DP Industrial PCI Express Serial Adapter Card Quick Installation Guide

Introduction

The *DP Industrial PCI Express Serial Adapter Card* is a high-speed serial card that provides additional serial ports to your system.

Key Features and Benefits

- Provides serial ports to PCI Express enabled system.
- Supports serial port data transfer rate up to 921.6Kb/s
- Built-in 15KVDC ESD serial interface protection
- Built in 128-byte FIFO buffer for ID-E80011-S1 & ID-E80111-S1; built-in 256-byte FIFO buffer for ID-E20211-S1
- Built in H/W, S/W data direction flow control

System Requirements

- Desktop PC with an available PCIe slot
- Windows® 8 (32-/64-bit) / 7 (32-/64-bit) / Vista (32-/64-bit) / XP (32-/64-bit) / Server 2003 & 2008 (32-/64-bit) / Server 2008 R2 / 2000

Package Contents

- *DP Industrial PCI Express Serial Adapter Card*
- Connector adapter cable:
  For ID-E20211-S1: 2x RJ-45 to DB9 (male) cable
  For ID-E80011-S1 & ID-E80111-S1: 1x VHDI68 to 8-port DB9 (male) cable
- Spare low profile bracket
- Driver CD
- Quick installation guide

Layout
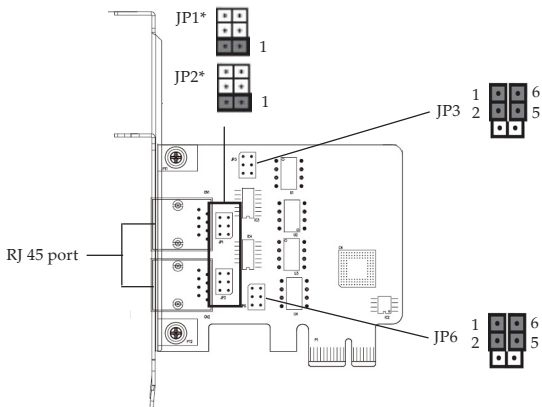
* **NOTE:** Short JP1 and JP2 for 120 ohm terminal resistance to get signal reflection elimination.

Figure 1: ID-E20211-S1 Layout

Figure 2: ID-E20211-S1 Jumper Setting
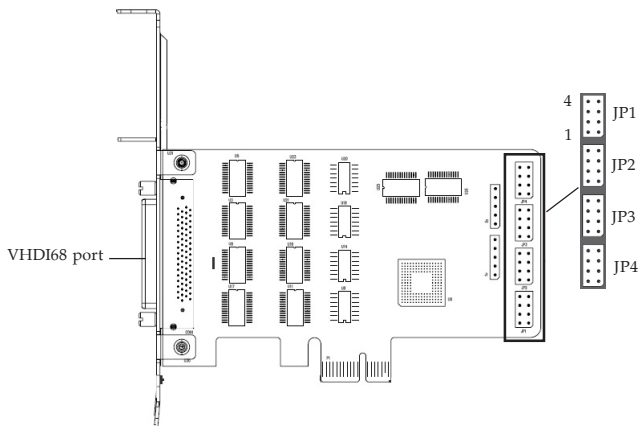
Figure 3: ID-E80111-S1 Layout

Figure 4: ID-E80111-S1 Jumper Setting - RS-422/485

RS-232 mode					
	JP1	JP2		JP3	JP4
Port 1	(jumper 1)	ignore	Port 5	(jumper 1)	ignore
Port 2	(jumper 2)	ignore	Port 6	(jumper 2)	ignore
Port 3	(jumper 3)	ignore	Port 7	(jumper 3)	ignore
Port 4	(jumper 4)	ignore	Port 8	(jumper 4)	ignore

Figure 5: ID-E80111-S1 Jumper Setting - RS-232
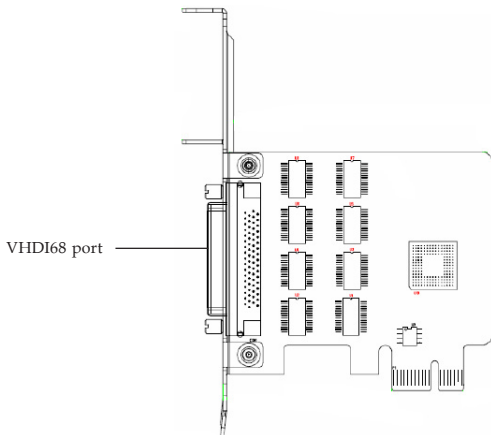

VHDI68 port

Figure 6: ID-E80011-S1 Layout

Pin Assignment

ID-E20211-S1 Pin Assignment

RJ-45 Pin Assignment

RJ45 Pin#	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	RxD-(A)		
2	RxD+(B)		
3	GND		
4	NC		NC
5	NC		NC
6	TxD-(A)		Data-(A)
7	NC		
8	TxD+(B)		Data+(B)

Figure 7: ID-E20211-S1 RJ-45 pin assignment

DB9 Pin Assignment
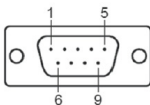
DB9 Pin#	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	TxD-(A)		Data-(A)
2	NC		NC
3	NC		NC
4	TxD+(B)		Data+(B)
5	GND		
6	RxD-(A)		
7	RxD+(B)		
8	NC		
9	NC		

Note: For RS-485 (2-wire), need to control input (RTS) and output (DTR).

Figure 8: ID-E20211-S1 DB9 pin assignment

ID-E80011-S1/ID-E80111-S1 Pin Assignment

DB9 Pin Assignment
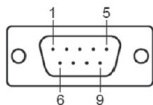
Pin	Signal	Pin	Signal	Pin	Signal
1	DCD	4	DTR	7	RTS
2	RxD	5	GND	8	CTS
3	TxD	6	DSR	9	---

Figure 9: ID-E80011-S1 DB9 Pin Assignment

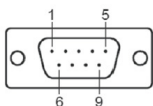| Pin	RS-232	RS-422	RS-485 (4-wire)	RS-485 (2-wire)
1	DCD	TxD-(A)	TxD-(A)	Data-(A)
2	RxD	---	---	---
3	TxD	---	---	---
4	DTR	TxD+(B)	TxD+(B)	Data+(B)
5	GND	GND	GND	---
6	DSR	RxD-(A)	RxD-(A)	---
7	RTS	RxD+(B)	RxD+(B)	---
8	CTS	---	---	---
9	---	---	---	---

Note: for RS-485 (2-wire), need to control input(RTS) and output(DTR).

> IMPORTANT: Please loop pin 1 and pin6, pin4 and pin7 when using RS-485 (2-wire)

Figure 10: ID-E80111-S1 DB9 Pin Assignment

VHDI68 Pin Assignment

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	RxD0	18	RxD4	35	RxD1	52	RxD5
2	CTS0	19	CTS4	36	CTS1	53	CTS5
3	RI0	20	RI4	37	RI1	54	RI5
4	RTS0	21	RTS4	38	RTS1	55	RTS5
5	DCD0	22	DCD4	39	DCD1	56	DCD5
6	DTR0	23	DTR4	40	DTR1	57	DTR5
7	DSR0	24	DSR4	41	DSR1	58	DSR5
8	TxD0	25	TxD4	42	TxD1	59	TxD5
9	GND	26	GND	43	GND	60	GND
10	TxD2	27	TxD6	44	TxD3	61	TxD7
11	DSR2	28	DSR6	45	DSR3	62	DSR7
12	DTR2	29	DTR6	46	DTR3	63	DTR7
13	DCD2	30	DCD6	47	DCD3	64	DCD7
14	RTS2	31	RTS6	48	RTS3	65	RTS7
15	RI2	32	RI6	49	RI3	66	RI7
16	CTS2	33	CTS6	50	CTS3	67	CTS7
17	RxD2	34	RxD6	51	RxD3	68	RxD7

**Figure 11: ID-E80011-S1 / ID-E80111-S1 VHDI68 Pin
Assignment - RS-232 Mode**

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	---	18	---	35	---	52	---
2	---	19	---	36	---	53	---
3	---	20	---	37	---	54	---
4	RxD+(1)	21	RxD+(5)	38	RxD+(2)	55	RxD+(6)
5	TxD-(1)	22	TxD-(5)	39	TxD-(2)	56	TxD-(6)
6	TxD+(1)	23	TxD+(5)	40	TxD+(2)	57	TxD+(6)
7	RxD-(1)	24	RxD-(5)	41	RxD-(2)	58	RxD-(6)
8	---	25	---	42	---	59	---
9	GND	26	GND	43	GND	60	GND
10	---	27	---	44	---	61	---
11	RxD-(3)	28	RxD-(7)	45	RxD-(4)	62	RxD-(8)
12	TxD+(3)	29	TxD+(7)	46	TxD+(4)	63	TxD+(8)
13	TxD-(3)	30	TxD-(7)	47	TxD-(4)	64	TxD-(8)
14	RxD+(3)	31	RxD+(7)	48	RxD+(4)	65	RxD+(8)
15	---	32	---	49	---	66	---
16	---	33	---	50	---	67	---
17	---	34	---	51	---	68	---

Figure 12: ID-E80111-S1 VHDI68 Pin Assignment - RS-422/485 (4-wire) Mode

Hardware Installation

General instructions for installing the card are provided below. The design of computer cases and motherboards may vary, refer to your computer's reference manual for further information, if needed.

Static Electricity Discharge may permanently damage your system. Discharge any static electricity build up in your body by touching your computer's case for a few seconds. Avoid any contact with internal parts and handle cards only by their external edges.

> **Note**: For low profile chassis, remove the standard height bracket and install the enhanced low-profile bracket now.

1. Turn OFF the power to your computer and any other connected peripheral devices.
2. Unplug the power cord and remove the cover from the computer.
3. Remove the slot bracket from an available PCIe slot.

4. To install the card, carefully align the card's bus connector with the selected PCIe slot on the motherboard. Push the board down firmly, but gently, until it is well seated.
5. Replace the slot bracket's holding screw to secure the card.
6. Replace the computer cover and reconnect the power cord.

Driver Installation

This section provides instructions to install the driver for the *DP Industrial PCI Express Serial Adapter Card*. Make sure the card is installed before beginning the driver installation.

Windows 8 (32-/64-bit) / Windows 7 (32-/64-bit) / Server 2008 R2

1. Install the board and boot up Windows.
2. Insert the driver CD. Close the **AutoPlay** box if prompted.
3. Go to **Device Manager**, then right click **PCI Serial Port** under **Other devices**.
4. Click **Update Driver Software**, then click **Browse my computer for driver software**.
5. Type **D:\PCIe\32bit** or **D:\PCIe\64bit**, then click **Next**. (Change **D:** to match your CD/DVD-ROM drive letter)
6. Click **Close**.
7. Go back to **Device Manager**, right click **Other PCI Bridge Device** under **Other devices**.
8. Repeat steps 4-6 to complete the installation.

Windows Vista (32-bit) / Server 2008 (32-bit)

1. Install the board and boot up Windows.
2. At **Found New Hardware**, click **Cancel**.
3. Insert the driver CD, close **AutoPlay** box if prompted.
4. Go to **Device Manager**, right click **PCI Serial Port** under **Other devices**.
5. Click **Update Driver Software**, then click **Browse my computer for driver software**.
6. Type **D:\PCIe\32bit**, and click **Next**. (Change **D:** to match your CD/DVD-ROM drive letter)
7. Click **Close**.
8. Go back to **Device Manager**, right click **Other PCI Bridge Device** under **Other devices**.
9. Repeat steps 5-7 to complete the installation.

Windows Vista (64-bit) / Server 2008 (64-bit)

1. Install the board and boot up Windows.
2. At **Found New Hardware**, click **Locate and install driver (recommended)**
3. *For Windows Vista*: Click **Continue**, and click **Don't search online.**
   For Server 2008 : Click **Don't search online**.
4. Insert the driver CD.
5. Click **Close**.

Windows XP (32-/64-bit) / Server 2003 (32-/64-bit)

1. Install the board and boot up Windows.
2. At **Found New Hardware Wizard**, click **No, not this time**, and click **Next.**
   Skip this step if not prompted.
3. Click **Install from a list or a specific location (Advanced)** and click **Next**.
4. Insert the driver CD, close the driver window if prompted.

5. Check **Include this location in the search**, uncheck another box, type **D:\PCIe\32bit** or **D:\PCIe\64bit**, then click **Next**. (Change **D:** to match your CD/DVD-ROM drive letter)

6. Click **Finish**.

7. Repeat steps 2-6 to complete the installation.

Windows 2000

1. At **Found New Hardware Wizard**, click **Next**.

2. Select **Search for a suitable driver for my device (recommended)**, and click **Next**.

3. Check **Specify a location**, uncheck the other boxes, then click **Next**.

4. Insert the driver CD, type **D:\PCIe\32bit**, then click **OK**. (Change **D:** to match your CD/DVD-ROM drive letter)

5. Click **Next** and **Finish**.

6. Repeat steps **1-5** to complete the installation.

To Verify Windows Installation

1. Check in Device Manager to verify installation.

    For Windows 8 / 7 / XP / Server 2008 R2 / 2003 / 2000: Right click **Computer** or **My Computer**, click **Manage**, click **Device Manager**.

    For Windows Vista: Right click **Computer**, click **Manage**, click **Continue**, then click **Device Manager**.

    For Server 2008: Right click **Computer**, click **Manage**,v double click **Diagnostics**, then click **Device Manager**.

2. **Serial Bus Adapter** should be displayed under Muti-port serial adapters. And double click **Ports (COM & LPT)**, **Enhanced Communication Port...** should be displayed.

Changing Serial Port Number

Some serial port devices need a specific communication port in order to function properly. If your serial port device works, do not make any changes.

1. Right click **My Computer**, click **Manage**, then click **Device Manager**.
2. Double click **Ports (COM & LPT)**, and double click the **PCI Express UART Port**.
3. Click the **Settings** tab.
4. Click the down arrow next to the **COM Port Number to Use** box. Select a communication port that is not in use, then click **OK**.
5. Restart your system to save your changes.

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SIIG offers a lifetime manufacturer warranty with this product. This warranty covers the original purchaser and guarantees the product to be free of any defects in materials or workmanship for the life of the product.

SIIG will, at our discretion, repair or replace (with an identical product or product having similar features and functionality) the product if defective in materials or workmanship. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Please see our web site for more warranty details.

If you encounter any problems with this product, please follow the procedures below.

A) If it is within the store's return policy period, please return the product to the store where you purchased from.

B) If your purchase has passed the store's return policy period, please follow the steps below to have the product repaired or replaced.

> **Step 1:** Submit your RMA request.
>
> Go to **www.siig.com**, click **Support**, then **REQUEST A PRODUCT REPLACEMENT** to submit a request to SIIG RMA or fax a request to 510-657-5962. Your RMA request will be processed, if the product is determined to be defective, an RMA number will be issued.

> **Step 2:** After obtaining an RMA number, ship the product.
> - Properly pack the product for shipping. All accessories that came with the original package must be included.
> - Clearly write your RMA number on the top of the returned package. SIIG will refuse to accept any shipping package, and will not be responsible for a product returned without an RMA number posted on the outside of the shipping carton.
> - You are responsible for the cost of shipping to SIIG. Ship the product to the following address:
>
>   **SIIG, Inc.**
>   **6078 Stewart Avenue**
>   **Fremont, CA 94538-3152, USA**
>   **RMA #:** _____
>
> - SIIG will ship the repaired or replaced product via Ground in the U.S. and International Economy outside of the U.S. at no cost to the customer.

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Founded in 1985, SIIG, Inc. is a leading manufacturer of IT connectivity solutions (including Serial ATA and Ultra ATA Controllers, FireWire, USB, and legacy I/O adapters) that bridge the connection between Desktop/Notebook systems and external peripherals. SIIG continues to grow by adding A/V and Digital Signage connectivity solutions to our extensive portfolio. SIIG products offer comprehensive user manuals, many user-friendly features, and are backed by an extensive manufacturer warranty. High quality control standards are evident by the overall ease of installation and compatibility of our products, as well as one of the lowest defective return rates in the industry. SIIG products can be found in computer retail stores, mail order catalogs, through major distributors, system integrators, and VARs in the Americas and the UK, and through e-commerce sites.

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