gridconnect

Bluetooth USB User Guide

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1. Bluetooth USB

Bluetooth is a global standard telecommunications method that enables data to be exchanged wirelessly between personal computers, peripheral components, mobile telephones and other electronic devices. Data can be readily exchanged between Bluetooth devices if they have been registered as components able to communicate with each other.

By using Bluetooth to connect to a mouse, keyboard, modem, printer, or other device, you can do away with messy cabling and not have to be concerned about space restrictions, which will allow you to work more comfortably.

Bluetooth exchanges data using radio waves.

The following points are critical in order to configure and use Bluetooth devices correctly.

- The devices must be Bluetooth-compatible. The hardware and software used in your PC and other components must be Bluetooth compatible.
- The Bluetooth devices must be close enough to be able to communicate. Bluetooth devices situated in places beyond the reach of the radio waves will not recognize each other, making communication impossible.
- The devices must be in a connectable state. The Bluetooth devices must recognize each other in order to be connectable for use. In certain devices, simply turning on the power will not produce a connectable state. Moreover, the energy-saving feature may come into effect after a certain amount of time, which will prevent the devices from being detected. Please refer to the specific product instruction manual for further details.
- No other radio wave-emitting devices should be operated nearby. Microwave ovens, wireless LANs and other radio wave-emitting devices located nearby may affect Bluetooth communication. Please ensure that your devices have been accordingly situated, and that the above devices are not in use when you are operating your Bluetooth device.
- The Bluetooth devices must be turned on. Bluetooth cannot be used if the devices have not been turned on.

1.1 Description

Bluetooth USB Features and Benefits:

- Add full Bluetooth wireless connectivity to a Windows PC or laptop via the USB port.
- Small size
- Class 1 high power radio for long range performance-up to 330’
- CD contains Toshiba drivers and user manuals
- Power and Activity Status LED

All known Bluetooth clients which support Serial Port Profile are supported.

1.2 Using Bluetooth

It is important to understand the concepts of "services" and "profiles" in order to determine whether an intended function can be properly utilized when you use a Bluetooth device.

Examples of Bluetooth devices include mice and keyboards (input devices), printers (output devices) and wireless modems (communication devices). Functions that can be utilized by such devices are called "services."

In order for these services to be used reliably, Bluetooth devices are provided with common specifications known as "profiles."

For example, when a PC makes a connection to a Bluetooth device, it obtains the profile of the corresponding device and thereby ascertains which functions (services) the device offers.

You will be able to use Bluetooth devices that have a profile supported by a PC (the Bluetooth Utility in this case).

If the profiles belonging to the device are not supported by the PC, the functions corresponding to those profiles will not be able to be utilized. Also, a device can only be used if its profiles are supported by the PC.

The following profiles are supported by the Bluetooth Utility:

DUN
Dial-Up Networking
Enables you to establish a dial-up Bluetooth connection to the Internet or other networks with a wireless modem station, mobile telephone, or similar device.

FAX
FAX
Enables you to establish a Bluetooth connection with a wireless modem station, mobile telephone, or similar device to send or receive a fax.

LAP
LAN Access Profile
Enables you to establish a Bluetooth connection with a LAN access point to access the services of a LAN using PPP.

SPP
Serial Port Profile
Enables communication with a device through a virtual serial port configured for a Bluetooth connection. This can be used for printers and printer adapters with PDAs, using a different method from HCRP or ActiveSync.
This is the profile used with the Firefly.

HID Human Interface Device Profile
Allows connections to wireless mice, keyboards and other input devices.

HCRP Hardcopy Cable Replacement Profile
Enables printing with a printer driver.

FTP
File Transfer Profile
Enables you to browse folders on a wireless device and transfer files to and from the local device.

OPP Object Push Profile
Allows business card data to be exchanged with a wireless device.

A2DP
Advanced Audio Distribution Profile
Allows audio data to be exchanged between wireless headsets and other audio devices, as well as allowing high-quality music playback.

AVRCP
Audio/Video Remote Control Profile
A/V remote control functions such as play and stop. The Bluetooth Utility supports remote control operation.

GAVDP Generic Audio/Video Distribution Profile
Basic profile used to support A2DP, AVRCP and other protocols.

HSP
Head Set Profile
Profile used for headsets.
Allows you to connect to a PC and communicate as well as connect to a mobile telephone.

PAN Personal Area Networking Profile
Supports IP base network. Allows connection to an ad-hoc or wired network via an access point.

BIP
Basic Imaging Profile
Allows image files to be sent and received after having been converted to a size suitable for the destination. In addition to being able to transfer image files, the Bluetooth Utility allows camera shutters to be operated by remote control, as well as other offering other functionalities.

1.3 Bluetooth Utility

The Bluetooth Utility is a software tool used to configure a variety of settings once a connection has been established between the PC and the Bluetooth device.

Note: See the ToshibaUsrGuide.pdf manual on the CD for more information about Bluetooth installation and operation.

The descriptions in the examples mainly pertain to operation under Windows XP.

Note: For additional information, see

1.3.1 Bluetooth Settings

This program enables you to easily configure settings when you connect to a Bluetooth device for the first time. The function of a configured and registered device is displayed on the main window as a connection icon. As a rule, the Bluetooth device will be connected automatically after having been set up; however, a shortcut can be created for a manual connection, if so required.

1.3.2 Bluetooth Manager

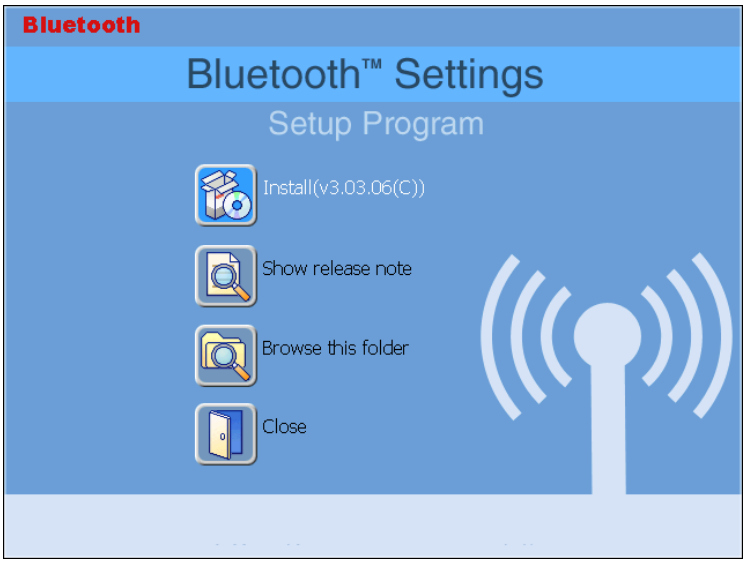
This program, which appears as a Taskbar icon, monitors and controls the power and operating status of Bluetooth devices. It can be used to start the Bluetooth Setup Utility, add a new connection, disconnect from a remote device, and perform other tasks.

1.3.3 Bluetooth Local COM

This program, which is registered in the Control Panel, can create a virtual COM port for use with the Bluetooth Utility. If you need to create a client COM port with the Bluetooth Setup Utility, it can be created automatically without having to start the program.

1.4 Install Bluetooth Drivers

Insert the CD and the following screen should appear.



Click on the Install button to start the software installation. Follow the screen prompts to complete the installation.

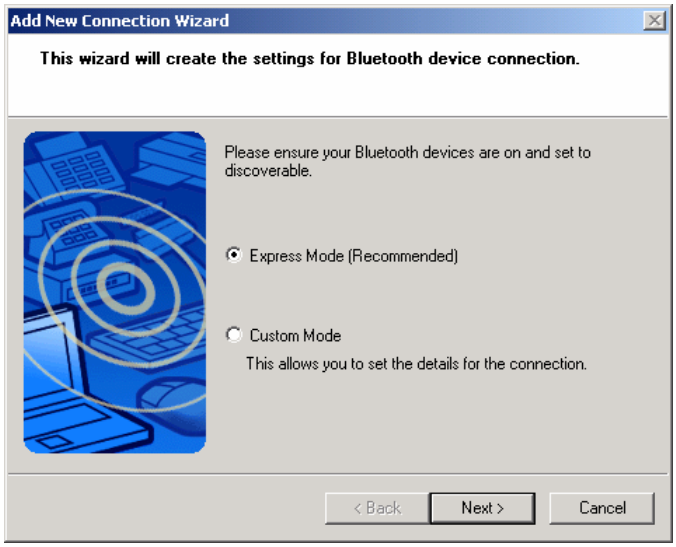
Note: See the ToshibaUsrGuide.pdf manual on the CD for more information about Bluetooth installation and operation.

1.5 Run Bluetooth Settings

Go to Programs, Bluetooth, Bluetooth Settings.

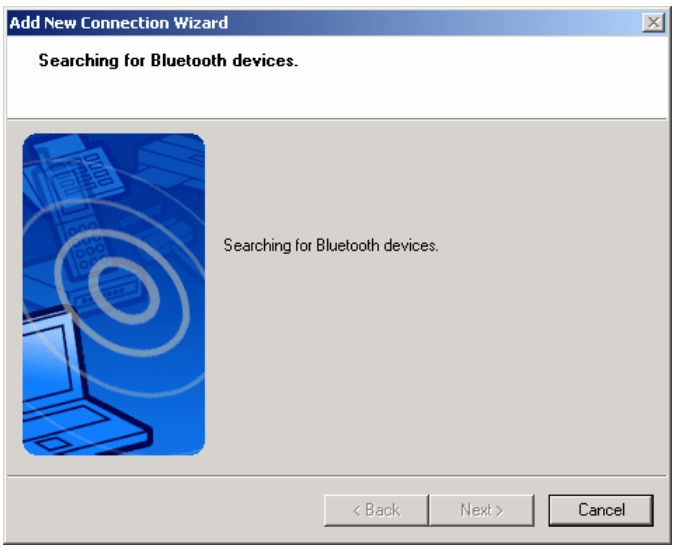
The Bluetooth Settings dialog box is displayed.

Click the ***New Connection*** button to display following dialog box.

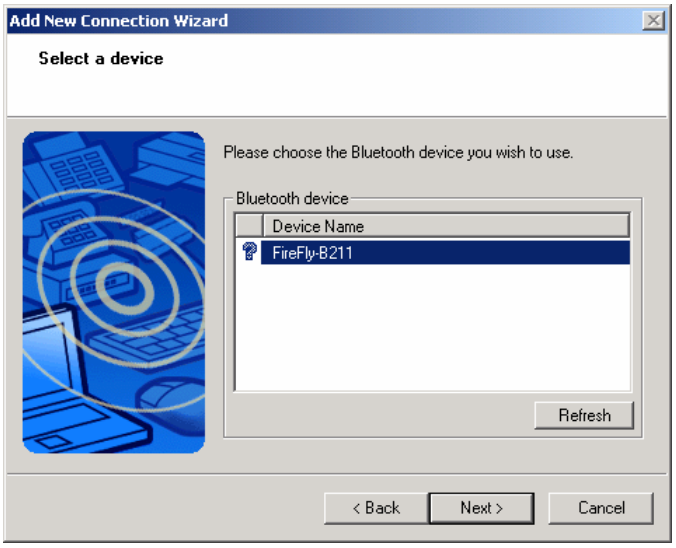


Make sure your Bluetooth devices are on and set to Discover mode. The software will automatically detect and register services. Express Mode is normally recommended for device set-up.

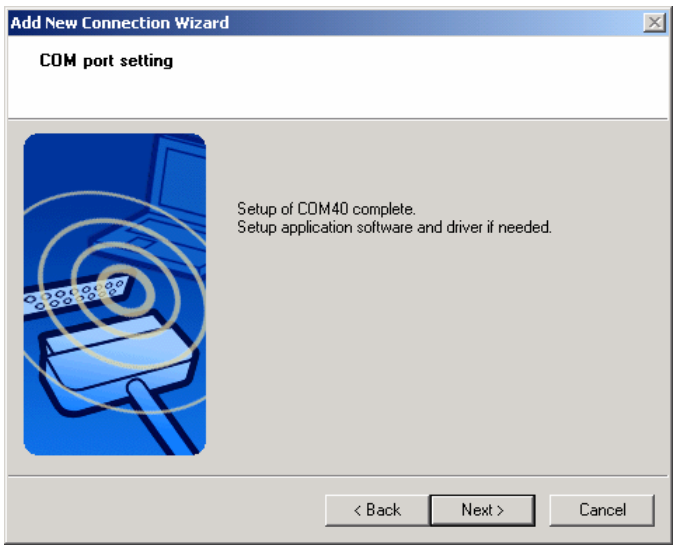
Click Next to continue.



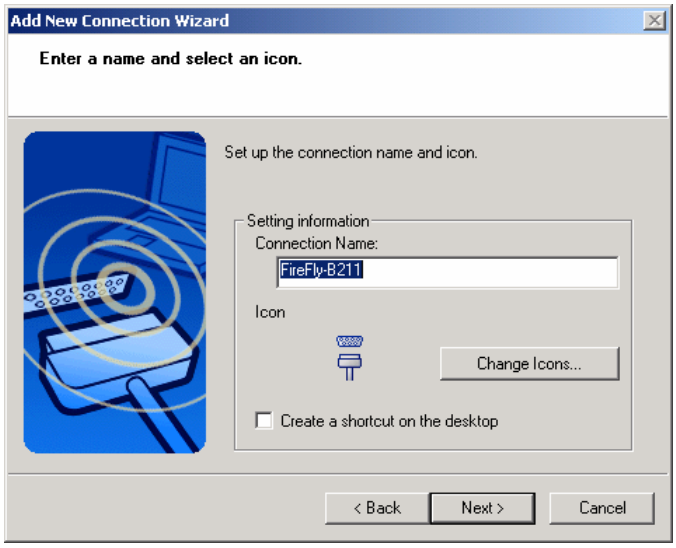
The software will begin searching for Bluetooth devices. When the search is complete, the following dialog is displayed.



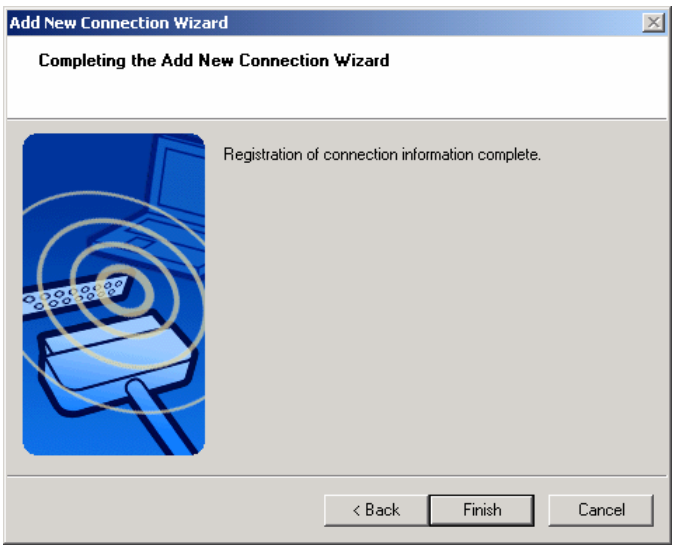
Select the device you want to use and click Next.



The software assigns a COM port setting for use with your application software. Click Next to continue.

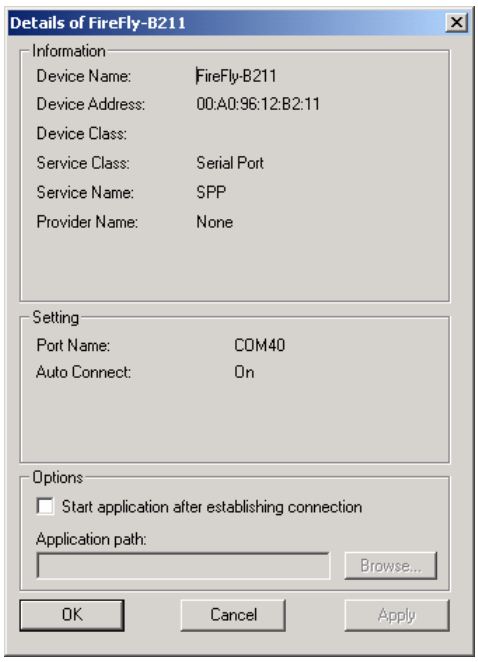


Enter a connection name and click Next.



The registration of the device is complete. Your device is now ready to use. Click the Finish button to continue.

Select a device and click the Detail button to display the details of the device.


Details of FireFly-B211
Information
Device Name:
FireFly-B211
Device Address:
00:A0:96:12:B2:11
Device Class:
Service Class:
Serial Port
Service Name:
SPP
Provider Name:
None
Setting
Port Name:
COM40
Auto Connect:
On
Options
Start application after establishing connection
Application path:
Browse...
OK
Cancel
Apply

1.5.1 Testing the COM Port

By pairing a Bluetooth USB device on your computer to a Firefly remote device, you have established a Bluetooth wireless connection to the remote device. To test the remote device, you can use HyperTerminal to send and receive ASCII characters.

A quick way to test a remote Firefly device is to use a loop-back plug. This is just a DB9 Female plug with two jumpers: Pin 2 tied to Pin 3 and Pin 7 tied to Pin 8. This ties the receive line back to the transmit line so that any character received by the remote device is instantly sent back. This jumper plug also ties the RTS and CTS lines together.

1. Start Hyperterminal and enter a name for the connection. When the **Connect To** dialog box appears, select a COM port (example COM40) from the **Connect Using** list box and click OK.
2. Ignore the COMx Properties for now and click OK. The status bar at the bottom of the screen may indicate Auto Detect. Click the **Disconnect** icon.
3. Click on the **Properties** icon, select the **Connect To** tab and click the **Configure** button below the selected COM port. Set to 9600, 8, None (parity), 1 None (Flow Control). Verify the settings and click OK.
4. Select the **Settings** tab. Change the Emulation from Auto detect to VT100. The status window should show VT100 and 9600 8-N-1.
5. Click the **Call** icon to complete the setup.

Make sure you set the Baud Rate to match the Firefly settings. When HyperTerminal indicates it is connected, you can type characters and see the characters being returned by the remote unit.

Note: make sure Local Echo is turned OFF, otherwise you will get two characters.