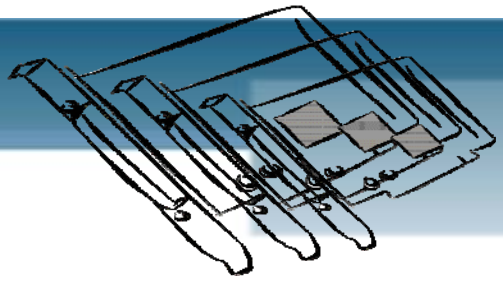
VXC CARD QUICK START GUIDE



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

English/ May 2010/ Version 1.0

PCI Express Multi-port Cards

1 What's in the shipping package?

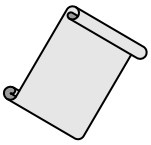
The package includes the following items:



VEX Series Card



Software CD
(V4.8 or later)



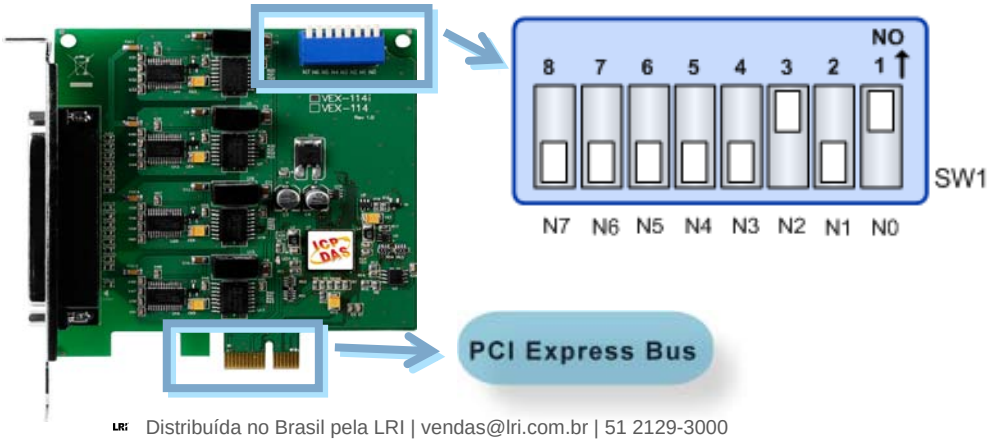
Quick Start Guide
(This Document)



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.



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SW1 Setting Table:

SW1 DIP Switch	8	7	6	5	4	3	2	1
Board ID=**0x00** (**Default**) COM = Auto-defined	OFF	OFF	OFF	OFF	OFF	OFF	OFF	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**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**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 "Next>" button to start the installation.**
3. **Click the "Next>" button to install the driver into the default folder.**
4. **Check the "Create a desktop icon" and click the "Next>" button.**
5. **Select the "NO, I will restart the computer later" and click the "Finish" button.**

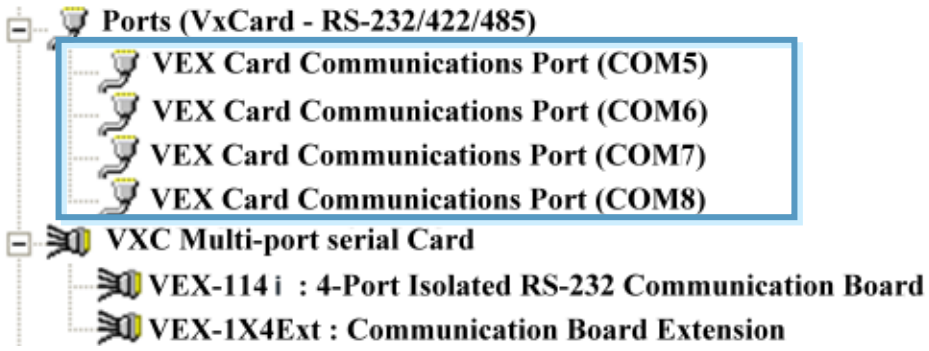
For installing driver on other systems, please refer to:
http://ftp.icpdas.com/pub/cd/iocard/pci/napdos/multiport/manual/

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.**



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5 Pin Assignments and Cable Wiring

VEX-144/144i DB-37

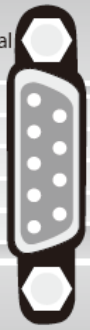
Pin Assignment	Terminal No.	Pin Assignment
N.C.	01	
TxD3-(A)/Data3-(A)	02	20 CTS3-(A)
GND/VEE3	03	21 RxD3-(A)
CTS3+(B)	04	22 RTS3-(A)
TxD3+(B)/Data3+(B)	05	23 RTS3+(B)
CTS4-(A)	06	24 RxD3+(B)
RxD4-(A)	07	25 TxD4-(A)/Data4-(A)
RTS4-(A)	08	26 GND/VEE4
RTS4+(B)	09	27 CTS4+(B)
RxD4+(B)	10	28 TxD4+(B)/Data+(B)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



RS-422/485 Female DB-37 Connector

VEX-144/144i DB-9

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



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

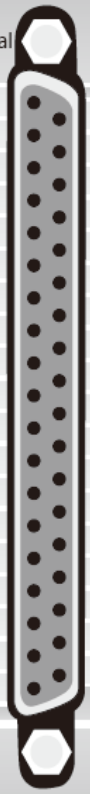
VEX-144(i) CON1			Device	
PIN	Signal		PIN	Signal
1	DATA-	→	1	DATA-
2	DATA+	→	2	DATA+

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!

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VEX-114/114i DB-37

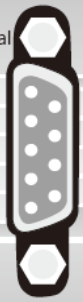
Pin Assignment	Terminal No.		Pin Assignment
N.C.	01	20	RI3
DCD3	02	21	DTR3
GND	03	22	DSR3
CTS3	04	23	RTS3
RxD3	05	24	TxD3
RI4	06	25	DCD4
DTR4	07	26	GND
DSR4	08	27	CTS4
RTS4	09	28	RxD4
TxD4	10	29	RI2
DCD2	11	30	DTR2
GND	12	31	DSR2
CTS2	13	32	RTS2
RxD2	14	33	TxD2
RI1	15	34	DCD1
DTR1	16	35	GND
DSR1	17	36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



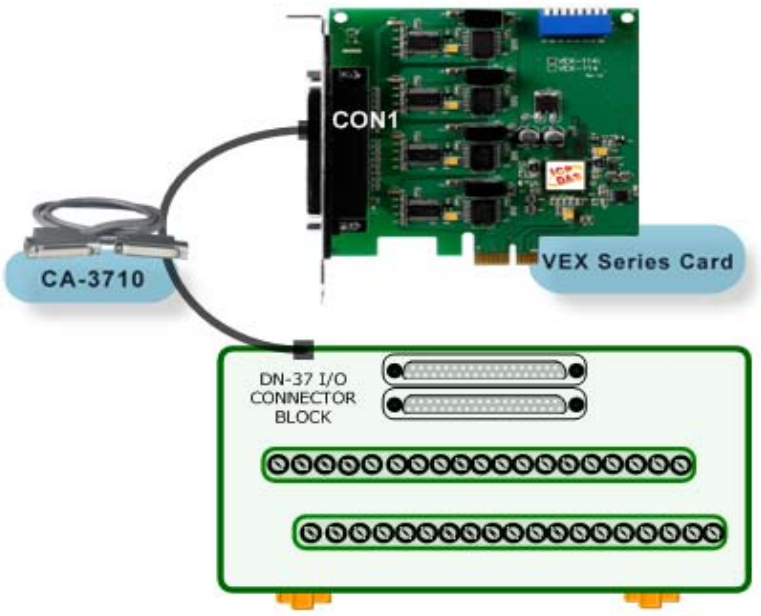
RS-232 Female DB-37 to Male DB-9 Connector

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.

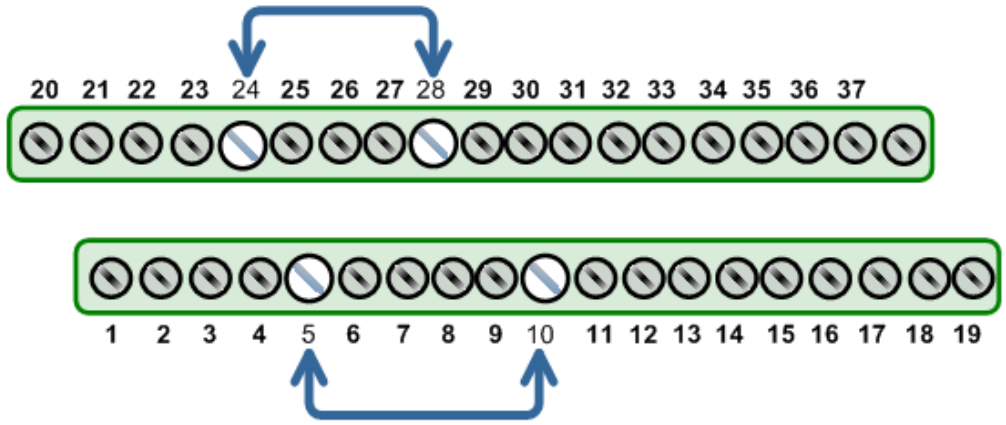


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2. Wire Port-3 and Port-4 :

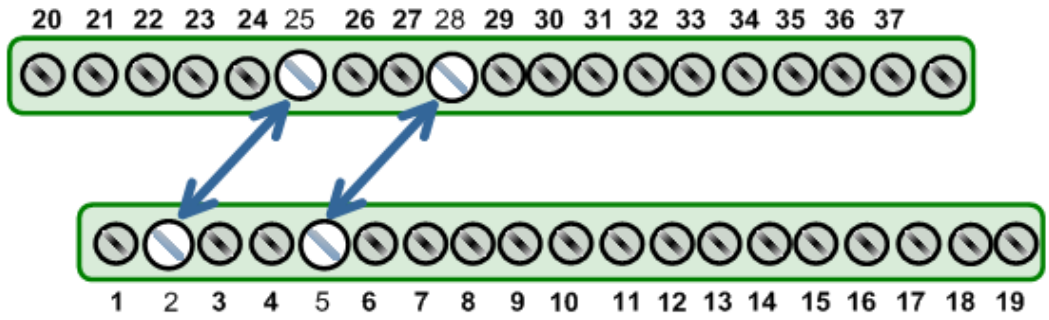
■ VEX-114/114i (RS-232)

Pin Assignment	Pin No.		Pin No.	Pin Assignment
TxD3	24	⟷	28	RxD4
RxD3	05	⟷	10	TxD4



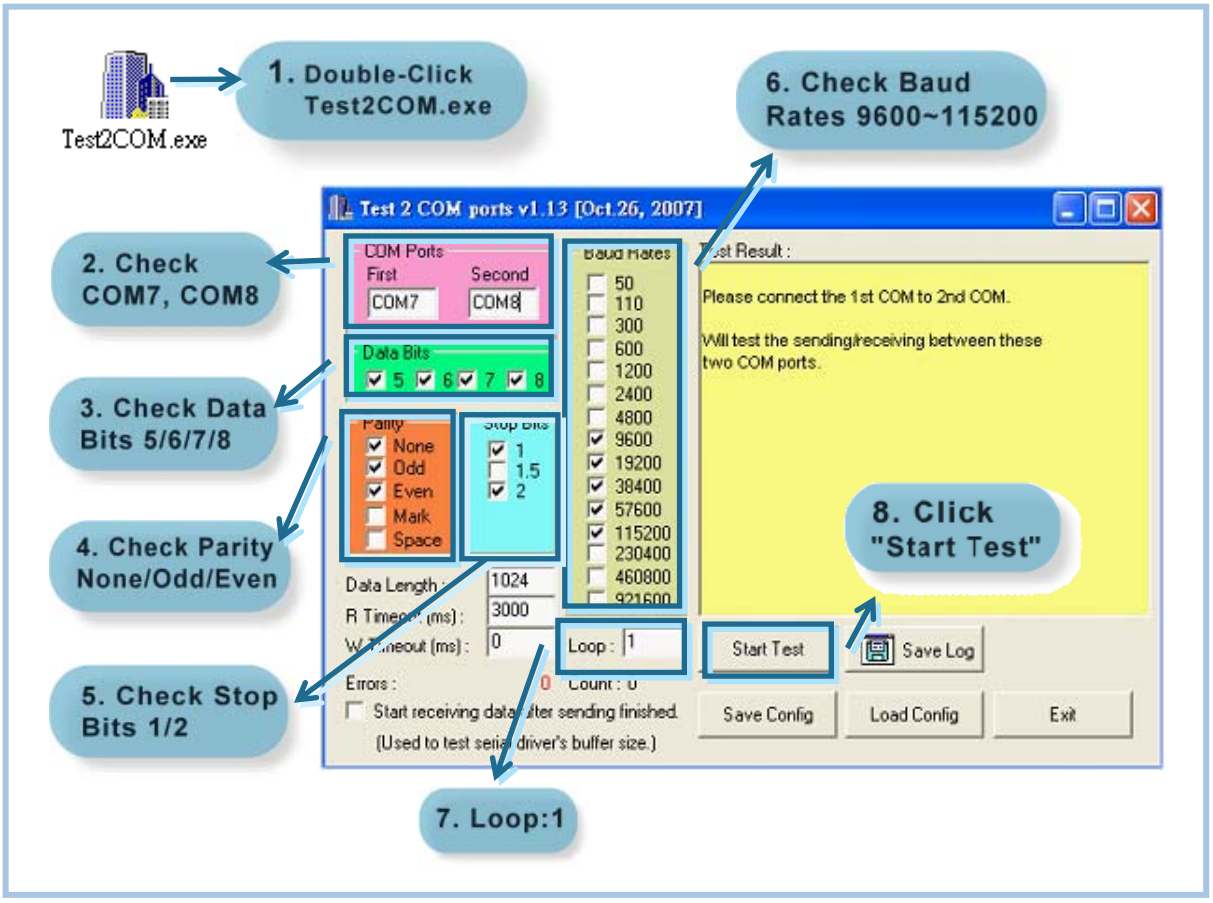
■ VEX-144/144i (RS-485)

Pin Assignment	Pin No.		Pin No.	Pin Assignment
TxD3-(A)/Data3-(A)	02	⟷	25	TxD4-(A)/Data4-(4)
TxD3+(B)/Data3+(B)	05	⟷	28	TxD4+(B)/Data4+(B)

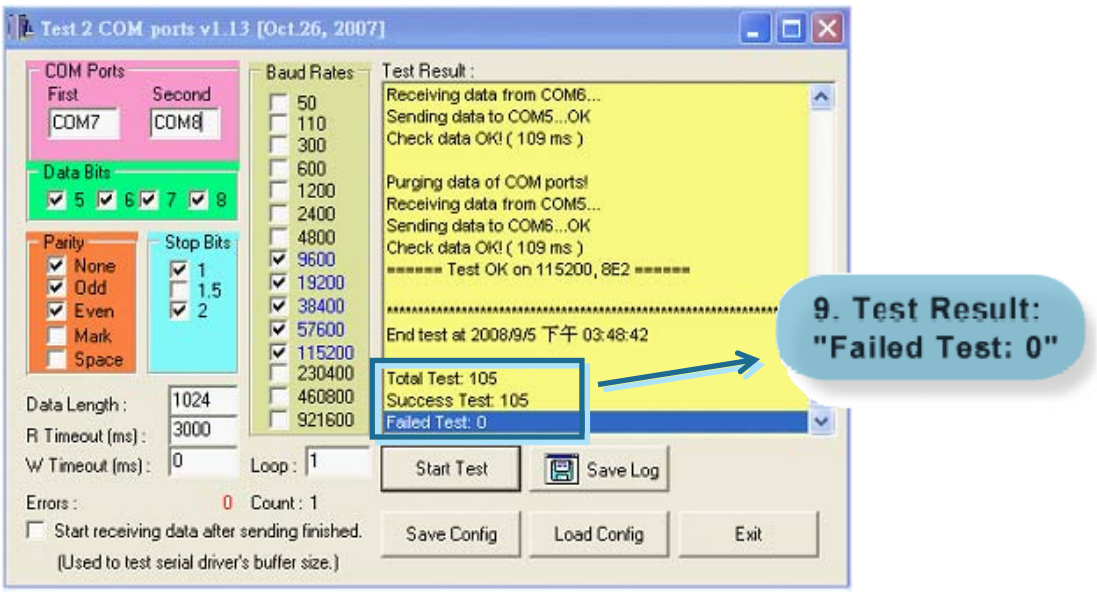


3. Execute the Test2COM.exe program. Get the file from:

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



4. Test Success.



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/

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