ZigBee Emotion Ring

User Manual

ZigBee Ring

Zg-T01R

&

USB Dongle

Zg-C01U

Rev : 01

1、Manufacturer Introduction

GlobalTop, located in Tainan Taiwan, is the professional in RF system design and manufacture. With the strong RF system design team, GlobalTop has variable RF product lines, like GPS, Lighting control system and ZigBee products.

2、Product Information

2.1 Product spec and features

2.1.1 Hardware spec ：

	Emotion Ring	USB Dongle
MAC	IEEE 802.15.4	
Carrier Frequency	2.4 GHz	
Modulation	DSSS	
Output Power	-4.06 dBm	-1.18 dBm
Sensitivity	-94 dBm	
Communication Distance	10 Meters	
Temperature Resolution	0.1 ℃	
Temperature Sample Rate	1 Data/ Sec	
Circuit Consumption	Max. 30mA	Max. 50mA
Power Supply	DC input (one AA battery)	
Rechargeable Battery	20mAh	
Max Connection		30
USB		USB2.0 Standard Type-A
Operating Temperature	+10 ~ +50℃	
Storage Temperature	0 ~ +85℃	

2.1.2 Contents in package and accessories ：

One set includes 9 integrity items at least:

- User manual * 1
- PC software & USB Driver CD * 1
- Relaxing learning guider CD * 1
- ZigBee USB receiver * 1
- ZigBee emotion ring * 1
- Charger * 1
- Clear wiper * 1

2.2 The notice before using emotion ring and installing PC software application：

1. Please take this training under professional supervision!
2. The relaxing CD may induce sleep. Please be cautious while driving or operate the machine.

3. Please do not tear the MAC sticker on emotion ring and USB dongle.
4. You may not use the rechargeable battery in charger.
5. Please do not take this training in a windy place.
6. Parents accompanying children under age 12 while taking this training is required.
7. It is not necessary to go internet online while installation.
8. It needs only once to setup USB dongle driver. You may un-install the driver if you do not need it.
9. Strongly recommend to install this application using Microsoft Windows XP.

3 、ZigBee Emotion Ring

3.1 LED Indicator：

Four colors LEDs to indicate different status:

color	LED Behavior	Device Status
Red	Steady for 1 second, then dark.	Press Power button to turn on ZigBee Ring
	Blinking 6 times in 4 secs	Press Power button and hold 4 secs to turn off ZigBee Ring (go into power saving mode).
	Blinking 3 times/sec	The rechargeable battery is low voltages (Need to be charged)
Yellow	Steady	Press SELECTION button to switch the buzzer on/off.
	Blinking once/sec	Temperature is the same or lower than previous record with buzzer on
Blue	Speedy Blinking	Search & try to link with ZigBee dongle
	Blinking once/sec	Temperature is the same or lower than previous record with buzzer off
Green	Blinking once	Temperature is higher than the previous record

3.2 POWER button：

◆ **Turn on:** Press"POWER" button once. Red led will blink once then blue led blink speedy to search USB receiver. After connecting with USB receiver, the blue led will blink once per second.

◆ **Turn off:** Press"POWER" button and hold 4 seconds. The red led will blink 6 times while you hold to press "POWER" button then turn off the ring. But if you do not hold to press the "POWER" button for 4 seconds, the ring will go back to working mode after you releasing the "POWER" button.

3.3 SELECT button：

Press one to switch buzzer function on/off.

3.4 POWER+SELECT button：

Press POWER and SELECT simultaneously to do hardware reset.

4 、ZigBee USB Receiver

4.1 Blue LED indicator：

    Blinking speedy：Plug in the USB Dongle while system boot-up and does not receive data from any emotion ring.

    Blinking once per second ：Receive emotion ring data.

5、Charger

5.1 Suitable battery：

Require one AA battery.
To avoid the damage of ring, you MAY NOT use the rechargeable battery in the charger.

5.2 Red LED indicator：

Steady： Indicating the battery 's engine is enough if the charger not under charging process. Or indicating the ring's battery is full if the charger under charging process.

Off： The power switch is off or the battery's engine is too low to go the charging process (need to change new battery).

※ *Note! We recommend to go charging process for 5 hours to get the ring engine full status at the first time. After that, to get full status needs 2 hours.*

6、 Installation guide

Note : Please plug in ZigBee USB dongle before going to installation porcess.

Step 1：Click "My Computer" to select the CD ROM and open the folder.

Step 2：Execute "Setup".
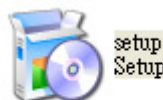
Step 3：Check if you accept the .NET Framework agreement. If you accept this agreement, please click "Accept". Otherwise please click "Unacceptable" to terminate the installation process. This process is performed only at the 1st installation.
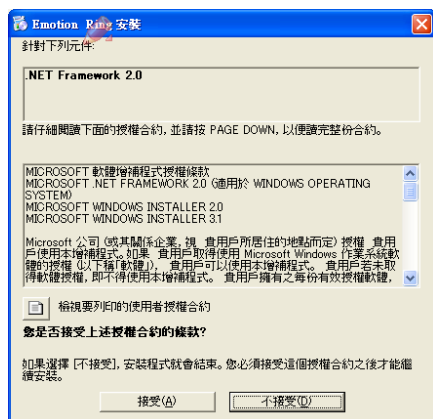

Step 4：Check if you accept the "Crystal Reports for .NET Framework 2.0" agreement. If you accept this agreement, please click "Accept". Otherwise please click "Unacceptable" to terminate the installation process.

This process is performed only at the 1st installation.
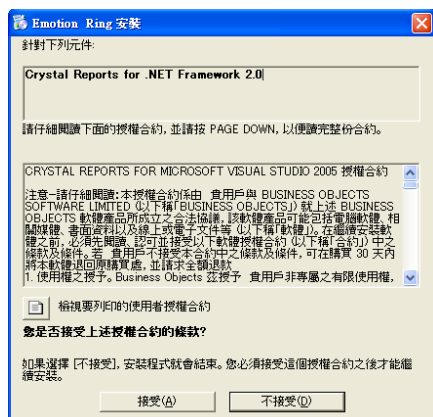
Step 5：Check if you accept the "Microsoft Visual Studio 2005" agreement. If you accept this agreement, please click "Accept". Otherwise please click "Unacceptable" to terminate the installation process.

This process is performed only at the 1st installation.

Step 6：The system will execute installation process for ".NET Framework"、"Crystal Reports for .NET Framework 2.0" and "Microsoft Visual Studio 2005".
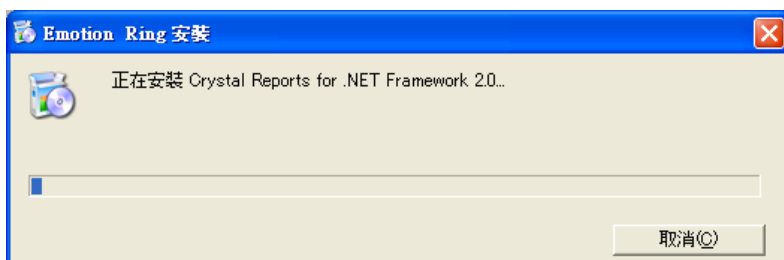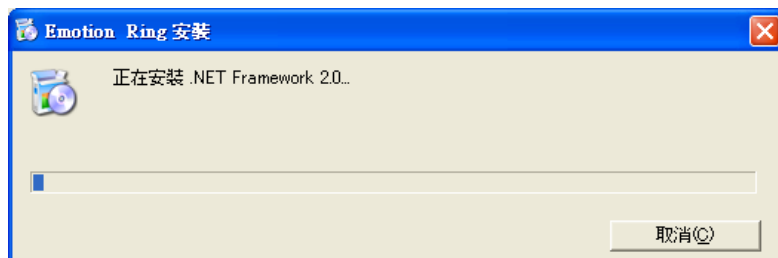
Step 7：After finishing the previous installation processes, system will begin the "Finger Surface Temperature Monitor" installation process. Please click "Next" to begin.
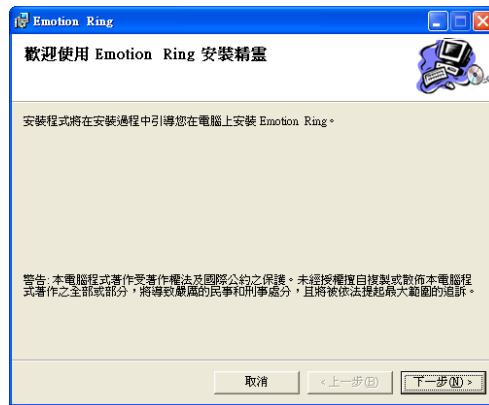
Step 8：Set the destination folder. If you have no special request, system will create the folder automatically. Please click "Next" after finishing continuing the process.

Everyone：Means everyone who logon this PC/NB can execute this application.

Just me：Means just the one who logon this PC/NB using my user id can execute this application.

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Step 9：Confirm before installation. Please click "Next" to go the installation process.

Step 10：The system will execute installation process.
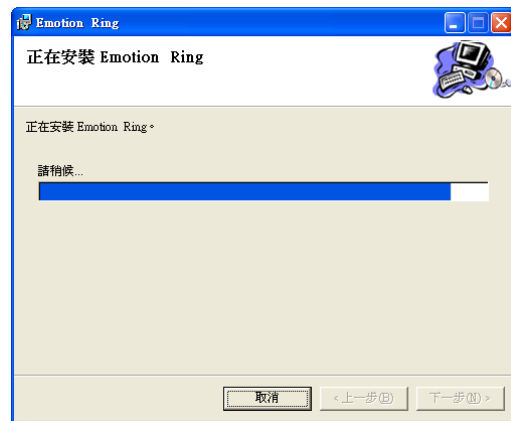
Step 11： System performs "CP210x VCP" driver installation process. Please click "Next" to begin the installation.

Step 12： Check if you accept the "CP210x VCP" license agreement. If you accept this agreement, please mark "I accept the terms of the license agreement". Otherwise please mark "I do not accept the terms of the license agreement". Then click "Next" for next step.
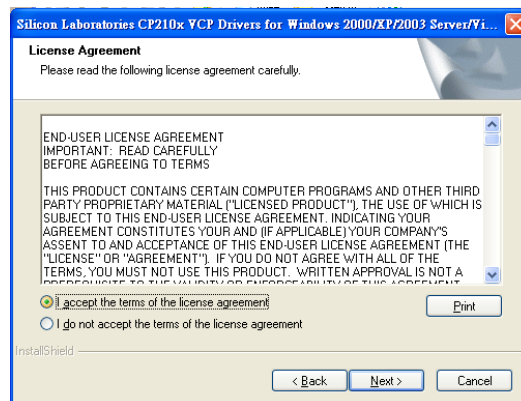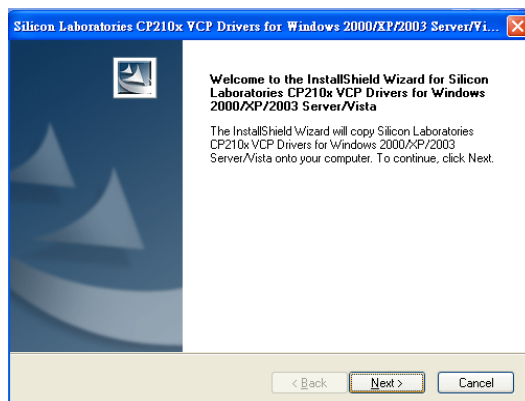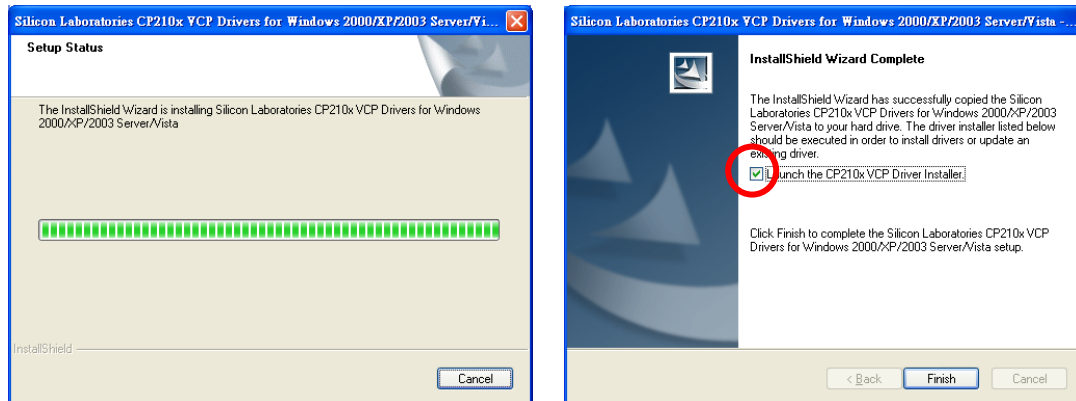

Step 13： Choose Destination Location.

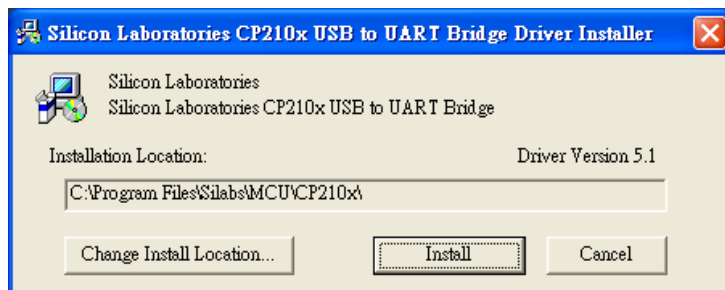**Step 14：** Perform installation process to click "Install".
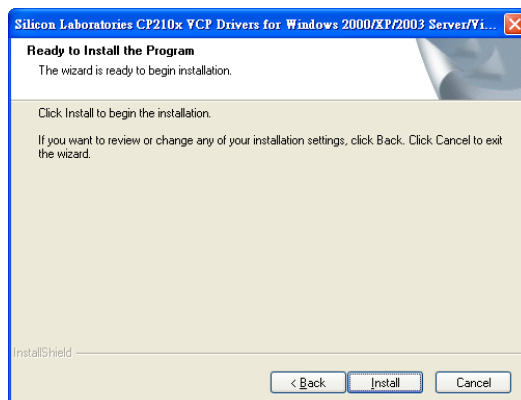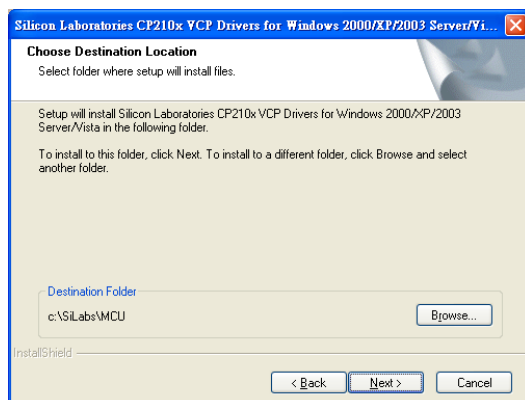
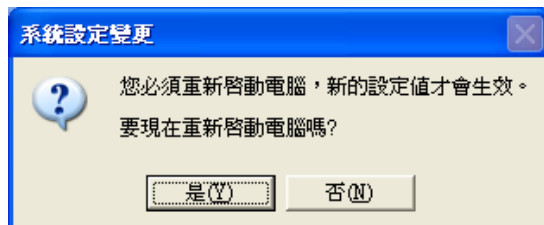**Step 15：** Program is installing.

Step 16： Mark "Launch the CP210xVCP Drive Installer" then click "Finish" to finish this process.
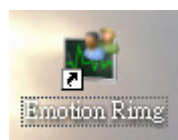

Step 17： System will popup another installation process. Please click "Install".

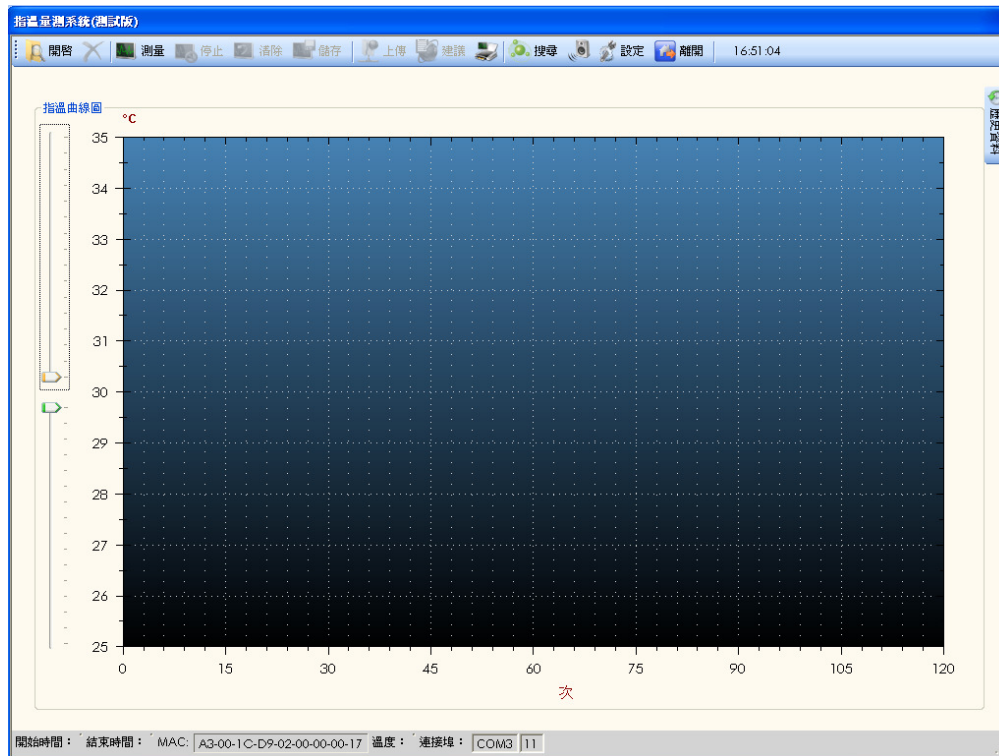**Step 18：** Finishing the installation process, please click "Yes" to restart your NB/PC.

Step 19： You may see the "Emotion Ring" shortcut icon on the desktop after restart .

Step 20： You may execute the finger surface temperature monitor program to click "Emotion Ring" icon.

7、User manual for Single User version

7.1The tool icons :

| Icon	Description
開啟	Open：Open the history training record.
✕	Delete：Delete the current training record.
測量	Start：Begin to monitor finger temperature.
停止	Stop：Stop to monitor finger temperature.
清除	Clear：Clear the current training record.
儲存	Save：Save the current training record.
搜尋	Scan：scan the current working ring
🔊	Sound：Switch on/off the sound.
設定	Setup：record personal profile.
離開	Exit：Close the application window.

8.2 step by step to do the training：

Step 1：Plug the ZigBee USB dongle, then turn on emotion ring. Open emotion ring application, and then check if the MAC ID value on left screen is the same as the ring label aside. If the answer is "yes", then go to step 6. Others go to step 2.

Step 2：Press "search" icon then popup a window as below.

Step 3：Press "search" button to find emotion ring. And then press "Stop" button after the ring MAC ID had been identified.　Press "OK" button to start training.
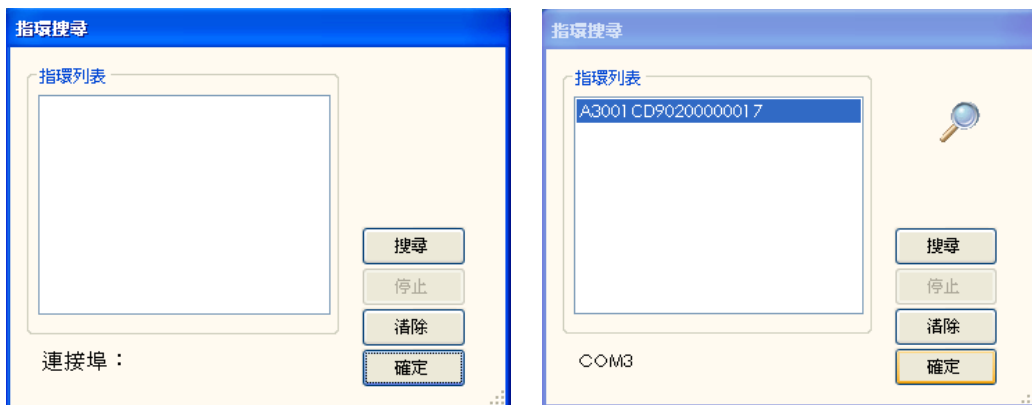

Step 4：Systems will popup a message box to ask if you want this MAC ID as the default ring. If the NB/PC is for your private use, you may choose "Yes". Others choose "No".

If you choose "Yes" , please go step 5.Others go step 6.

**Step 5**：Input your personal information: name & Id no. Then press "OK" to close this window.
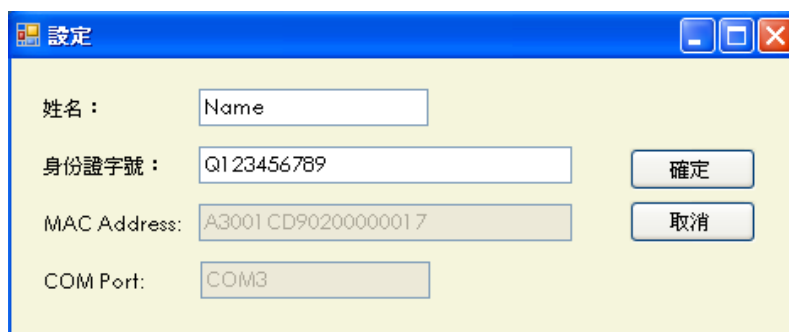
Step 6 : Press "Start" to begin the finger temperature monitor program. The yellow smile face means the finger temperature is higher the previous second.
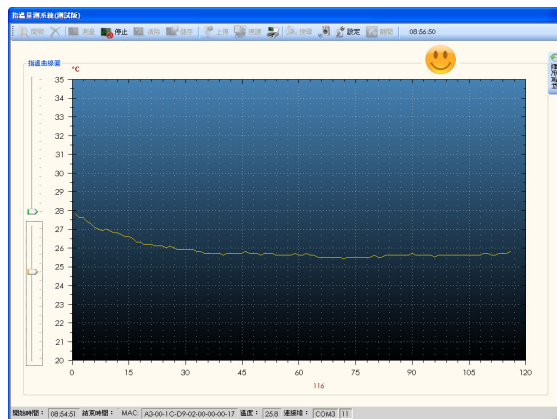
Step 7 : Press "Stop" button to stop the train. You may choose to save to clear the training data after stop the training.

Step 8 : In case you choose to clear the training data, system will popup another confirm message box to as you confirm again.
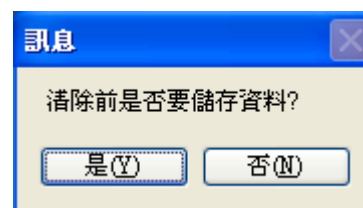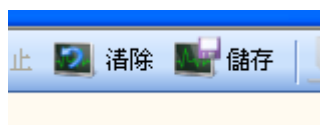
Step 9 : In case you choose to save the training data, system will popup another message box to ask you input some personal profile. Also ask you to make the relaxed score both before and after doing this training exercise.

Step 10 : To modify personal profile, please press "Configuration" button

8.3 Inquiry History data

Press "History" button to choose one training record.

You also may use the id or name to search data.

FCC statement in User's Manual (for class B)
"Federal Communications Commission (FCC) Statement

This Equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to
  which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.