

USER MANUAL

BCM92046 Solution

Bluetooth Module for Lenovo



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■ Section One: Introduction

The Bluetooth Module use a monolithic single-chip, Foxconn BCM92046 and it can compliant Bluetooth 2.1. This Bluetooth module is base on the highly integrated BCM92046 stand-alone baseband processor with an integrated 2.4GHz transceiver. It is fully compliant with the Bluetooth radio specification and incorporates new modulation schemes to support enhanced data rate(EDR) of 3MBps.

1.1 Features

1.1.1 Bluetooth Function

- Bluetooth radio firmware is upgradeable for bug fixes, initial version compatible with Bluetooth specification version 2.1
- Fully compliant to Bluetooth SIG (BQB) compatibility testing.
- o USB Pin assignment is to use MDC reserve pin to communicate with Host.interface
- Bluetooth Profile Support
 - Pim Item Transfer
 - Pim Synchronization
 - Network Access
 - Dial-up Networking
 - Bluetooth Serial Port
 - Fax
 - Audio Gateway
 - Headset
 - Bluetooth Imaging
- Drivers support Windows 98, 98SE, ME, 2000, XP.
- Supports Power Management

1.2 Hardware Requirements

Supply Voltage	3.3V
Frequency Range	2.400-2.4835 GHz
Antenna Load	50 Ohm
Receive Sensitivity	-78 dBm@0.1% BER
Maximum Receiver Signal	-20 dBm
TX Power	4 dBm maximum (class 2)
RF Power Control Step Size	2 dB
Range	10 meters at 0 dBm TX power (class 2)
Radio	Compliant with Bluetooth radio specification and incorporates new modulation schemes to supports enhance data rate (EDR) of 3Mbps



Pico Net	1 master to 7 slaves
Operating Channels	79 channels of 1 MHz BW
Security	Full support of Bluetooth security provisions including hardware support for full length 128 bit encryption keys.
Host Interface (USB)	USB specification 2.1 compliant and using MDC reserve pin to communicate with Host
Software Requirements	Windows 98SE, ME, 2000, XP.
Mechanical Requirements	26mm x 14mm



Section Two: Bluetooth Installation

The following steps provide instructions for installing Bluetooth.

- 1. Make sure your Bluetooth device already insert into your notebook.
- 2. Make sure your notebook operating system support Windows 98SE or ME or 2000 or XP.

2.1 ActivePerl Installation

Proceed to the following section.

Double click the program "ActivePerl-5.8.4.810-MSWin32-x86.msi" to execute the To execute ActivePerl in the software package :



Windows shows the welcome dialog as below, click the "Next" to begin the process :



1. The license agreement dialog will pop up, please read it carefully. If you agree it, choose "I accept the terms in the license agreement" and click "Next" :





2. Windows show the custom setup, select the way you want features to be installed, and then click **Next**":

🛃 ActivePerl 5.8.4 Build 810 Setup	×
Custom Setup Select the way you want features to be in:	stalled.
Click on the icons in the tree below to change ActivePerl Perl PPM 3.0 Examples	the way features will be installed. ActiveState ActivePerl is a quality-assured distribution of Perl. This feature requires 0KB on your hard drive. It has 3 of 3 subfeatures selected. The subfeatures require 44MB on your hard drive.
Location : C :\Perl\	Br <u>o</u> wse
<u>R</u> eset Disk <u>U</u> sage < <u>E</u>	ack <u>N</u> ext > Cancel

4 Show the new features in PPM, then select "Next" :



🛃 ActivePerl 5.8.4 Build 810 Setup	
New features in PPM	
This release of ActivePerl includes Programmer's Package Man version 3, which includes a new facility for keeping track of instal ASPN's "PPM Profile" feature communicates your package installs a securely and transparently to your ASPN Profile. Saved profiles all easily migrate, reinstall, upgrade or restore PPM packages in one o locations. Using the profile functionality requires installing a license for ASPN can always disable or enable the Profile feature later within PPM3.	ager led packages. and updates ow you to or more Perl. You
For more information about ASPN, please see <u>http://www.ActiveState.com/Products/ASPN_Perl/</u> .	
Enable PPM3 to send profile info to ASPN Prive	acy Policy
< <u>B</u> ack Next >	Cancel

5 Choosing setup options shows, and you should choose the first and second items, then click "**Next**" :

🛃 ActivePerl 5.8.4 Build 810 Setup
Choose Setup Options Choose optional setup actions.
✓ Add Perl to the PATH environment variable ✓ Create Perl file extension association
Create IIS script mapping for Perl
Create IIS script mapping for Perl ISAPI
< <u>B</u> ack <u>N</u> ext > Cancel



6 It's ready to install the tool, click "Install" to run it".



7 Installing ActivePerl 5.8.4 Build 810.





8 Click the "Finish" button, completing the setup wizard.



2.2 Bluetool Installation

Double click the program "BlueToolInstall_v1.0.0.3.exe " to execute BluetoolInstall in the software package :

1 Show the welcome dialog as below, click the "**Next**" to begin the process:

,	
	Welcome to the InstallShield Wizard for Broadcom BlueTool
	The InstallShield(R) Wizard will install Broadcom BlueTool or your computer. To continue, click Next.
	Copyright 2002-2005 Broadcom Corp. All rights reserved.



2 Specify the destination folder in your local system, which you want the software install to. You may use the default folder or click "**Change**" to install to different folder, then click "**Next**" :

📅 Broadcom BlueTool - InstallShield Wizard	
Destination Folder Click Next to install to this folder, or click Change to install to a different folder.	44
Install Broadcom BlueTool to: C:\Program Files\Broadcom\BlueTool\	<u>C</u> hange
InstallShield	Cancel

3 Choose the setup type you need, here you could select the typical type for your test , then click "**Next**" :



3. The wizard is ready to begin installation, and shows the setup type and destination folder you have chosen, then click "**Next**" :

പ	FO)	(COF	Network	System	Group

😸 Broadcom BlueTool - InstallShield Wizard	×
Ready to Install the Program The wizard is ready to begin installation.	
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard. Current Settings:	
Setup Type:	
Typical	
Destination Folder:	
C:\Program Files\Broadcom\BlueTool\	
User Information: Name: King	
Company: King	
< <u>B</u> ack Install Cancel	

4. The dialog "**installshied wizard completed**" shows, after selecting the item launch the program ,click "**Finish**" :

📴 Broadcom BlueTool - InstallShield Wizard				
	InstallShield Wizard Completed			
	The InstallShield Wizard has successfully installed Broadcom BlueTool. Click Finish to exit the wizard.			
	✓ Launch the program			
< <u>B</u> ack Einish Cancel				

2.3 Driver in BTWUSB

1 After inserting the bluetooth module, it will search driver of BTWUSB as below, you could select the destination of the driver from the second option, then click "next"



硬體更新精靈	
	這個精靈協助您安裝軟體於: %Brcm2046ROM.DeviceDex% ② 如果您的硬體附有安裝 CD 或磁片,現在將它 插入。
	 您要緒靈執行什麼工作? ○ 自動安裝軟體(建議選項)① ● 從
	<上一步(B) 下一步(B) 取消

2 Then Select the Driver location and click "Next":



3 Searching for the driver, please wait for it.



硬體更新精靈	
精靈搜尋中	• , 請稍候
8	%Brcm2046ROM.DeviceDext%
	<i>A</i>
	<上一步图) 下一步(11) > 取 消

4 Finishing searching for the driver, and the driver is installed, then click the **"Finish"** to finish the installation.

尋找新僧硬體精靈		
	完成尋找新增硬體精霊	
	這個精靈安裝了軟體於:	
	Broadcom USB Bluetooth Device	
	按 [完成] 關閉楮靈。	
	<上一步(B) 完成 取消	

Section Three: FCC Notice

3.1 FCC Compliance

This Equipment complies with Part 68 of the FCC Rules. On this equipment is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If posible, they will be notify in advience. But if advance notice isn't practical, you will notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect proper operation of your equipment. If they do, you will be notified in advance to give you an opportunity you maintain uninterrupted telephone service.

The FCC prohibits this equipment's should fail to operate properly, disconnect the equipment from the phone line to determine if it is causing the problem. If the problem is with the equipment, discontinue use and contact your dealer or vendor.



3.2 FCC Class B 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 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 the 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

Notice: (1)Shielded cables, if any, must be used in order to comply with the emission limits. (2) Any change or modification not expressly approved by the grantee of the equipment authorized could void the user authority to operate the equipment.

Caution: Please make sure you already disconnect the phone cable before you want to touch or remove modem module.