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Attention: Windows users should install Software according to the instructions in Section 2 BEFORE connecting the CP2101 USB cable to a PC.

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1. Kit Contents

The CP2101 Evaluation Kit contains the following items:

- CP2101 Evaluation Board
- CP2101 Virtual COM Port Drivers CD-ROM
- RS232 Serial Cable
- USB Cable
- CP2101 Evaluation Kit User's Guide (this document)

2. Software Setup

The included CD-ROM contains the Virtual COM Port Drivers for the CP2101. The following files are included on the CD-ROM:

- CP2101 datasheet (CP2101.pdf)
- Driver installation utility (CP2101_Drivers.exe)
- Version information document (Readme.txt)
- CP2101 Evaluation Kit User's Guide (CP2101_UG.pdf) (this document)

2.1. Extract all Virtual COM Port Drivers

Initial software setup requires running **CP2101_Drivers.exe** to extract all of the device drivers (Windows and Macintosh). After following the prompts, the utility will copy the driver files to a specified directory or the default directory, "C:\Cygnal\CP2101". Each set of drivers will be extracted to an appropriately named directory, for example WIN, MAC9, and MAC10.

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2.2. Install Windows Virtual COM Port Driver

To install the Windows virtual COM port driver, run **Setup.exe** located in the WIN directory created in Section 2.1. Driver files are installed into the "C:\Program Files\CUSB USB to RS-232 Bridge Controller" directory. COM port properties for the device can be selected in the device manager (COM port number, baud rate etc.).

2.3. Install Macintosh Virtual COM Port Driver

To install the Macintosh OSX virtual COM port driver, extract the **cardinal-osx-V1_00c-release.zip** file located in the MAC10 directory created in Section 2.1. Next, run the extracted file **CygnalUSBToRS232Installer**.

To install the Macintosh OS9 virtual COM port driver, extract the **cardinal-os9-V3_00a-free.sit** file located in the MAC9 directory created in Section 2.1. Next, run the extracted file **Installer**.

3. Hardware Setup

The evaluation board is connected to a PC as shown in Figure 1.

1. Connect one end of the USB cable to a USB Port on the PC.
2. Connect the other end of the USB cable to the USB connector on the CP2101 evaluation board.
3. Connect one end of the RS232 serial cable to the DB-9 connector on the CP2101 evaluation board.
4. Connect the other end of the RS232 serial cable to the target serial device.

Figure 1. Hardware Setup

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4. Target Board

The CP2101 Evaluation Kit includes an evaluation board with a CP2101 device pre-installed for evaluation and preliminary software development. Numerous input/output (I/O) connections are provided to facilitate prototyping using the evaluation board. Refer to Figure 2 for the locations of the various I/O connectors.

J1	DB9 connector for RS232 interface
J2	UART signal access connector
J3	USB connector for USB interface
J4	Not used
D1	Power indicator LED

Figure 2. CP2101 Evaluation Board

4.1. Universal Serial Bus (USB) Interface (J3)

A Universal Serial Bus (USB) (J3) connector is provided to facilitate connections to the USB interface on the CP2101.See Table 1 for the USB pin definitions.

Pin #	Description
1	VBUS
2	D-
3	D+
4	GND (Ground)

Table 1. USB Connector Pin Descriptions

4.2. UART Signals (J1, J2)

A RS232 transceiver circuit and DB-9 connector (J1) are provided on the evaluation board to connect the CP2101 virtual serial port to external serial devices. See Table 2 for the RS232 J1 pin descriptions. The J2 connector is provided to facilitate direct access to the CP2101's UART signals. Shorting blocks on J2 are required to connect the UART signals to J1. See Table 3 for J2 pin descriptions.

Pin	Signal	CP2101 Direction	Description
1	DCD	Input	Data Carrier Detect
2	RXD	Input	Receive Data
3	TXD	Output	Transmit Data
4	DTR	Output	Data Terminal Ready
5	GND		Ground
6	DSR	Input	Data Set Ready
7	RTS	Output	Request to Send
8	CTS	Input	Clear to Send
9	RI	Input	Ring Indicator

Table 2. RS232 Pin Descriptions

Pins	Signal	CP2101 Direction	Description
1-2	TXD	Output	Transmit Data
3-4	RXD	Input	Receive Data
5-6	DTR	Output	Data Terminal Ready
7-8	RI	Input	Ring Indicator
8-10	DCD		Data Carrier Detect
11-12	DSR	Input	Data Set Ready
13-14	CTS	Input	Clear to Send
15-16	RTS	Output	Request to Send

Table 3. J2 Pin Descriptions

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5. Schematic

Figure 3. CP2101 Evaluation Board Schematic