

Belkin
Wireless USB P.C. to P.C. Adapter
Model F5U035

Table of Contents

Introduction	3
Features	3
Operating System Supported	3
System Requirements	3
Package Includes	3
Technical Specification.....	4
How to insert the Belkin Dongle to a computer.....	5
How to use the Belkin Dongles.....	7
Install the Belkin Dongle Software	9
Operating the Belkin USB Dongles	15
How to use Belkin(R) WiMedia Manager.....	17
Uninstallation	18
Uninstall Belkin(R) Wireless UWB Link Software.....	18
Uninstall Belkin(R) Wireless UWB Link Drivers	18
Uninstall Intel(R) UWB Device Firmware Utility (DFU) Driver (This may not be required)	18
Channel Selection	19
Multi-Channel Operations	19
Troubleshooting	20
Customer Support.....	20
Information.....	20
FCC Statement	20

Introduction

Congratulations and thank you for purchasing the Belkin(R) Wireless USB 2.0 PC to PC Adapter. This revolutionary product lets you connect your computer or laptop wirelessly to other computers and perform operations such as fast file transfers, video streaming.

Please review this User Manual carefully so that you are sure to get the most from your Wireless UWB Adapter.

Features

- Wireless Connectivity between computers and or laptops.
- Connect almost instantly without any access point.
- Data transfer rate of up to 480 Mbps* at a distance of 3 meters away
- Data transfer rate of up to 110 Mbps* at a distance of 10 meters away
- Create your own Personal Area Network and exchange files, play videos

Operating System Supported

- Microsoft* Windows Vista
- Microsoft* Windows XP with Service Pack 2

System Requirements

- Personal Computer with USB 2.0 port
- 128 Megabytes Physical Memory

Note: Do not plug the Belkin dongle into USB port which is not USB 2.0.

Package Includes

- Belkin(R) Wireless UWB Adapter – (Qty 2)
- USB Flexible Connector – (Qty 2)
- Installation CD-ROM
- User Manual

Technical Specification

Model Number	F5U035
UWB Chipset	Alereon Baseband, RF Intel(R) Wireless UWB Link 1480M MAC
Antenna	On-board Omni-directional Antenna
Operating Temperature	0° C to 55° C
Operating Range	Up to 30 Feet (10 Meters)
Power Mode	USB Bus powered.
PHY Data Rate	480 Mbps (Automatic Rate Adaptation)
Frequency Range	3.1 GHz – 4.8 GHz Supporting 3 sub-bands 528 MHz each
RF Modulation	Multiband OFDM
PHY Compliance	Complies with WiMedia(R) PHY Specification Revision 1.0
MAC Compliance	Complies with WiMedia(R) MAC Specification Revision .85
FCC Compliance	Complies with FCC 47 CFR Part 15, Subpart F Section 15.519
USB Compliance	Complies with USB 2.0 Specification
OS Compliance	Complies with Microsoft* Windows* XP SP2, Vista
Co-existence	Coexists with other standard WiMedia devices

How to insert the Wireless USB 2.0 PC to PC Adapter to a computer

Insert the dongle into the USB adapter as shown in the diagram below. Insert the adapter with the dongle into the USB port of the computer.



Figure 1 How to Insert Dongle into USB Adapter

Recommended ways to connect the adapter to a computer



Figure 2 Recommended Dongle Orientation

How to use the Wireless USB 2.0 PC to PC Adapter

The Wireless USB 2.0 PC to PC Adapter can be used with laptops or desktop systems to communicate wirelessly. A few scenarios have been listed below to give you an idea of how the adapter can be used to share information almost instantly and improve your productivity.

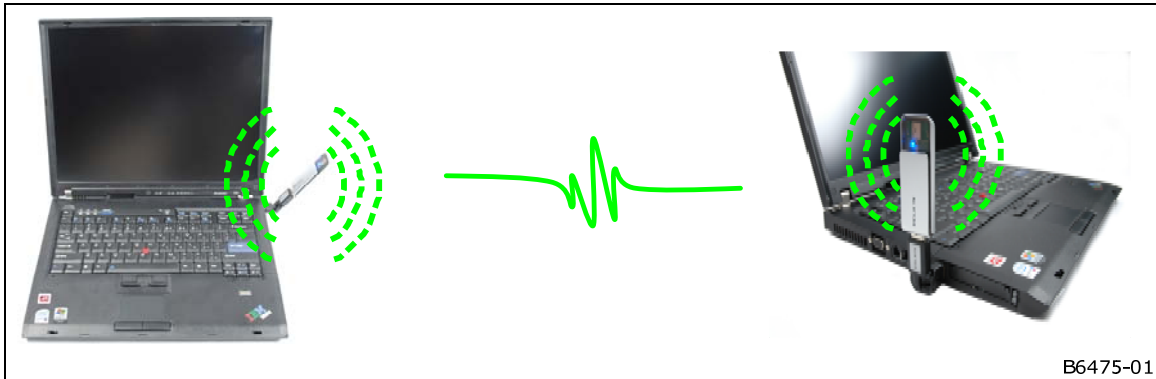


Figure 3 Laptop to Laptop Wireless Communication

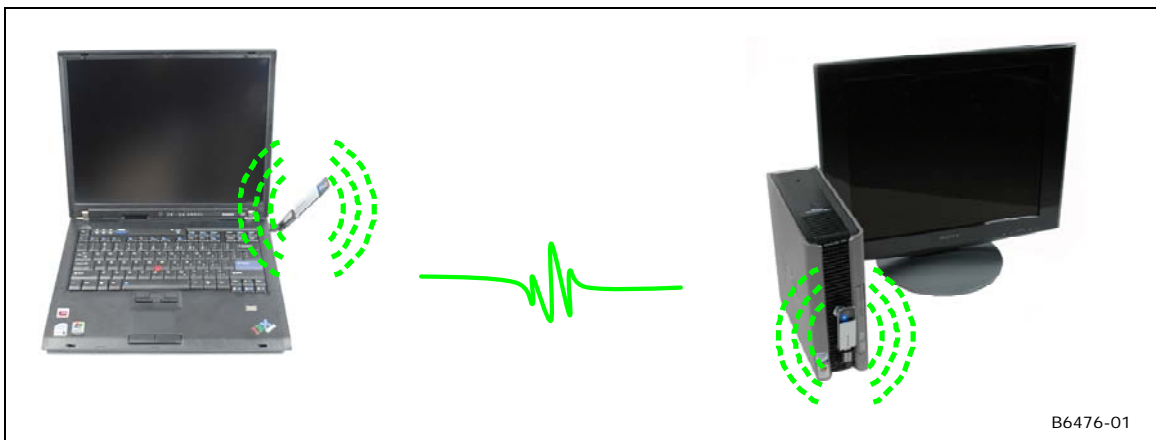
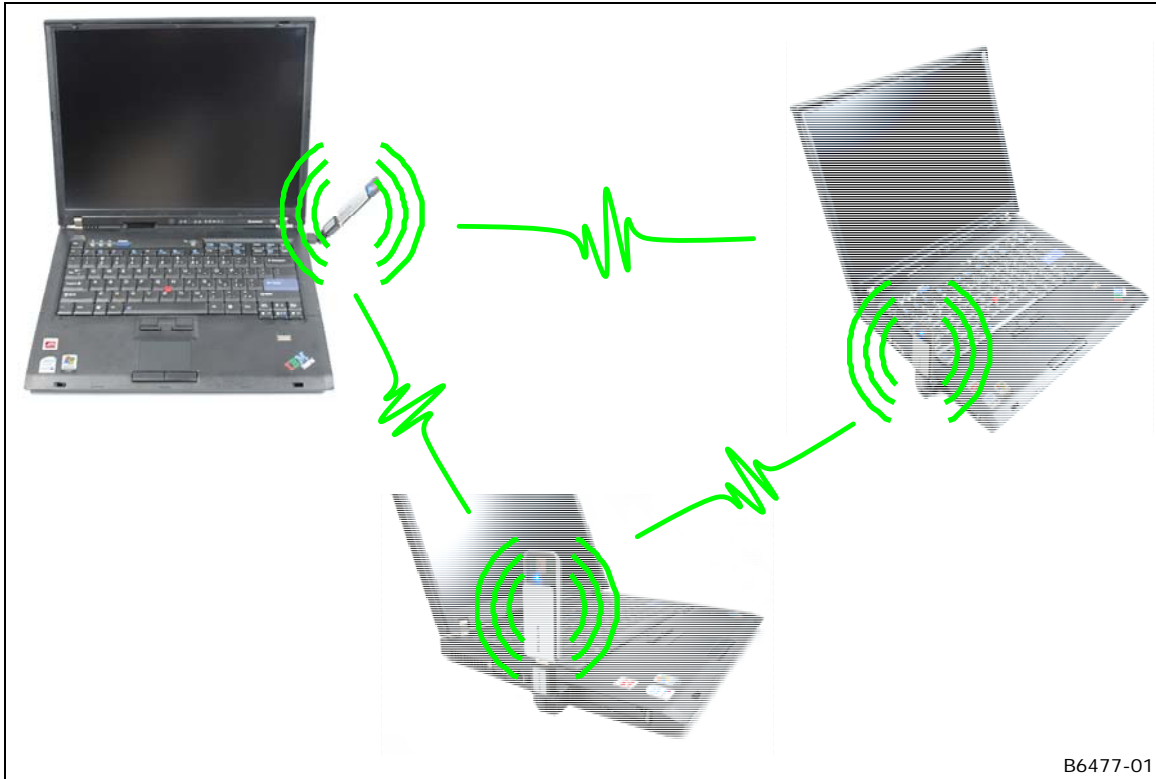


Figure 4 Laptop to Computer Wireless Communication



B6477-01

Figure 5 Multi-Laptop communication creating a Personal Area Network

Installation

The following steps will illustrate the procedure to install the software and the Wireless USB 2.0 PC to PC Adapter for the first time.

Note: Do not attach the USB dongle before the software is installed.

Step 1 Install the software from the CD-ROM onto your computer.

Step 2 Connect the USB dongle to the PC or laptop and complete the multi driver installation.

Step 3 After successful installation, now you are ready to use the Belkin dongles for copying files, or streaming video.

Install the Wireless USB 2.0 PC to PC Adapter Software

1. If this is not the first time the software has been installed, please uninstall the old version of the software. Click Start -> Control Panel -> Add or Remove Programs. In the Add or Remove Programs Window, scroll down to select Belkin(R) Wireless UWB Link software and click Remove button to delete the software.
2. Install the Wireless USB 2.0 PC to PC Adapter software by running the **installation file setup.exe** provided in a CD-ROM as part of the package.
3. If the system does not have Microsoft* .Net Framework, Version 2.0, the installation file will install .Net Framework first and then proceed to install the Belkin Wireless UWB Link software.
4. The InstallShield Wizard will be displayed as shown in the figure below. Click Next to proceed.

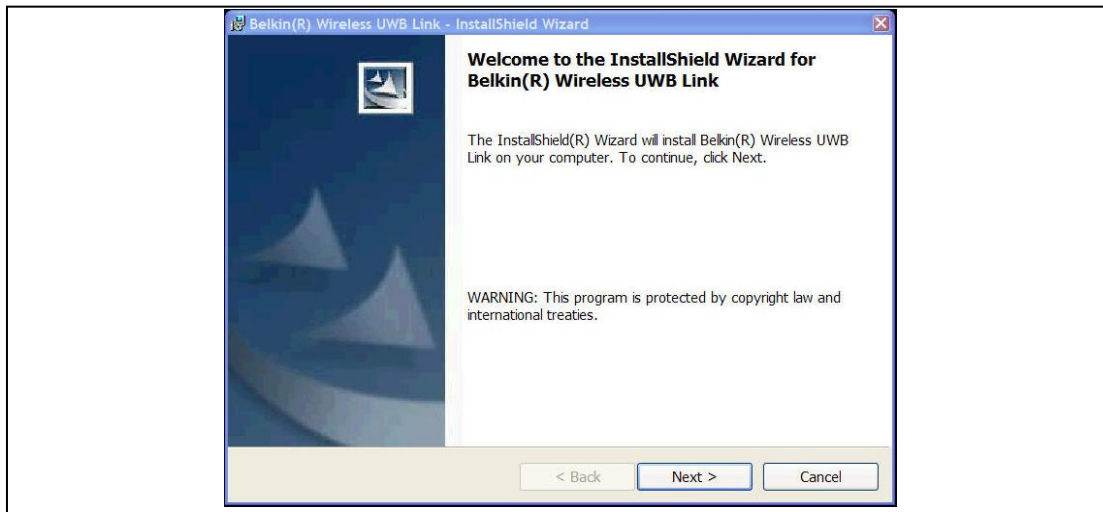


Figure 6 InstallShield Wizard

5. InstallShield Wizard will display the License Agreement Window as shown below. If you agree to use the software, Click 'I agree the terms in the License Agreement' and Click Next to proceed.

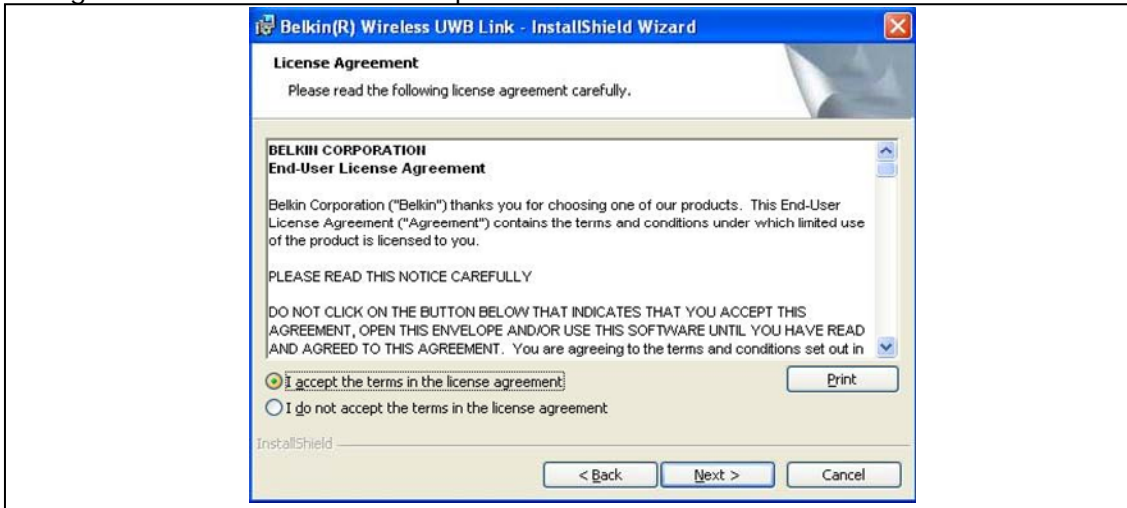


Figure 7 InstallShield – License Agreement

6. InstallShield will display the 'Ready to Install the Program' window as shown below. Click Install to proceed.

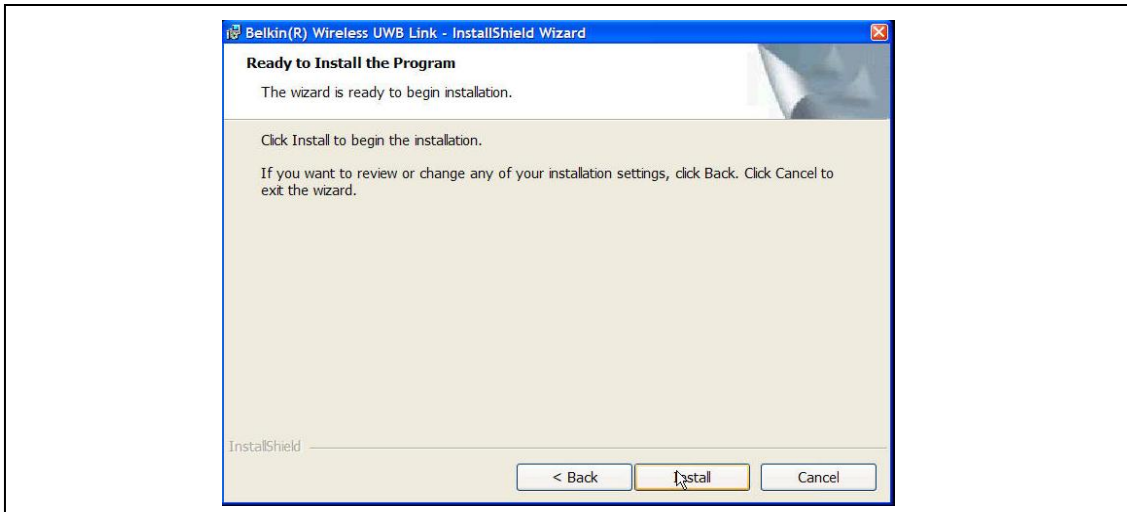


Figure 8 InstallShield – Ready to Install the Program

7. The InstallShield wizard will display a warning message "**The Software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP**". This message can be safely ignored, as this will not cause any harm to your system. Proceed with the installation by clicking **Continue Anyway**.

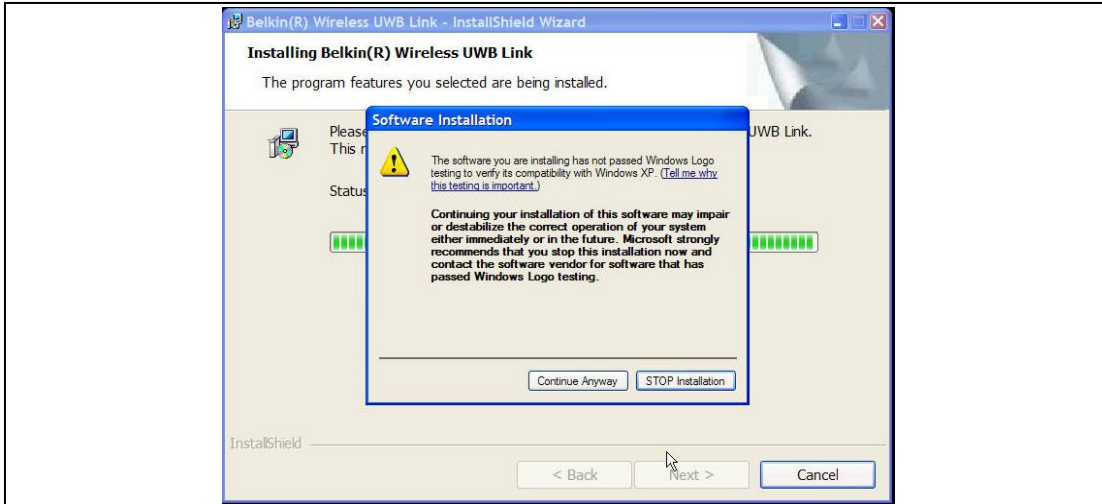


Figure 9 InstallShield – Warning Message

8. InstallShield will prompt two more times with the warning message, Click **Continue Anyway**.
9. Now the InstallShield has completed the installation of the Belkin Wireless UWB Link software as shown in the figure below. Click Finish to close the Window.

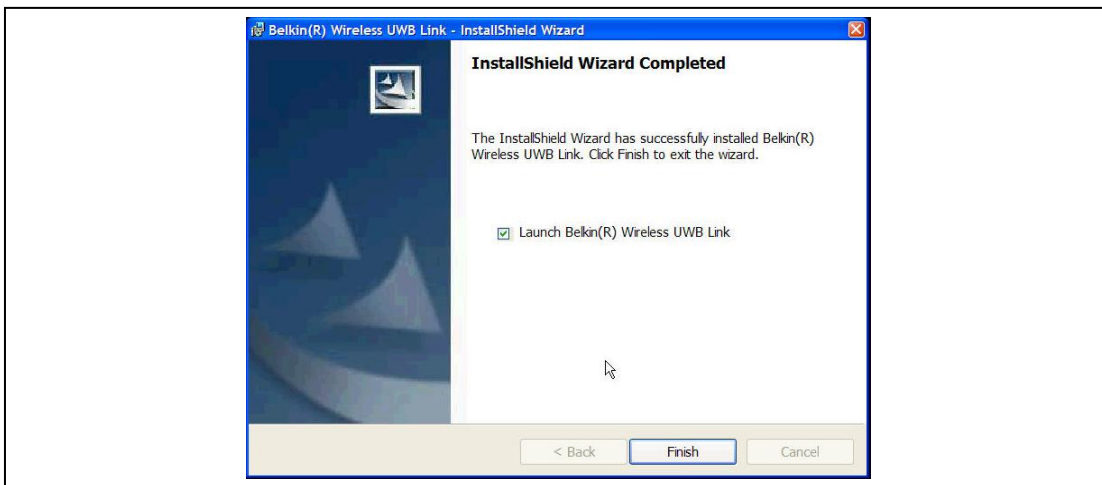


Figure 10 – InstallShield Wizard Completed

10. At this point, WiMedia Manager will be running on the Notification Area of the Windows Status bar as shown in the figure below.



Figure 11 – WiMedia Manager

11. After successful installation, the Belkin Wireless UWB Link software will be copied into the default folder location "**C:\Program Files\Belkin\Wireless UWB Link**".

12. Now insert the Belkin dongle to the USB 2.0 port of the personal computer.
13. Windows* will recognize a new hardware plugged into the system and invoke "Found New Hardware" Wizard prompting to install the software for Intel(R) Wireless UWB Link 1480M Device Firmware Utility.



Figure 12 Found New Hardware - Intel(R) Wireless UWB Link 1480M Device Firmware Utility

14. Choose 'Yes, this time only' and Click Next to proceed.

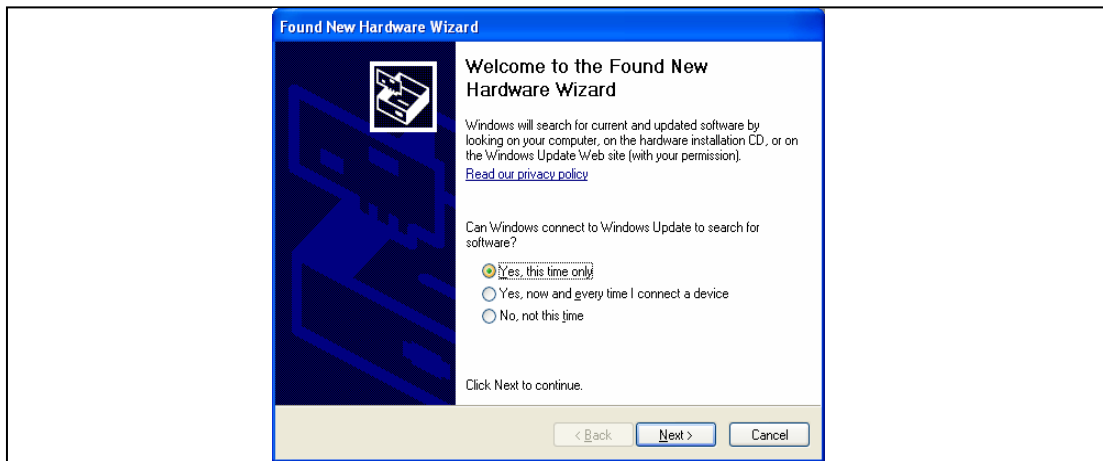


Figure 13 – Found New Hardware Wizard

15. Found New Hardware Wizard will prompt you to insert installation CD or floppy disk. Choose the option "Install the Software automatically (recommended)" and click Next to proceed.

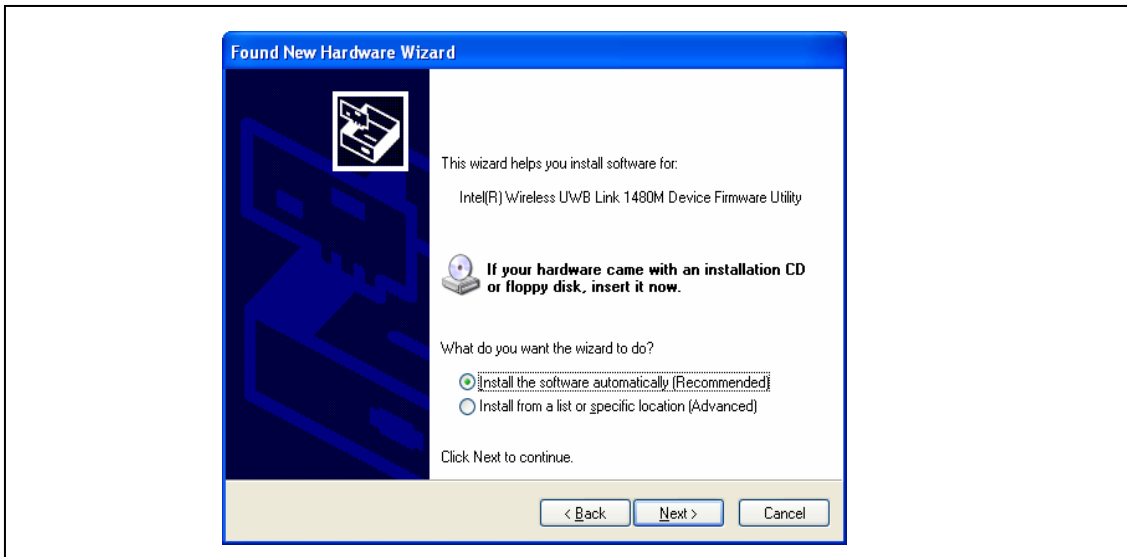


Figure 14 - Found New Hardware Wizard – Prompting to Insert installation CD

16. Found New Hardware Wizard will display a warning message. This message can be safely ignored and click **Continue Anyway** to proceed.
17. Now the Found New Wizard has installed the software “Intel(R) Wireless UWB Link 1480M Device Firmware Utility”. Click Finish to close the Window.

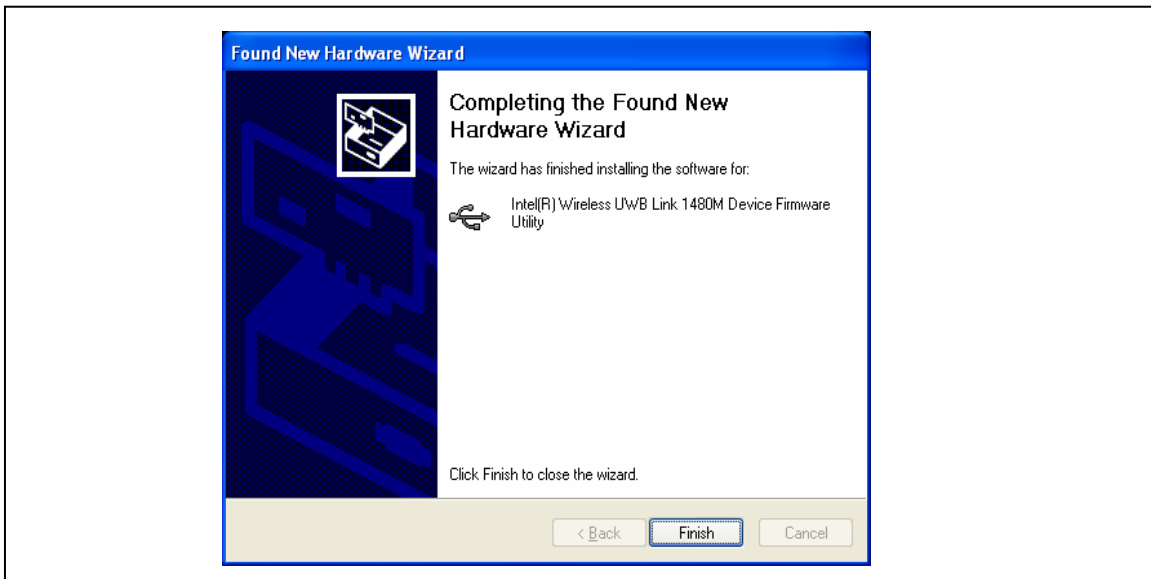


Figure 15 - Found New Hardware Wizard Completed Software Installation

18. Windows will recognize a new hardware plugged into the system and invoke “Found New Hardware” Wizard prompting to install the software for Intel(R) Wireless UWB Link 1480M Control Driver. Repeat the same steps as followed with the first software installation.
19. Windows will recognize a new hardware plugged into the system and invoke “Found New Hardware” Wizard prompting to install the software for Intel(R)

Wireless UWB Link 1480M USB WiNet Adapter. Repeat the same steps as followed with the first software installation.

20. After the software installation, Windows will prompt the New Hardware is ready to use as shown in the figure below.

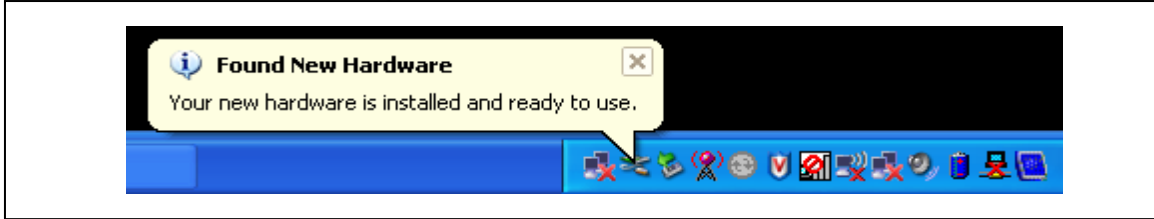


Figure 16 – Found New Hardware Wizard – New Hardware ready to use

21. To verify installation, go to the device manager by clicking Start Menu -> Control Panel -> System (Under Classical View) -> Choose Hardware Tab -> Click Hardware profiles at the bottom of the window.

22. Look for the devices “**Intel(R) Wireless UWB Link 1480M Control Driver**” and “**Intel(R) Wireless UWB Link 1480M USB WiNet Adapter**” listed as indicated in the figure below.

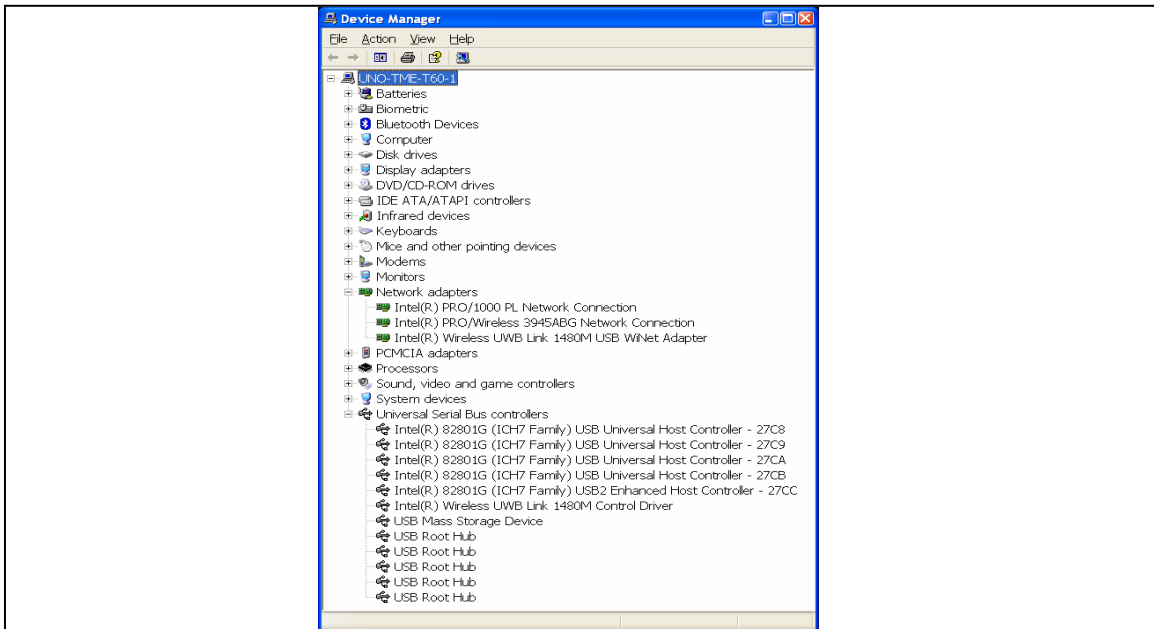


Figure 17 Device Manager displaying Control and Network drivers

Operating the Belkin USB Dongles

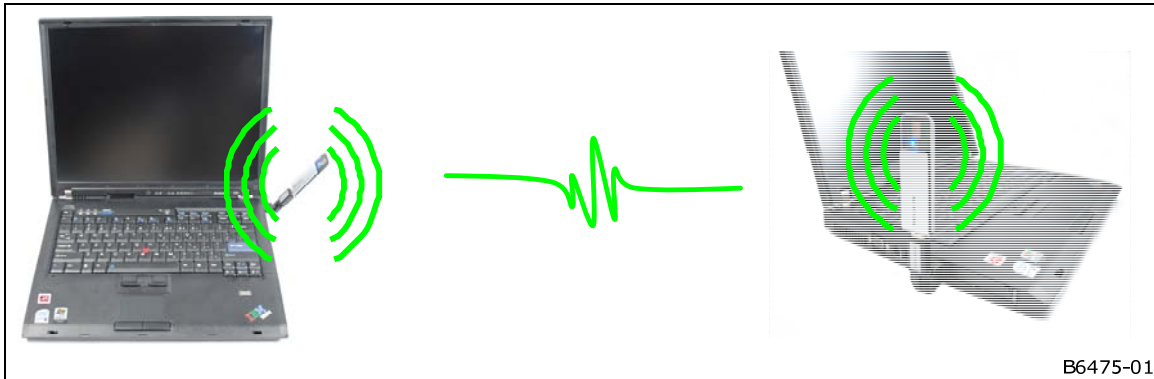


Figure 18 End-to-End Connectivity with Belkin USB Dongles

1. Boot the PCs Laptop A and laptop B to Windows*.
2. Ensure the **WiMedia Manager** is running by viewing the **WiMedia Manager** icon on the Notification Area on the Status bar of Windows.
3. Open the WiMedia Manager by double clicking the WiMedia Manager.
4. Under General Tab, Ensure the channel numbers are the same for Laptop A and laptop B.
5. Insert the Belkin dongle on the USB port of Laptop A as well as Laptop B.
6. The Belkin dongle will be enumerated as a USB device under normal operations for respective laptops as indicated in the Figure 17.
7. In General View, the remote UWB device will be listed under the UWB Neighbourhood column.

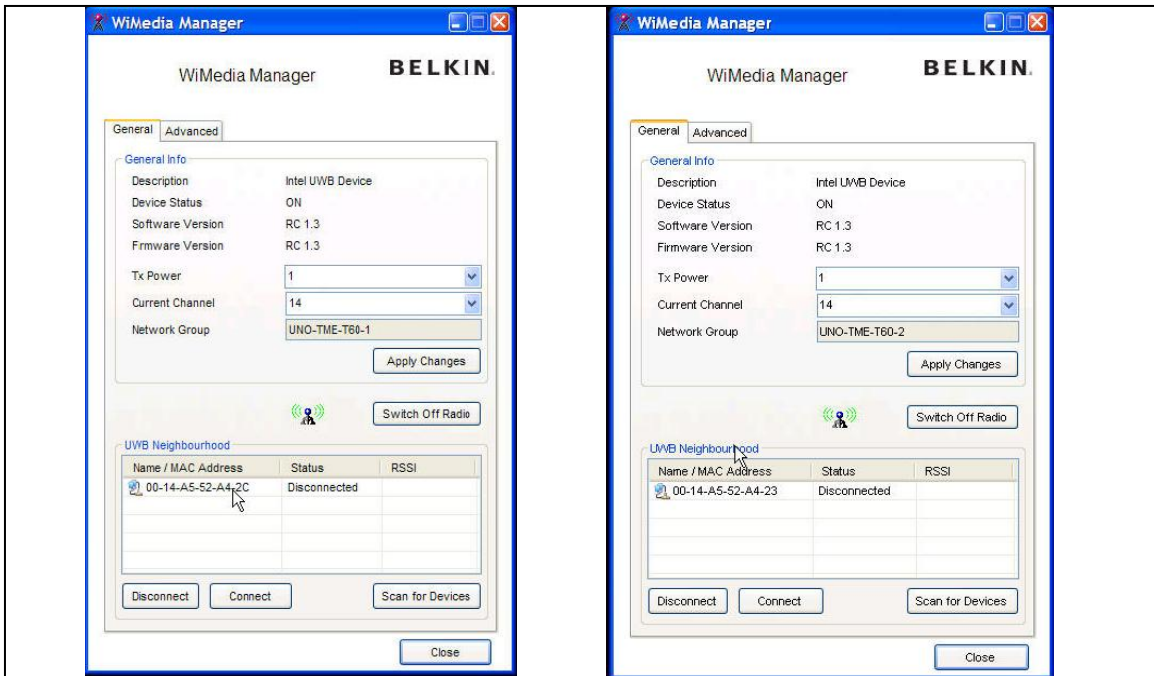


Figure 19 WiMedia Manager listing remote devices

8. To Connect to the remote device, select the remote device and click Connect. Similarly perform the same action on the remote PC.
9. Upon successful connection, the Windows* notification bar would indicate “Local Area Connection # Connected” (Note 1).

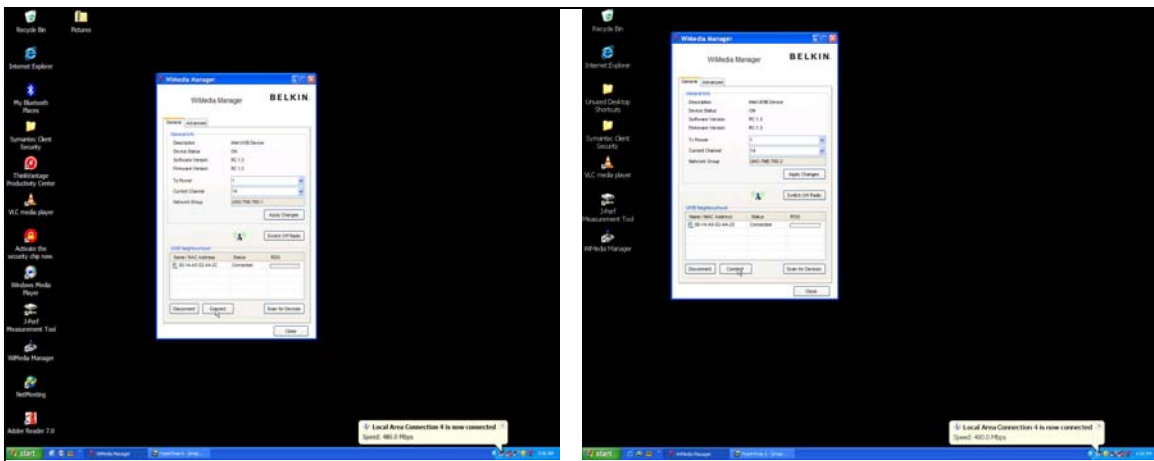


Figure 20 WiMedia Manager – When UWB Device is Connected

10. Now you can copy files or share a video at a very fast speed!

How to use Belkin(R) WiMedia Manager

The Belkin **WiMedia Manager** is installed as a startup item as part of the Belkin Wireless UWB Link software installation and will be running as a background task. The **WiMedia Manager** can be located on the notification area of the Microsoft* Windows status bar as shown in the Figure 21.



Figure 21 WiMedia Manager on the Notification Area

The WiMedia Manager is functionally classified into General View and Advanced View as illustrated in the figure below.

The General View will list the features:

- Device Status – RADIO ON/OFF
- Establish UWB Connections, disconnect a UWB Connection,
- Change channel numbers,
- Scan for UWB Devices
- Listing of Software/Firmware version for maintenance purpose

The Advanced View will list the features:

- Bandwidth Reservation
- Power Management
- Statistics for existing UWB Connections

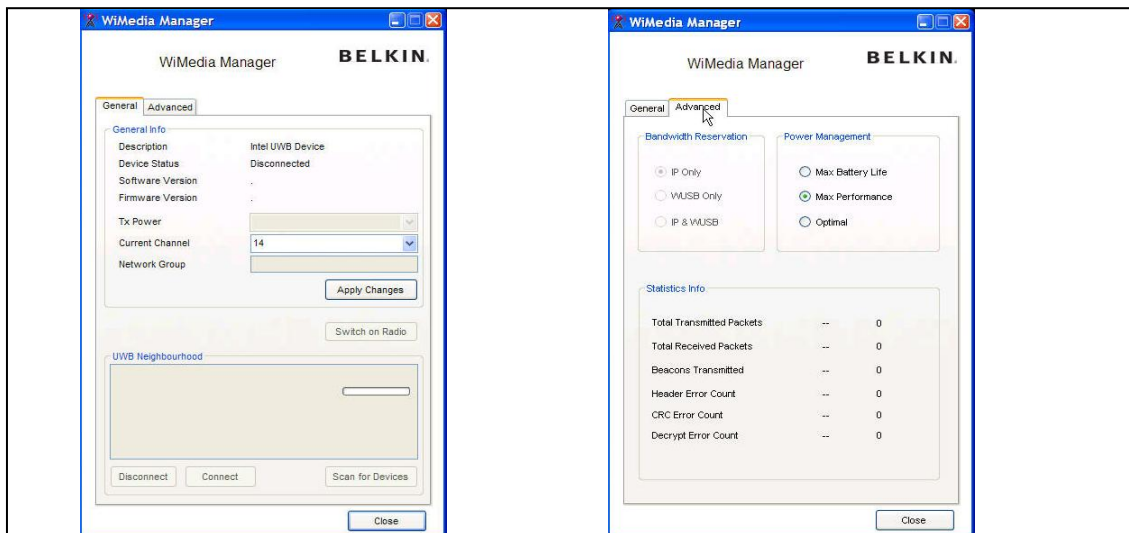


Figure 22 WiMedia Manager – General and Advanced View

Uninstallation

If you need to uninstall the software, follow the procedure outlined below.

Uninstall Belkin(R) Wireless UWB Link Software

Please follow the steps indicated below to uninstall the Belkin(R) Wireless UWB Link software which was installed prior:

1. Go to Add or Remove Programs by clicking Start Menu -> Control Panel -> Add or Programs
2. Identify Belkin(R) Wireless UWB Link software and Click the Remove button to Uninstall
3. The Install Shield wizard will ask "Do you want to completely remove the selected application and its features?" Click the Yes button.
4. After successful Uninstall, the Uninstall Complete Dialog will be displayed. Click the Finish button to close the dialog.

Uninstall Belkin(R) Wireless UWB Link Drivers

The following sequence of un-installation of the drivers is recommended.

- Intel(R) Wireless UWB Link 1480M USB WiNet Adapter
 - Intel(R) Wireless UWB Link 1480M Control Driver
1. Insert the Belkin dongle into the USB port of the personal computer/laptop.
 2. Go to the Device Manager.
 3. Under Network Adapters:
 - Right Click on **Intel(R) Wireless UWB Link 1480M USB WiNet Adapter** and select Uninstall.
 4. Under Universal Serial Bus Controller:
 - Right Click on **Intel(R) Wireless UWB Link 1480M Control Driver** and select Uninstall.

Uninstall Intel(R) UWB Device Firmware Utility (DFU) Driver (This may not be required)

The DFU device is not listed in the Device manager, we recommend to delete the file DfuUWB.sys from the location C:\Windows\System32\drivers.

Channel Selection

The Belkin(R) dongle will operate in Band Group 1 mode only. The channels supported within the Band Group1 are listed in the **Table 1**. If there are multiple dongles, you may choose to operate the dongles in different channels for simultaneous operations. The default channel Belkin dongle is programmed to operate in channel number 14.

Channel Number	TFC Code	Band ID					
9	1	1	2	3	1	2	3
10	2	1	3	2	1	3	2
11	3	1	1	2	2	3	3
12	4	1	1	3	3	2	2
13	5	1	1	1	1	1	1
14	6	2	2	2	2	2	2
15	7	3	3	3	3	3	3

Table 1 PHY Channel Numbers

Multi-Channel Operations

If there's a need to have simultaneous UWB connections, you may choose to operate these systems in different channel numbers without any interference. Before inserting the Belkin dongles, open the WiMedia Manager and change the channel number appropriately.

Troubleshooting

1. Why does the Belkin Dongle not work on laptops which have USB 1.0/1.1 ports?

The Belkin dongle is designed to work for USB 2.0 and hence you can see the performance greater than USB 1.0/1.1.

2. Does your computer support USB 2.0?

To determine if your computer supports USB 2.0, follow the steps below:

Step 1: Go to the Device Manager Start -> All Programs -> Control Panel -> System -> Hardware (Tab) -> Click Device Manager.

Step 2: In Device Manager, Under Universal Bus Controllers check for the entry **Enhanced Host Controller**.

Customer Support

FCC Statement

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.

Changes or modifications to this device not expressly approved Belkin could void the user's authority to operate the equipment under the FCC grant of equipment authorization issued to Belkin

Information

Electromagnetic Interference (EMI) is any signal or emission, radiated in free space or conducted along power or signal leads, that endangers the function of radio navigation or other safety service (the telephone and cellphones are considered to be safety services) or seriously degrades, obstructs or repeatedly interrupts a licensed radio communications service. Radio communications services include but are not limited to: AM/FM commercial broadcast, television, cellular services, radar, air traffic control, pager and personal communications services (PCS). These licensed services, along with unintentional radiators such as digital devices, including computer systems, contribute to the electromagnetic environment.

Electromagnetic Compatibility (EMC) is the ability of items of electronic equipment to function properly together in the electromagnetic environment. While this device has

been designed and determined to be compliant with regulatory agency limits for EMI, there is no guarantee that interference will not occur in a particular installation. If this device does cause interference with radio communications services, which can be determined by turning the device on and off, you are encouraged to try to correct the interference by one or more of the following measures:

- Re orient the receiving antenna
- Relocate the device with respect to the victim receiver
- Move the device away from the victim receiver
- Plug the device host into a different power outlet than the victim receiver so that the device system and receiver are on separate branch circuits

If necessary, consult your system service representative or an experienced radio/television technician for additional help in resolving interference.