

Ver.:1.0

Classification:

Software Development for I-7000/M-7000 series

Question How to access M-7026 by using DCON commands in LabVIEW?

Answer

Refer to the following for a detailed description of the configuration process:

Step 1:

Install the DCON Utility Pro on your PC, and then run the DCON Utility Pro to set the protocol to "DCON" for the M-7026. The DCON Utility Pro can be downloaded from the ICP DAS web site:

http://www.icpdas.com/en/download/index.php?nation=US&kind1=&model=&kw=DCON+Utility+Pro

1. Click the "COM Port" button to select the COM Port that the M-7026 is connected to on the PC, then

select the appropriate Baud Rate, Protocol, Checksum and Format settings depending on the configuration of the M-7026 and click the "OK" button.

DCON Utility Pro V 2.0.0	*		5	?	×
ID Address 7026 1[1h]	COM P COM7 Baud Rate 2007 11520 2000 0K	Port Protocol Ch 57600 4800 Cancel	Time 200 ecksum F 38400	out ms ormat 19200) + 3*DI (mA,V)



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2. Click the "Start Search" button to start searching for the M-7026, as illustrated below. Once the M-7026 is identified, it will be displayed in the search results panel of the DCON Utility Pro.



3. Click the "Stop Search" button to stop the search.

			5		
Address	Baud Rate	Checksum	Format	Status	Description
1[1h]	9600	Disable	N,8,1	Remote I/O	[Modbus RTU]2*A0 + 6*AI + 3*D0 + 3*DI (mA,V)
	1[16]	1[1h] 9600	1[1h] 9600 Disable	1[1h] 9600 Disable N,8,1	1[1h] 9600 Disable N,8,1 Remote I/O



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4. Double click on the module name to open the "7026 Firmware [0B01]" dialog box.

DCON U	Itility Pro V 2	0.0.3				
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Start Add	dress	0 End	Address	5		
0	Address	Baud Rate	Checksum	Format	Status	Description
026	1[1h]	9600	Disable	N,8,1	Remote I/O	[Modbus RTU]2*AO + 6*AI + 3*DO + 3*DI (mA,V)
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5. In the "Configuration" tab, select the "DCON" option from the "Protocol" drop down options.

7026 Firmware[0B01]		3
Configuration AO	AI DI Host WDT About	
Protocol		
Address	2 01H	
Baud Rate	9600 -	
Parity	N,8,1-None Parity -	
Checksum	Disable -	
Analog Format	Engineering Formst 👻	
Fast Mode	Normal Mode 👻	
Response Delay	0 ms Set Module Configurations	
Exit		
下午 01:38 ::GET_CH2_A	I_ALARM_ENABLE_STATUS[01 01 01 42 00 01 5C 22]; [01 01 01 00 51 88]; [32 ms]	,đ



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6. Verify that the "INIT Switch" on the M-7026 is in the "Init" position.



7. Click the "Set Module Configurations" button.

7026 Eirmware(0801)				×
/020 Firmware[0001]				
Configuration AO	AI	DI H	lost WDT	About
Protocol	DCON		-	
Address	1	÷ ()1H	
Baud Rate	9600		•	
Parity	N,8,1-No	ne Parity		
Checksum	Disable		Ŧ	
Analog Format	Engineerin	ng Format	•	
Fast Mode	Normal M	lode	•	
Response Delay	0	ms	•	Set Module Configurations
🔄 Reverse DI State				
Exit				
- LAR				
下午 01:38 ::GET_CH2_A	I_ALARM	_ENABLE_	STATUS[01 01 01 42 00 01 5C 22]; [01 01 01 00 51 88]; [32 ms]>OK



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8. A "Setting Communication Parameters OK:" dialog box will be displayed and click the "OK" button.



9. Set the "INIT Switch" on the M-7026 to the "Normal" position.

10. Power-on and reboot the M-7026 to operate the module in "Normal" Mode.



11. Search for the M-7026 module again. Verify the result to show "[DCON]" and then exit the DCON Utility Pro.

DCON U	Jtility Pro V 2	.0.0.3				
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Start Ad	dress	0 End	Address	5		
ID	Address	Baud Rate	Checksum	Format	Status	Description
7026	1[1h]	9600	Disable	N,8,1	Remote I/O	[DCON]2*AO + 6*AI + 3*DO + 3*DI (mA,V)

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Step 2:

Run the sample program: **DO_M-7026.vi.**

1. Enter the **COM Port** that the M-7026 is connected to on the PC, then select the appropriate **Baud Rate, Parity, Data Bit** and Stop Bit settings depending on the configuration of the M-7026 in the "Module setting" area.

2. Enter the request command: @01D003 → Sets Channel DO0 and DO1 to ON.
@01D001 → Sets Channel DO0 to ON.
@01D003 → Sets Channel DO0 and DO1 to ON.
@01D007 → Sets Channel DO0, DO1 and DO2 to ON.

- 3. Click the **"Send Command"** button.
- 4. Check the response data: $\textbf{!01} \rightarrow \textbf{Successful}$

DO_M-7026	5.vi	
<u>F</u> ile <u>E</u> dit <u>V</u> ie	ew <u>P</u> roject <u>Operate</u> <u>T</u> ools <u>W</u> indow <u>H</u> elp P 🛑 💵	
	Module setting Open Port Number 7 BaudRate \$2000 Parity (0: none) none parity 0 Data Bit (8) 8 stop bit (0: 1 stop bit) 1 stop bit 0	
<u> </u>		× .::



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- 5. Enter the request command: **@01DI** \rightarrow Read status.
- 6. Click the **"Send Command"** button.
- 7. Check the response data: **!0100300** \rightarrow DO Read back.



Note: For detailed information regarding DCON protocol command, refer to Chapter 2 "DCON Protocol" in the user manual of the M-7026.

The user manual location:

http://www.icpdas.com/web/product/download/io_and_unit/rs-485/document/manual/7000/M-7026_en.pdf