



# Logicbus M-7017Z 10/20 Channel Current and Voltage Analog Input Module User Guide

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**Logicbus M-7017Z 10/20 Channel Current and Voltage Analog Input Module**



## Quick Start Guide

### Product:

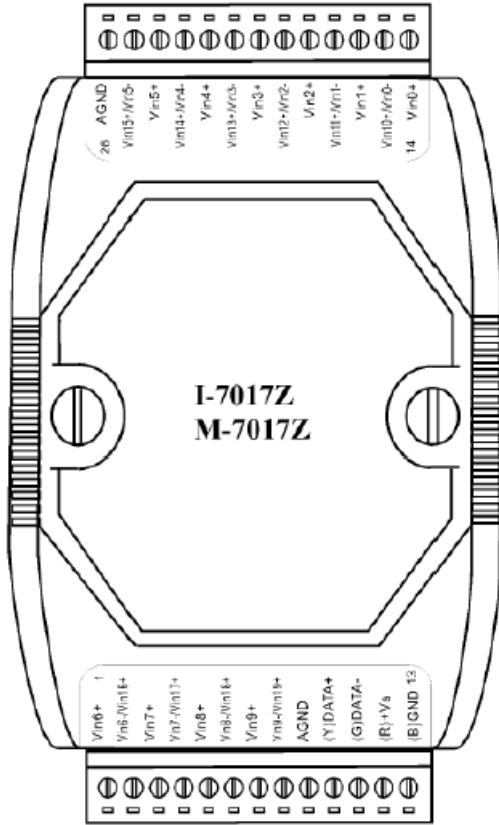
[http://www.icpdas-usa.com/m\\_7017z.html](http://www.icpdas-usa.com/m_7017z.html)

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

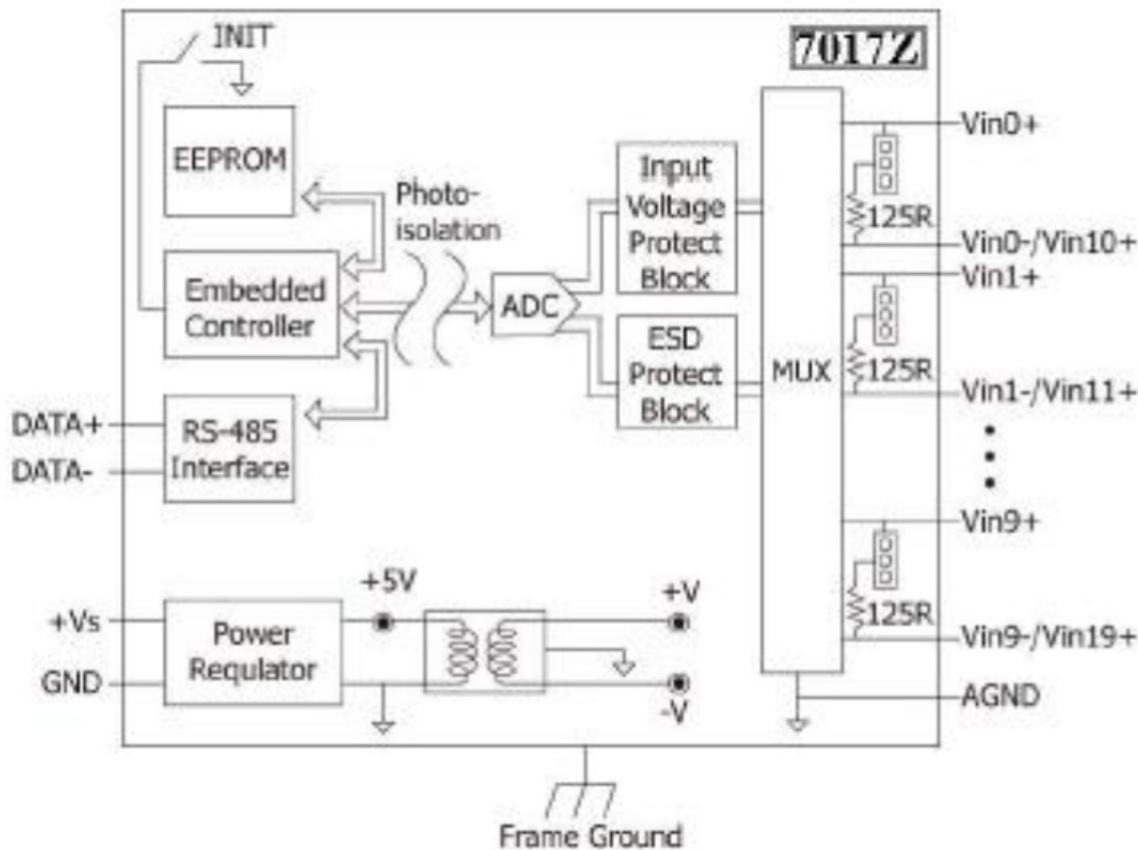
## Introduction

M-7017Z has software configurable channels— from 10 differential channels into 20 single ended channels. Both voltage and current are accepted:  $\pm 150\text{mV}$ ,  $\pm 500\text{mV}$ ,  $\pm 1\text{V}$ ,  $\pm 5\text{V}$ ,  $\pm 10\text{V}$ ,  $\pm 20\text{mA}$ ,  $0\sim 20\text{mA}$ , and  $4\sim 20\text{mA}$ . No external resistor needed for measuring the current, all you have to do is to open the shell first and finish the setting by jumper. Measuring the current is as simple as you think! The M-7017Z also passes 240Vrms over voltage protection for differential inputs and 150Vrms over voltage protection for singleended inputs, 3000VDC intra-module isolation,  $\pm 4\text{KV}$  contact ESD protection,  $\pm 4\text{KV}$  EFT protection for power, and  $\pm 1\text{KV}$  EFT protection for RS-485. The sampling rate of M-7017Z is changeable. There are fast mode and normal mode for your consideration. Fast Mode is 60Hz with 12 bit resolution. Normal Mode is 10Hz with 16 bit Resolution.

Terminal Assignment



Block/ Wiring Diagram



| Voltage Input |                   |                   |
|---------------|-------------------|-------------------|
|               | Differential Mode | Single-ended Mode |
| JUMPER<br>    |                   |                   |
| Current Input |                   |                   |
| JUMPER<br>    |                   |                   |

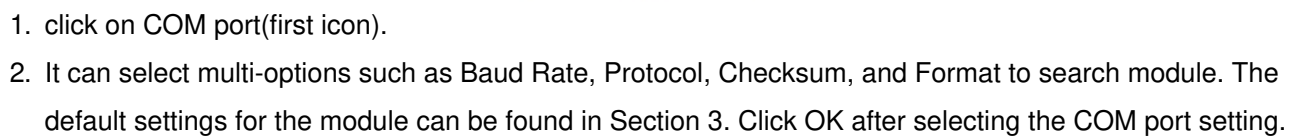
Default Settings

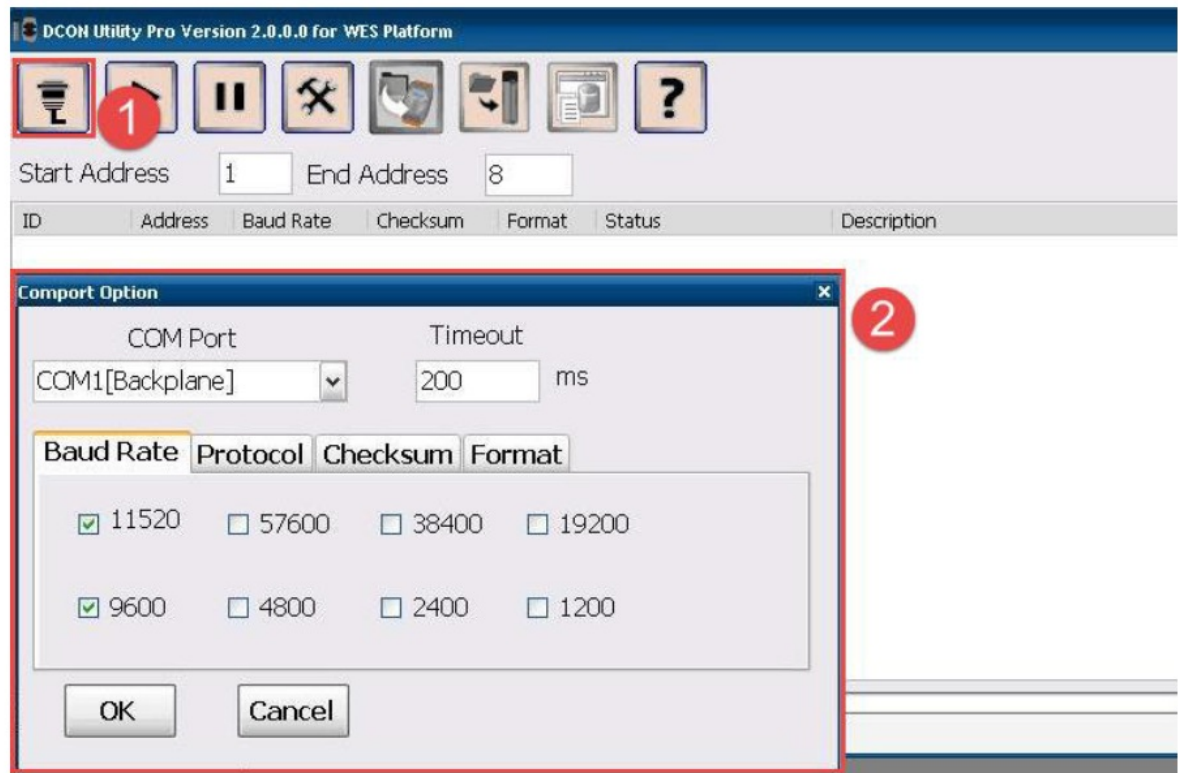
Default settings for the M-7017, M-7018 and M-7019 series modules are:

- **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

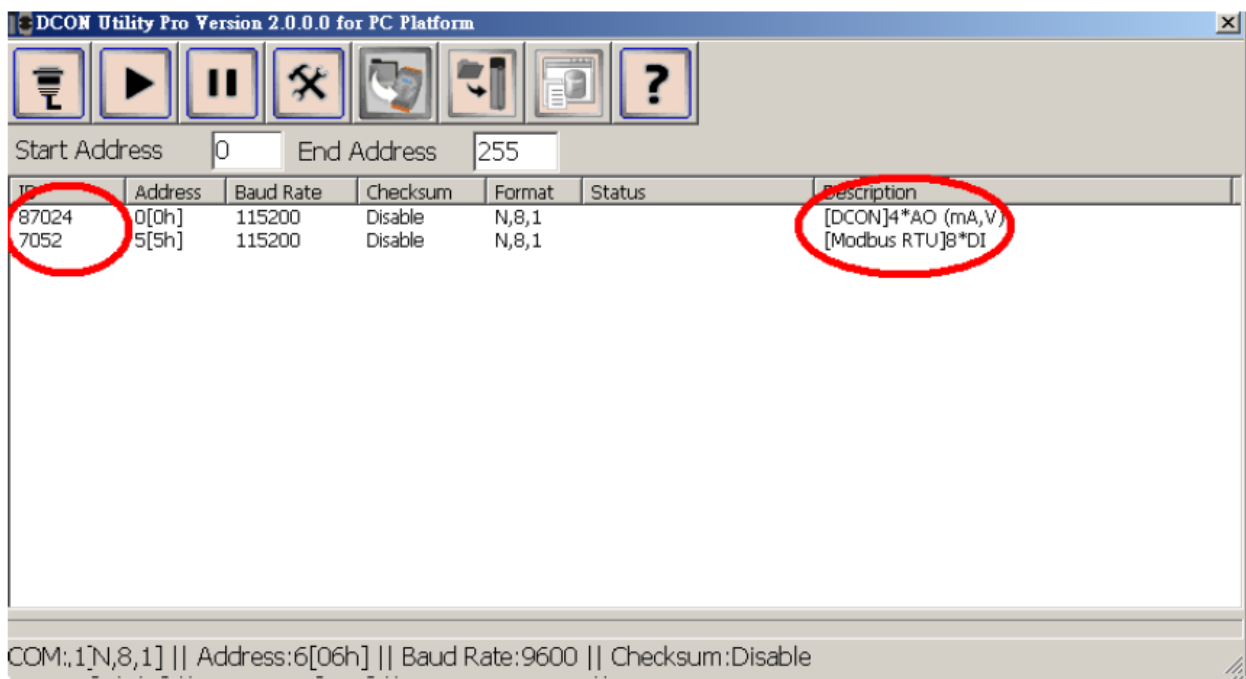
- ## Configuration

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.

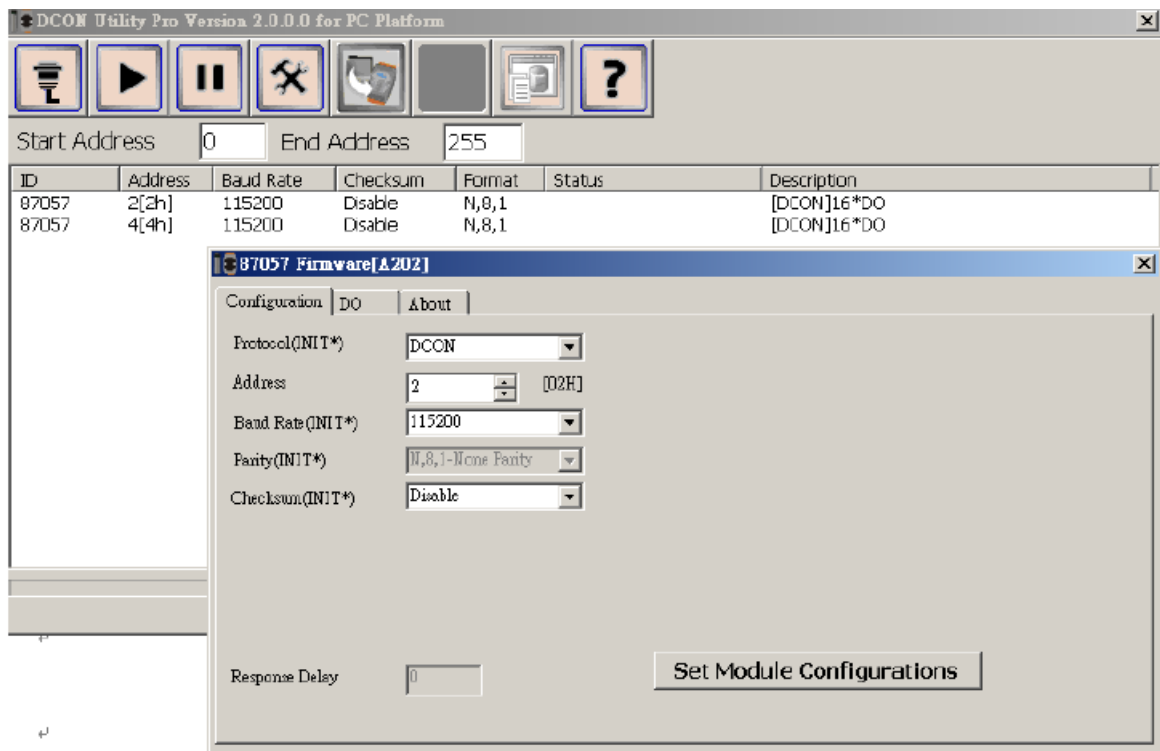




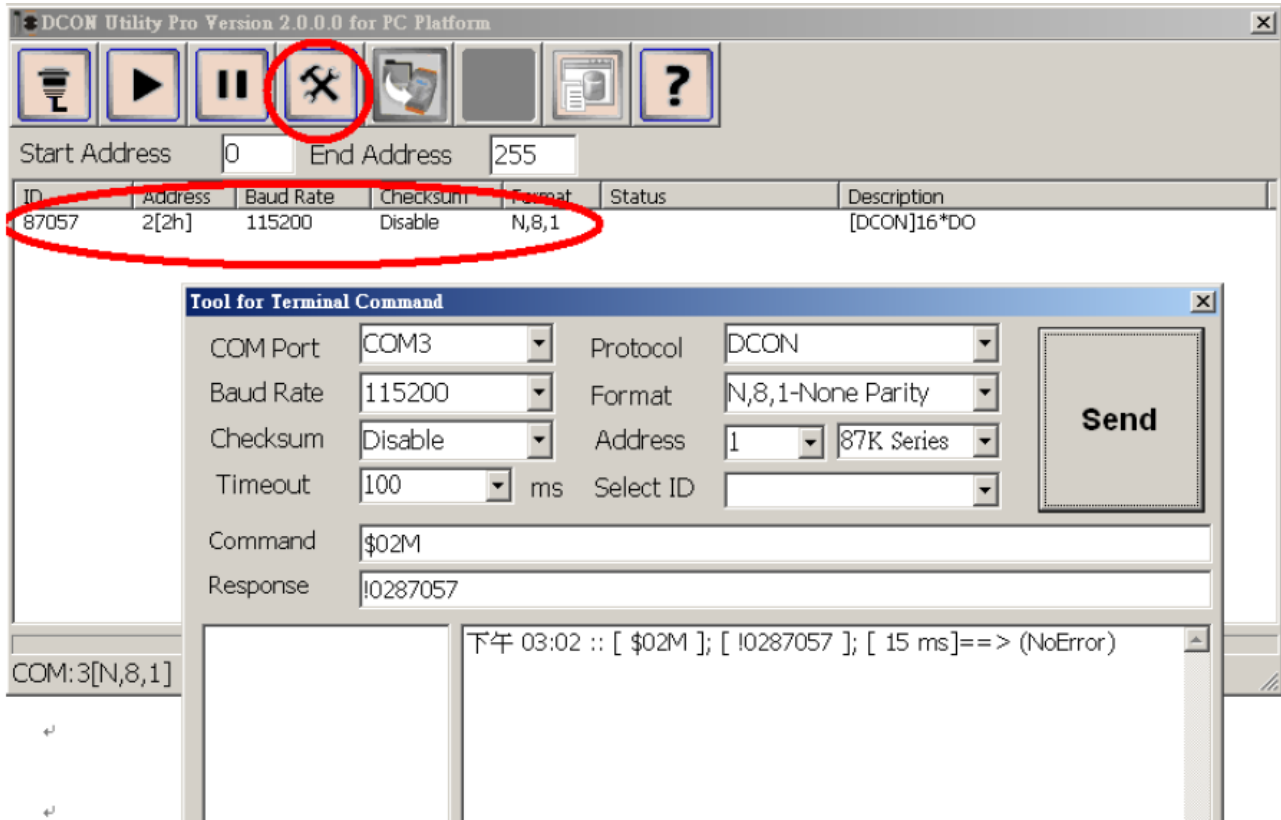
5. DCON utility pro will search for the selected COM port according the setting previously set. DCON Utility Pro supports DCON and Modbus protocol for all ICPDAS and the others modules.



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.
  1. Sub-function 04h of Function 46h, see user manual Section 3.3.2 Sub-function 06h of Function 46h, see user manual
  2. Section 3.3.4 Sub-function 08h of Function 46h, see user manual Section 3.3.6
8. 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.



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

**Tool for Terminal Command**

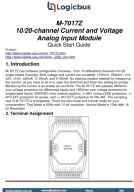
|           |         |           |                   |             |
|-----------|---------|-----------|-------------------|-------------|
| COM Port  | COM3    | Protocol  | DCON              | <b>Send</b> |
| Baud Rate | 115200  | Format    | N,8,1-None Parity |             |
| Checksum  | Disable | Address   | 2 87K Series      |             |
| Timeout   | 100 ms  | Select ID | 87057             |             |
| Command   | @020000 |           |                   |             |
| Response  | >       |           |                   |             |

|                                                                                                                                                                                                                                                                                                                                                                       |                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Get Module Name</li> <li>Get Firmware</li> <li>Get Module Configure</li> <li>Set Module Configure</li> <li>Read DO</li> <li><b>Write DO</b></li> <li>Write DO Bit 0</li> <li>Write DO Bit 1</li> <li>Write DO Bit 2</li> <li>Write DO Bit 3</li> <li>Write DO Bit 4</li> <li>Write DO Bit 5</li> <li>Write DO Bit 6</li> </ul> | <p>下午 03:20 :: [ @020000 ]; [ &gt; ]; [ 0 ms]==&gt; (NoError)</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|

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## Documents / Resources

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><a href="#">Logicbus M-7017Z 10/20 Channel Current and Voltage Analog Input Module [pdf] User Guide</a></p> <p>M-7017Z 10 20 Channel Current and Voltage Analog Input Module, M-7017Z, 10 Channel Current and Voltage Analog Input Module, 20 Channel Current and Voltage Analog Input Module, Current and Voltage Analog Input Module, Current Analog Input Module, Voltage Analog Input Module, Analog Input Module, Input Module, Module</p> |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## References

- [Data Acquisition \(DAQ\), Embedded Control, and Industrial Communication Products | ICP DAS USA, Inc.](#)
- [DCON Utility Pro | DCON Utility Pro is a toolkit that can help easily search, configure and test I/O modules. It is installable on all Windows version from Windows 98 to Windows 8.1](#)