

REXENSE

802.15.4/ZigBee USB Stick

RD1100



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VERSION HISTORY

V1.0.0	2010/06/4	1st issue of preliminary document
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1. Overview

RD1100 is an easy and effective tool for enabling connectivity of 802.15.4/ZigBee for your devices with USB port. With the virtual COM port driver support, the users can receive and send data through any COM port application (e.g. Hyper Terminal)

1.1. Supported Operating Systems

- Windows 98SE
- Windows XP
- Windows 2000
- MAC OS-9
- MAC OS-X
- Linux

2. Rated Parameters

Parameter	Min	Max	Unit	Testing condition
Supply Voltage Vdd	4.0	5.25	V	
Voltage on any pin	-0.3	3.6	V	
Storage Temperature	-55	125	°C	

Table 1: Absolute maximum ratings

The absolute maximum ratings given above should under no circumstances be violated. Exceeding one or more of the limiting values may cause permanent damage to the device.

3. Operating Conditions

Typical values at 5V 25°C.

Parameter	Min.	Typ.	Max.	Units	Condition
Current (TX)	160	165	170	mA	TX P=20dBm
Current (RX)	34.8	36.0	37.4	mA	RX PA LNA Open
Standby Current	29.8	31	32.5	mA	IDLE PA LNA Closed
Sleeping Current		105		uA	SPLEEP
Operating Temperature	-40	25	85	°C	

Table 2: Operating Condition

4. Other data

For further technical information, including radio performance, please refer to the Product Manual of REX3SP Module at www.rexense.com.

For more information on ZigBee® compliance and the AT command interface firmware, please refer to the latest AT command dictionary and the REX3SP user guide at www.rexense.com.

5. Firmware Upgrades

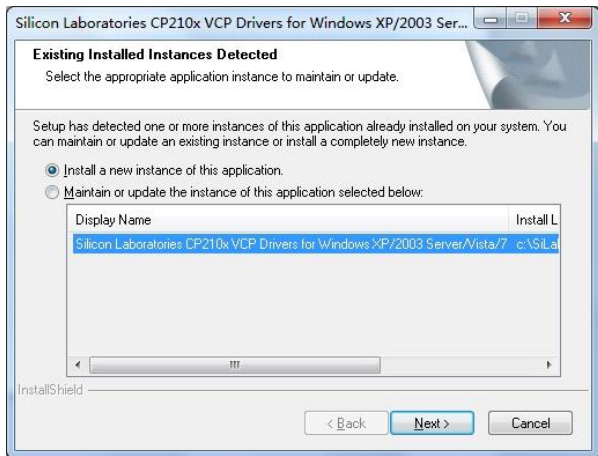
The drivers provided will generate a virtual COM port allowing easy access to the serial port of the embedded REX3SP.

To read more about the REX3SP wireless mesh networking module and its command line interface please read the corresponding documentation which can be found at www.rexense.com.

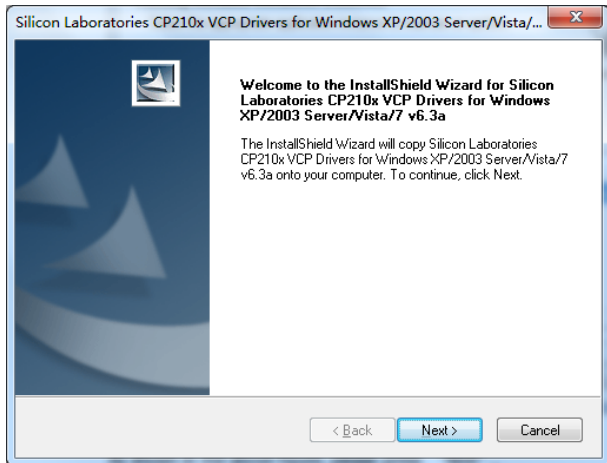
6. Driver Installation and Operation

Users need to download the driver named "CP210x_VCP_Win_XP_S2K3_Vista_7" at www.rexense.com. After the driver is successfully installed, the system will create a virtual COM port, through which the system can access to the serial port of the module REX3SP. For more information of the module (REX3SP), please go to www.rexense.com.

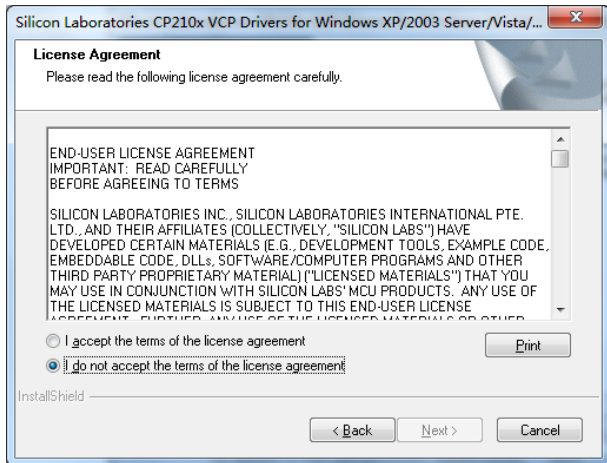
Windows 9x/XP/2k/7 Driver Installation



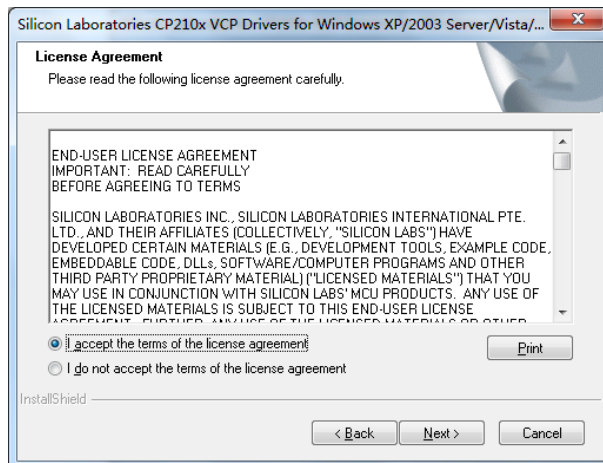
Please click "Next" to proceed as shown in the above window.



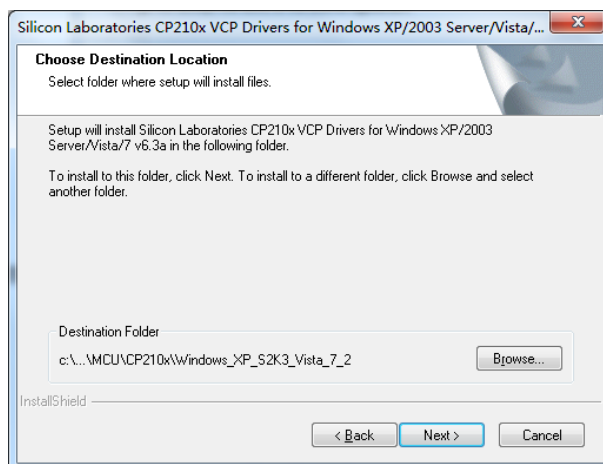
Please click "Next" to proceed as shown in the above figure.



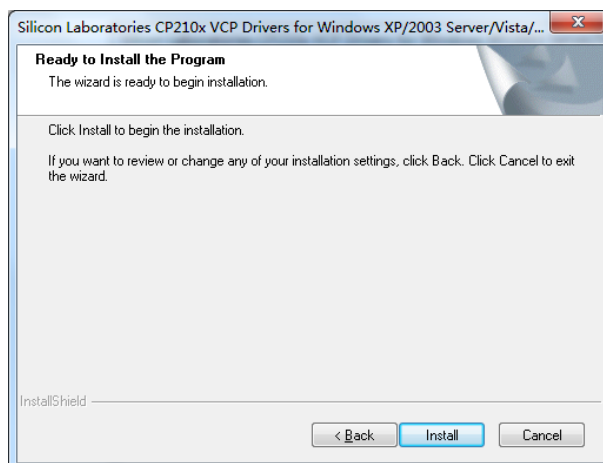
Please select "I accept the terms of the license agreement" to proceed;



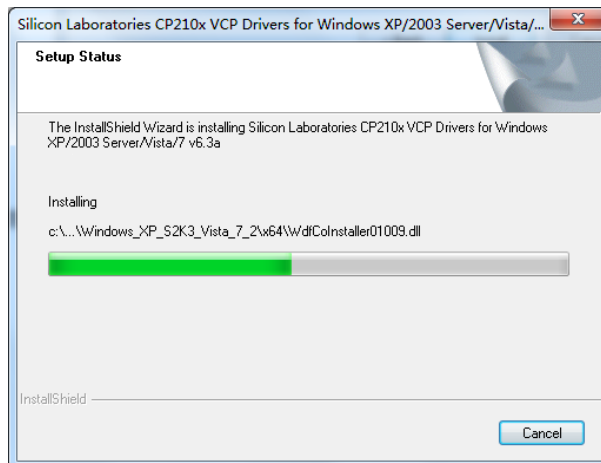
Please click "Next" to proceed as shown in the above figure.



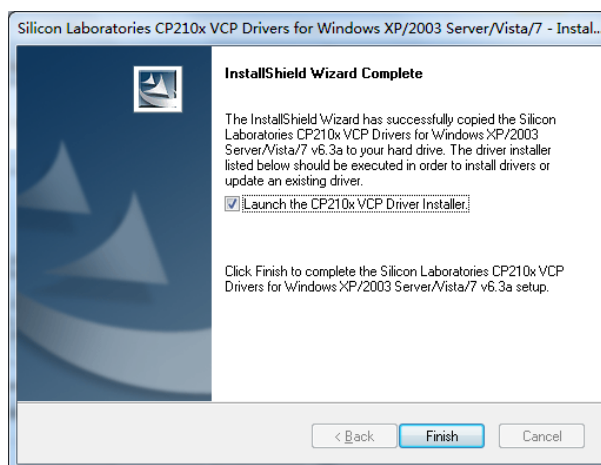
Please select a destination folder where you want to install the driver, and click "Next" to proceed;



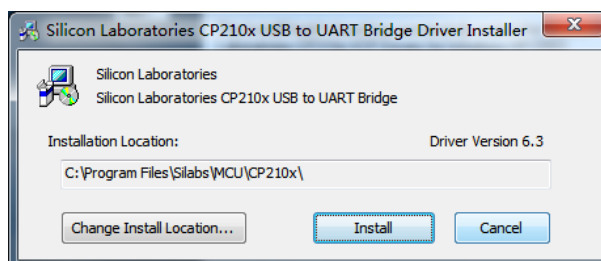
Click "Install" to proceed;



As shown in the window, "CP210x_VCP_Win_XP_S2K3_Vista_7" has been successfully copied to user's hard disk. Please click "Launch the CP210x VCP Driver Installer" to complete the installation.



Please click "Finish";



Please click "Install" to complete the installation.

7. Custom Firmware Development

Two ways of custom firmware development are available:

Method 1: Through the USB-Serial port, users are able to perform IAP upgrade with pre-installed Bootloader program in the ZigBee module. Users can send the firmware to perform the upgrade according to the upgrading commands of the Bootloader program.

Method 2: J-Link (for ST based chips)/Ember Insight Adapter (for Ember based chips) and IAR for ARM 5.405 (or above) are needed to perform the custom firmware development without Bootloader program in the ZigBee module. The custom firmware can be burned into the ZigBee chip via Jflasher. Or users can download the firmware through IAR for ARM.

8. Contact Us

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9. Reference Sites

STMicroelectronics: www.st.com

Ember: www.ember.com