, for the M-7017 and M-7019 series
  - Type 1B, -150V to 150V, for the M-7017R-A5
  - Type 0D, -20mA to +20mA for the M-7017C and M-7017RC
  - Type 05, -2.5V to 2.5V, for the M-7018 series
- Baud Rate: 9600 bps
- Filter set at 60Hz rejection (Not used by the M-7019R, firmware version B2.6 and earlier)



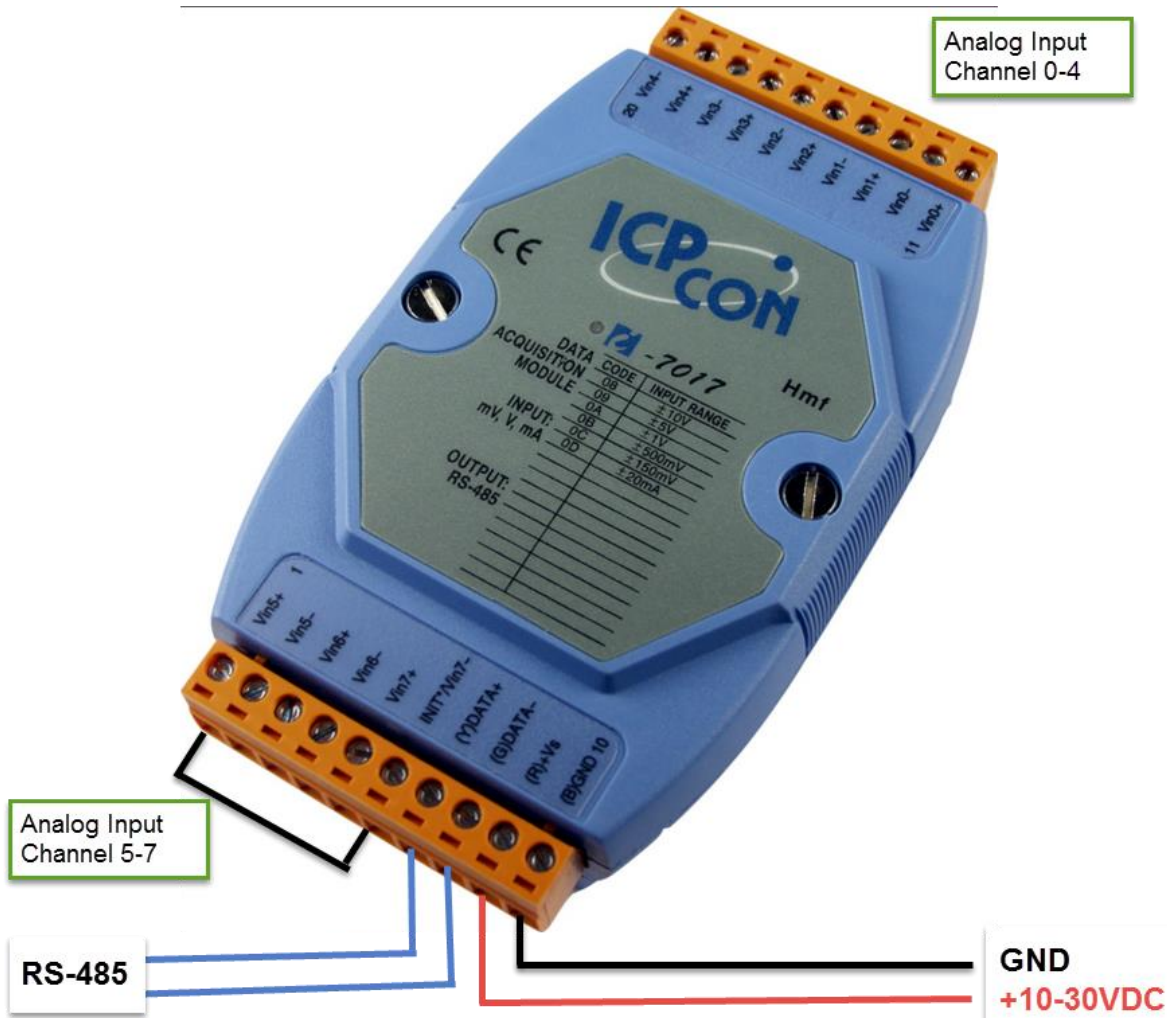
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## 5. Configuration

To install the module, follow the steps below:

1. Connect the thermistor analog input.
2. Connect the module to the RS-485 network using the DATA+ and DATA- terminals. If the host is only equipped with an RS-232 interface, then an RS-232 to RS-485 converter will be required.
3. Connect the module to the power supply using the +Vs and GND terminals. Note that the voltage supplied should be in the range of +10 to +30V DC.





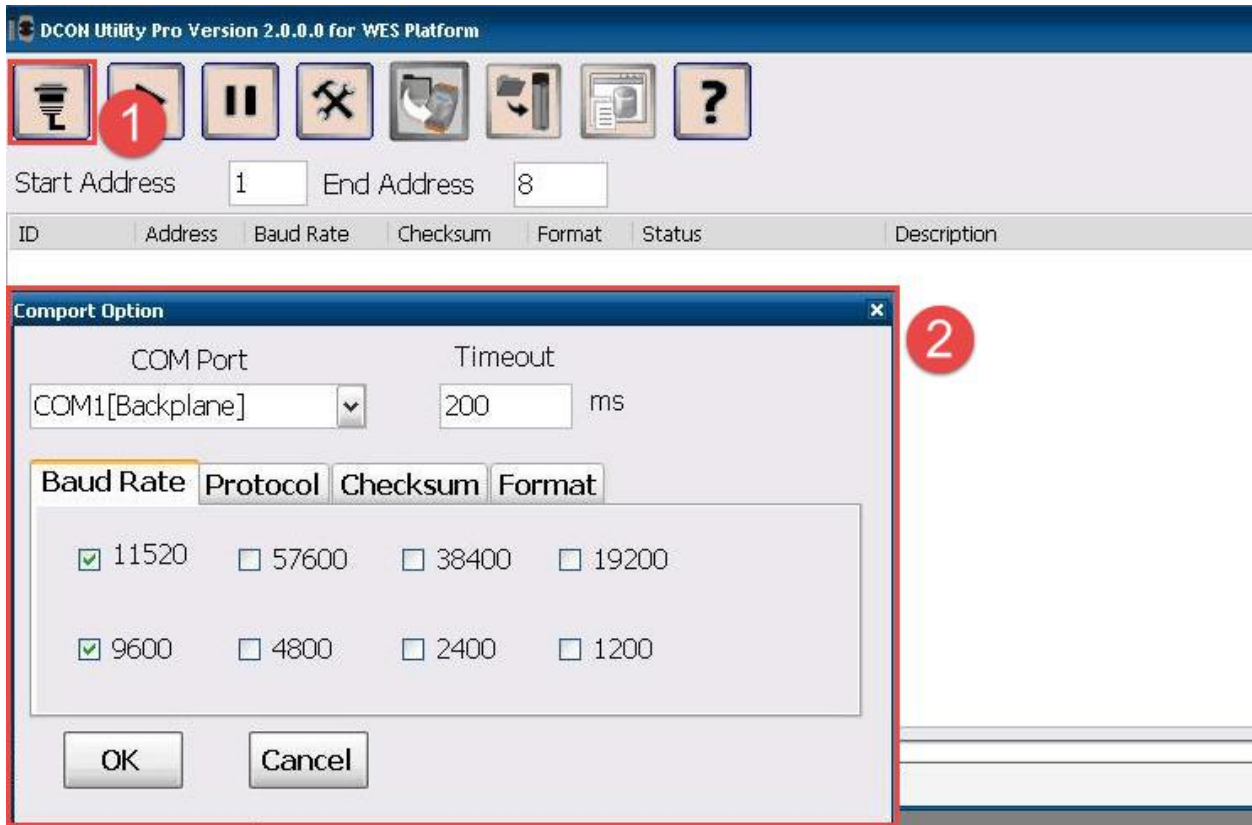
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4. Open DCON utility pro

- 1 click on COM port(first icon).
- 2 It can select multi-options such as Baud Rate, Protocol, Checksum, and Format to search module. The default settings for the module can be found in Section 3. Click OK after selecting the COM port setting.

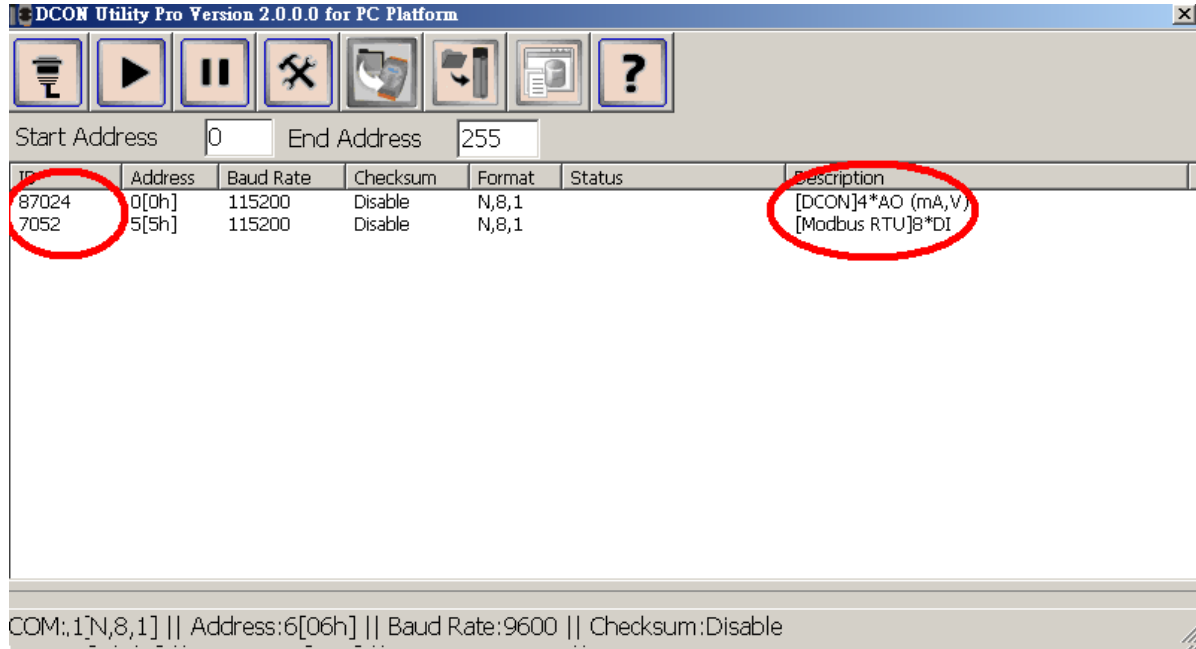




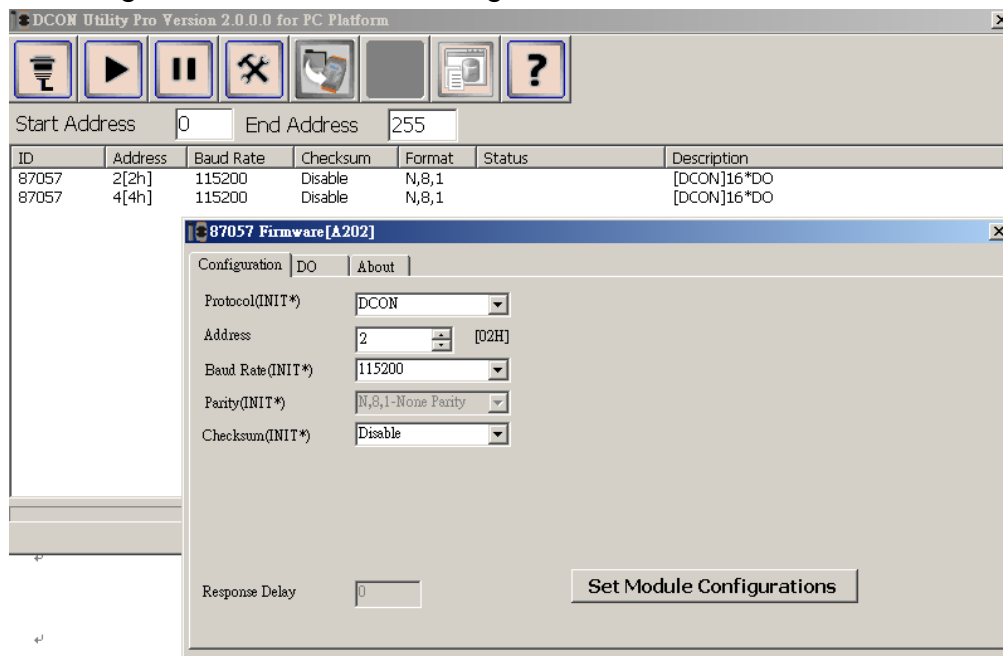
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5. DCON utility pro will search for the selected COM port according the setting previously set. DCON Utility Pro supports DCON and Modbus protocol for all ICPDAS and the others modules.



## 6. Configuration I/O module setting on PC

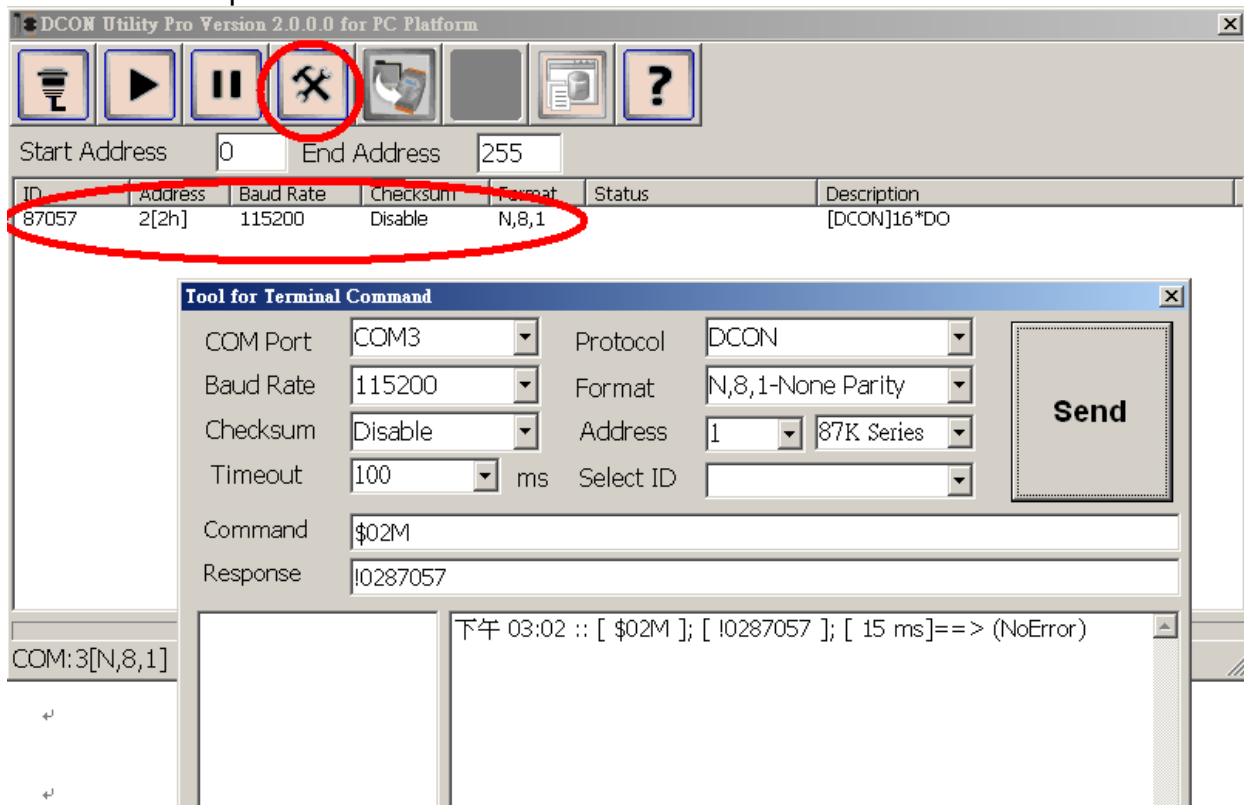




7. For M-7000 modules using the Modbus RTU protocol, configure the module using the following functions.

- Sub-function 04h of Function 46h, see user manual Section 3.3.2
- Sub-function 06h of Function 46h, see user manual Section 3.3.4
- Sub-function 08h of Function 46h, see user manual Section 3.3.6

For M-7000 modules using the Modbus RTU protocol, use Function 04h to read the data from the input channels. See user manual Section 3.2 for details.





8. If user doesn't know command, user can select Address and ID, it will show some refer commands as below. User can select necessary command to test or debug modules.

