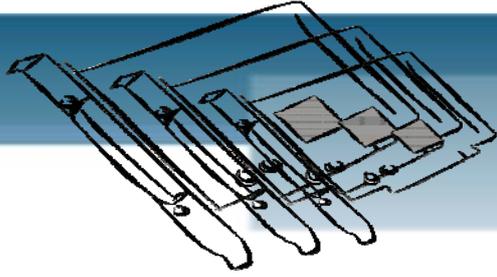


VXC CARD QUICK START GUIDE



for VEX-114/114i/144/144i

English/ May 2010/ Version 1.0

1 What's in the shipping package?

The package includes the following items:



VEX Series Card



Software CD
(V4.8 or later)



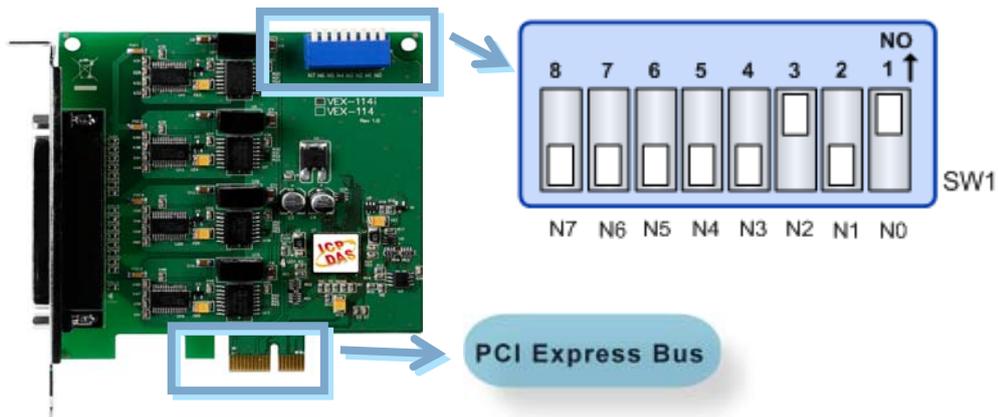
Quick Start Guide
(This Document)



CA-4002 D-Sub
Connector

2 COM Port Mapping

Setting SW1 dip-switch (COM Selector) to 0x05 (1 and 3 "NO", others "OFF"). The setting forces the VEX card to use COM5, COM6, COM7 and COM8.



■ SW1 Setting Table:

SW1 DIP Switch	8	7	6	5	4	3	2	1
Board ID= 0x00 (Default) COM = Auto-defined	OFF							
Board ID= 0x03 COM = 3/4/5/6	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
Board ID= 0x05 COM = 5/6/7/8	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
Board ID= 0x07 COM = 7/8/9/10	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
Board ID= 0x09 COM = 9/10/11/12	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
Board ID= 0x14 COM = 20/21/22/23	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
Board ID= 0x1E COM = 30/31/32/33	OFF	OFF	OFF	ON	ON	ON	ON	OFF
Board ID= 0x28 COM = 40/41/42/43	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
Board ID= 0x32 COM = 50/51/52/53	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
Board ID= 0x3C COM = 60/61/62/63	OFF	OFF	ON	ON	ON	ON	OFF	OFF
Board ID= 0x64 COM = 100/101/102/103	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
Board ID= 0x96 COM = 150/151/152/153	ON	OFF	OFF	ON	OFF	ON	ON	OFF
Board ID= 0xC8 COM = 200/201/202/203	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
.
.
.
Board ID= 0xFF COM = 255/256/x/x	ON							

3 Installing Windows Driver

1. Launch the Windows 2000/XP/2003/2008/Vista/7 (32/64 bit) driver setup program. It is located at :
CD: \Napdos\multiport\windows\VxCard_W7_Vx.xx.xx.exe
<http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/multiport/windows/>
2. Click the “**N**ext>” button to start the installation.
3. Click the “**N**ext>” button to install the driver into the default folder.
4. Check the “**C**reate a desktop icon” and click the “**N**ext>” button.
5. Select the “**N**O, I will restart the computer later” and click the “**F**inish” button.



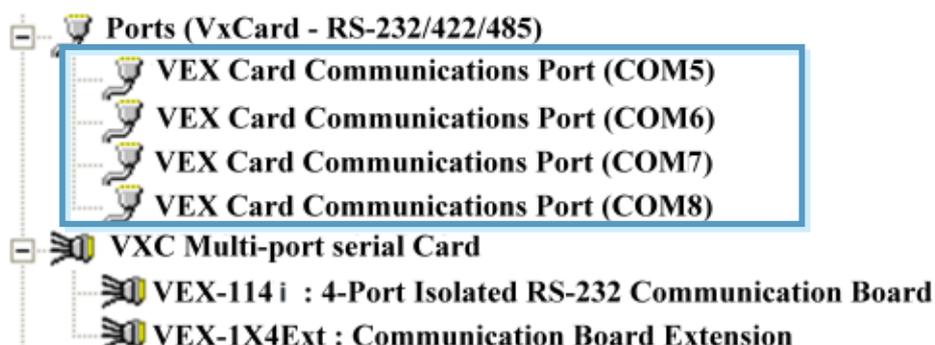
For installing driver on other systems, please refer to:
<http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/multiport/manual/>

4 Installing the Hardware

Follow these steps:

1. Shut down and power off your computer.
2. Remove the cover from the computer.
3. Select an unused PCI Express slot.
4. Carefully insert your VEX card into the PCI Express slot.
5. Replace the PC cover.
6. Power on the computer.
7. Follow the prompt message to finish the Plug&Play steps.
8. Make sure the com ports installed are correct as follows:

- i. Select “Start → Control Panel” and then double click the “system” icon.
- ii. Click the “Hardware” tab and then click the “Device Manager” button.
- iii. Check the COM ports of VEX card which listed correctly or not.



5

Pin Assignments and Cable Wiring

■ VEX-144/144i DB-37

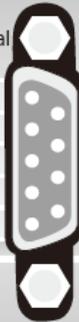
Pin Assignment	Terminal	No.	Pin Assignment
N.C.	01	20	CTS3-(A)
TxD3-(A)/Data3-(A)	02	21	RxD3-(A)
GND/VEE3	03	22	RTS3-(A)
CTS3+(B)	04	23	RTS3+(B)
TxD3+(B)/Data3+(B)	05	24	RxD3+(B)
CTS4-(A)	06	25	TxD4-(A)/Data4-(A)
RxD4-(A)	07	26	GND/VEE4
RTS4-(A)	08	27	CTS4+(B)
RTS4+(B)	09	28	TxD4+(B)/Data+(B)
RxD4+(B)	10	29	CTS2-(A)
TxD2-(A)/Data2-(A)	11	30	RxD2-(A)
GND/VEE2	12	31	RTS2-(A)
CTS2+(B)	13	32	RTS2+(B)
TxD2+(B)/Data2+(B)	14	33	RxD2+(B)
CTS1-(A)	15	34	TxD1-(A)/Data1-(A)
RxD1-(A)	16	35	GND/VEE1
RTS1-(A)	17	36	CTS1+(B)
RTS1+(B)	18	37	TxD1+(B)/Data1+(B)
RxD1+(B)	19		



RS-422/485 Female DB-37 Connector

■ VEX-144/144i DB-9

Pin Assignment	Terminal	No.	Pin Assignment
GND/VEE	05	09	CTS-(A)
RxD-(A)	04	08	CTS+(B)
RxD+(B)	03	07	RTS+(B)
TxD+(B)/Data+(B)	02	06	RTS-(A)
TxD-(A)/Data-(A)	01		



RS-422/485 Female DB-37 to Male DB-9 Connector

■ RS-422 Cable Wiring

VEX-144(i) CON1		Device		
PIN	Signal		PIN	Signal
1	TxD-	→	4	RxD-
2	TxD+	→	3	RxD+
3	RxD+	→	2	TxD+
4	RxD-	→	1	TxD-
5	GND	→	5	GND
6	RTS-	→	9	CTS-
7	RTS+	→	8	CTS+
8	CTS+	→	7	RTS+
9	CTS-	→	6	RTS-

■ RS-485 Cable Wiring

VEX-144(i) CON1		Device		
PIN	Signal		PIN	Signal
1	DATA-	→	1	DATA-
2	DATA+	→	2	DATA+



The RS-485 bus is a differential (balanced) signal, thus you cannot wire the Data+ with Data- directly for a single port loop-back test. It will not work at all!

■ VEX-114/114i DB-37

Pin Assignment	Terminal No.	Pin Assignment
N.C.	01	20 RI3
DCD3	02	21 DTR3
GND	03	22 DSR3
CTS3	04	23 RTS3
RxD3	05	24 TxD3
RI4	06	25 DCD4
DTR4	07	26 GND
DSR4	08	27 CTS4
RTS4	09	28 RxD4
TxD4	10	29 RI2
DCD2	11	30 DTR2
GND	12	31 DSR2
CTS2	13	32 RTS2
RxD2	14	33 TxD2
RI1	15	34 DCD1
DTR1	16	35 GND
DSR1	17	36 CTS1
RTS1	18	37 RxD1
TxD1	19	

RS-232 Female DB-37 Connector

■ VEX-114/114i DB-9

Pin Assignment	Terminal No.	Pin Assignment
GND	05	09 RI
DTR	04	08 CTS
TxD	03	07 RTS
RxD	02	06 DSR
DCD	01	

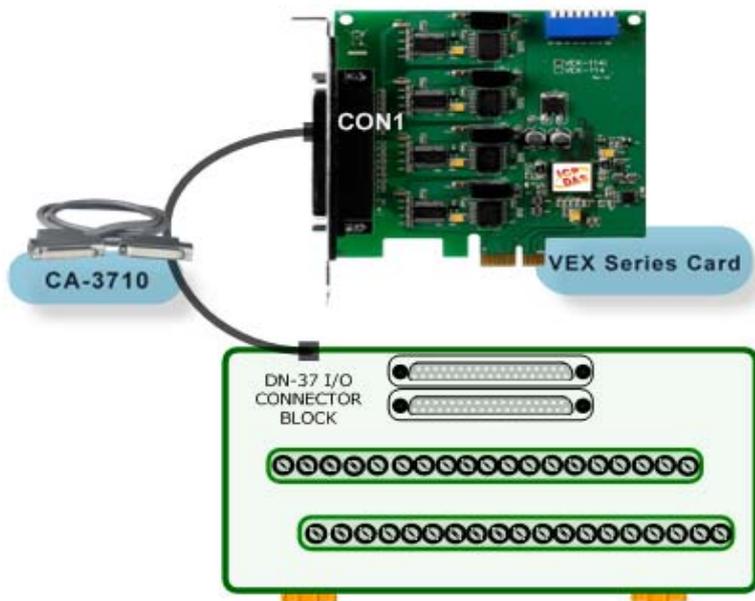
RS-232 Female DB-37 to Male DB-9 Connector

■ RS-232 Cable Wiring

System 1	PIN		PIN	System 2
RxD	2	←	3	TxD
TxD	3	→	2	RxD
GND	5	↔	5	GND
DTR	4	→	6	DSR
	--		1	DCD
DCD	1		--	
DSR	6	←	4	DTR
RTS	7	→	8	CTS
CTS	8	←	7	RTS
RI	9	←	9	RI

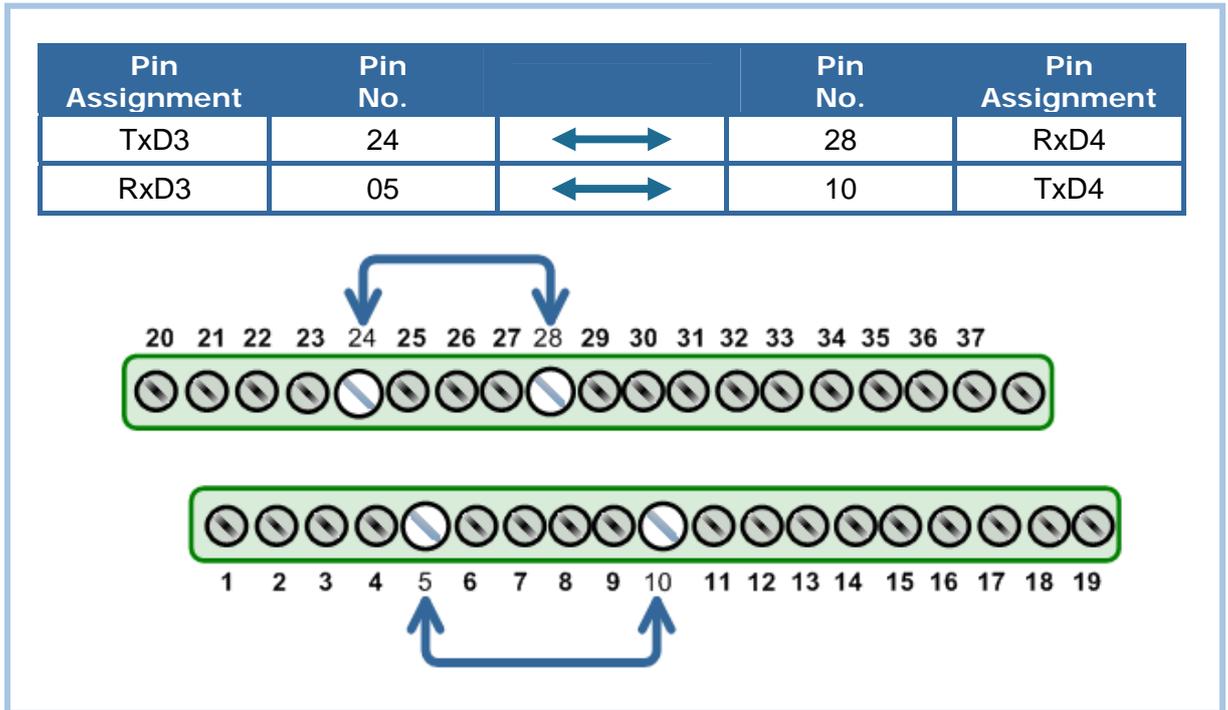
6 Self Test

1. Use the DN-37 to connect the VEX-114(i)/144(i) CON1.

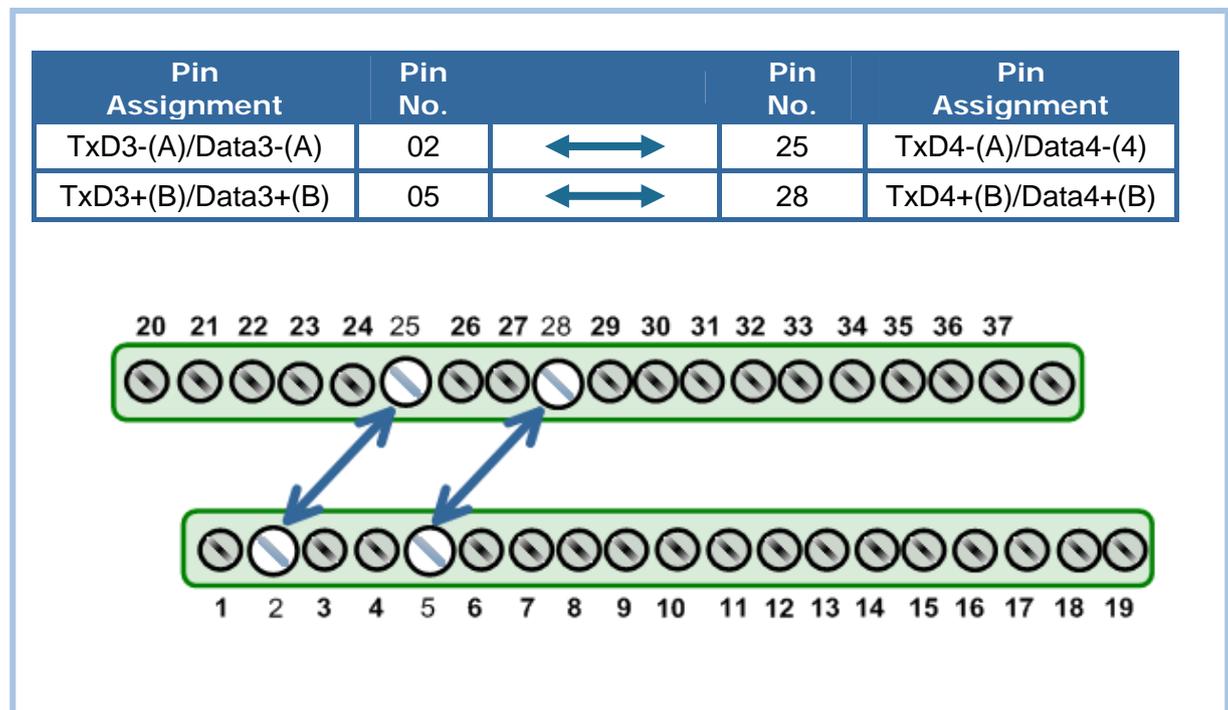


2. Wire Port-3 and Port-4 :

■ VEX-114/114i (RS-232)



■ VEX-144/144i (RS-485)



3. Execute the Test2COM.exe program.

Get the file from:

- CD:\Napdos\multiport\utility
- <http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/multiport/utility/>

The screenshot shows the 'Test 2 COM ports v1.13' application window. The interface includes several configuration sections: 'COM Ports' (First: COM7, Second: COM8), 'Data Bits' (5, 6, 7, 8), 'Parity' (None, Odd, Even, Mark, Space), 'Stop Bits' (1, 1.5, 2), 'Baud Rates' (50 to 921600), and 'Test Result' (Please connect the 1st COM to 2nd COM. Will test the sending/receiving between these two COM ports.). At the bottom, there are buttons for 'Start Test', 'Save Log', 'Save Config', 'Load Config', and 'Exit'. A 'Loop' field is set to 1. The 'Errors' section shows 0 errors.

1. Double-Click Test2COM.exe

2. Check COM7, COM8

3. Check Data Bits 5/6/7/8

4. Check Parity None/Odd/Even

5. Check Stop Bits 1/2

6. Check Baud Rates 9600~115200

7. Loop:1

8. Click "Start Test"

4. Test Success.

The screenshot shows the 'Test 2 COM ports v1.13' application window after a successful test. The 'Test Result' section displays the following text: 'Receiving data from COM6...', 'Sending data to COM5...OK', 'Check data OK! (109 ms)', 'Purging data of COM ports!', 'Receiving data from COM5...', 'Sending data to COM6...OK', 'Check data OK! (109 ms)', '***** Test OK on 115200, 8E2 *****', and 'End test at 2008/9/5 下午 03:48:42'. The 'Total Test: 105', 'Success Test: 105', and 'Failed Test: 0' are displayed at the bottom of the test result area.

9. Test Result: "Failed Test: 0"

Additional Information

- **VEX-114/114i Series Card Product page:**
http://www.icpdas.com/products/Industrial/multi_serial/vxc-114u.htm
- **VEX-144/144i Series Card Product page:**
http://www.icpdas.com/products/Industrial/multi_serial/vxc-144u.htm
- **CA-3710 and DN-37 page (optional):**
http://www.icpdas.com/products/Accessories/cable/cable_selection.htm
http://www.icpdas.com/products/DAQ/screw_terminal/dn_37.htm
- **Documentation:**
CD: \Napdos\multiport>manual\
<http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/multiport/manual/>
- **Software:**
CD: \Napdos\multiport\
<http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/multiport/>

