

# Acer Bluetooth Shuttle

Product Sheet

-Initial Version-

## Hardware

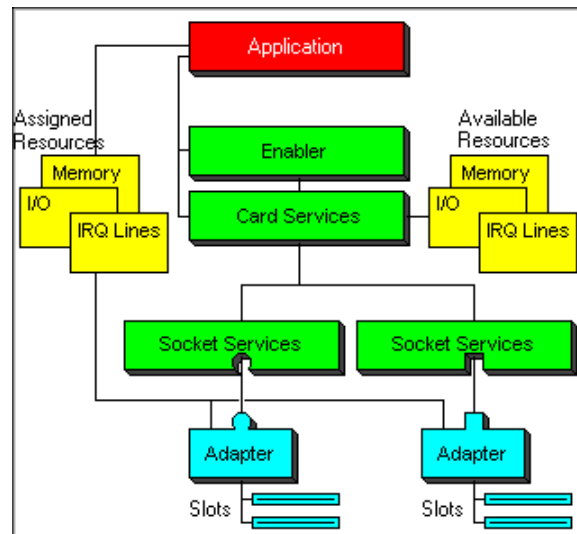
### Specification of Acer Bluetooth Shuttle

**Acer Bluetooth Shuttle** is a Bluetooth PCMCIA product. It enables *Bluetooth™* wireless technology for the desktop / laptop computers equipped with the PCMCIA interface, and support point-to-multiple-point pico-net.

It provided a standard PCMCIA interface with following characteristics:

- PCMCIA release 2.01, Card & Socket Service Compliant, 5V Compliant,
- Extended PCMCIA Type II form factor with Internal Antenna
- Dimension: 111.3mm x 54mm x 9.1mm with Embedded Antenna
- PCMCIA Dimension: 85.6mm x 54mm x 5mm
- Bluetooth 1.1 Compliant
- Radio Output Power 20dBm; Bluetooth class I operation.
- Receive sensitivity < -80dBm; BER=10<sup>-3</sup> @ antenna I/P port
- FCC part 15; ETS300328 and ETS300826 complied

### System Overview of PCMCIA interface



## Software Specification

## of Acer Bluetooth

## Shuttle

**Acer Bluetooth Shuttle** is a high-performance, versatile stack driver solution for the PC that helps end-users seamlessly transition from a “connected experience” to a “wireless experience”. It enables the Bluetooth wireless technology for the notebook or desktop PC.

With Acer Bluetooth Shuttle, you can establish wireless links by your computer or notebook with other devices of Bluetooth ability. What you can do are:

- Connect to serial device with legacy applications
- Connect to local area networks
- Access the Internet with dial up networking
- Send and receive fax messages with legacy applications
- Transfer files and objects

These above operations are deeply involved with a **Microsoft™ Explorer** plug-in application called **Bluetooth™ Plug-in**. Its fundamental and essential functions are:

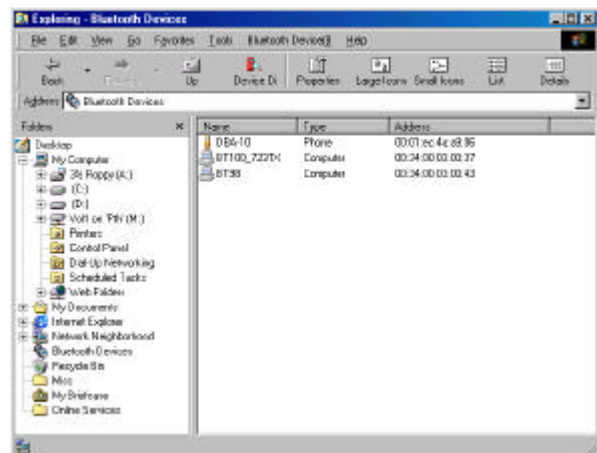
- Discover neighboring Bluetooth devices (search for remote Bluetooth devices in the RF

range of your computer).

- Discover and browse services of discovered Bluetooth devices.
- Help to establish links to discovered Bluetooth devices.

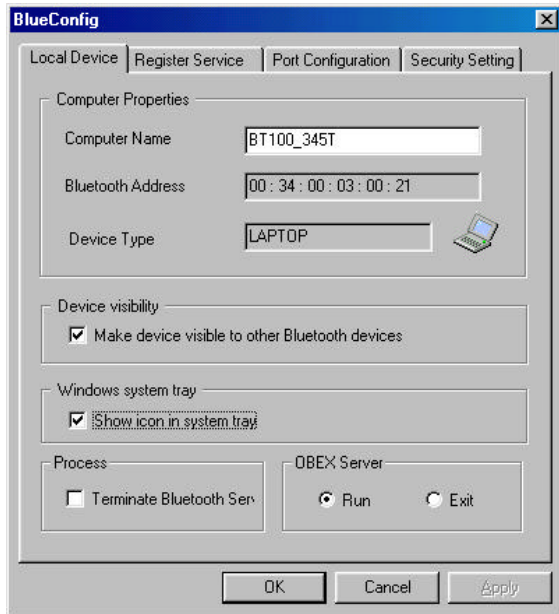
The appearance of Bluetooth Plug-in looks like a folder on your Windows 98(or 2000) Desktop. All remote devices will be there if your Bluetooth PC card found. It functions like Network Neighborhood in Windows.

### Bluetooth™ Plug-In



With another auxiliary tool **Bluetooth™ Device Configuration**, you can customize some setting for your Bluetooth PC card, monitor current status of your Bluetooth system, and manage authentication related setting.

### Bluetooth™ Device Configuration



## Product Features

- Full Bluetooth software stack support Baseband, LMP, HCI, L2CAP, SDP and RFCOMM.
- Support for Microsoft® Windows® 98, ME and 2000.
- The **Acer BT100 Shuttle** software offers the following profiles:
  - **Generic Access Profile**  
Supporting device discovery and authentication.
  - **Service Discovery Application Profile**  
Supporting service discovery.
  - **Serial Port Profile**  
Bluetooth virtual COM ports for legacy applications. It's the basic profile for Dial-Up Networking Profile, Fax Profile, LAN Access Profile, and Object Exchange Profile relevant profiles.

- **Dial-Up Networking Profile**  
Support Dial-Up Service (as data terminal) through a Bluetooth modem.
- **Fax Profile**  
Support Fax Service (as data terminal) through a Windows Fax legacy application.
- **LAN Access Profile**  
Support access to local area network (as data terminal).

- **Generic Object Exchange Profile**  
It's the basic profile for OBEX Object Push Profile, and OBEX File Transfer Profile.
- **OBEX Object Push Profile**  
Support file objects retrieving and putting in a fixed location.
- **OBEX File Transfer Profile**  
Support file transfer in any location.

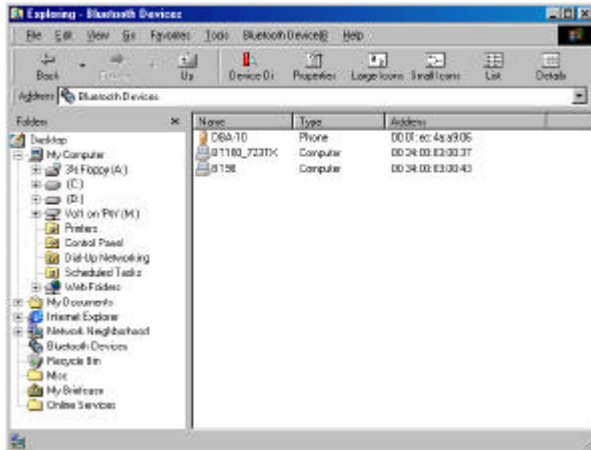
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### Generic Access Profile

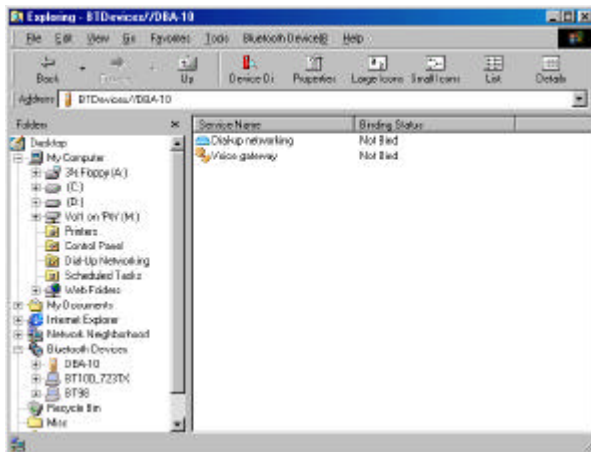
# System Overview

The Acer Bluetooth Shuttle software consists of a software stack and some application.

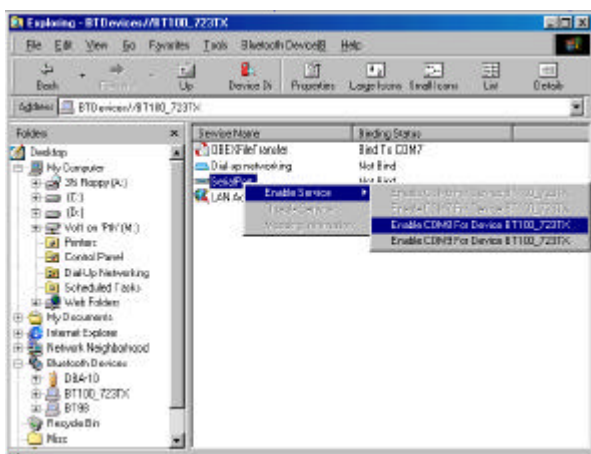
The core protocol stack is implemented as a subset of version 1.1 of the Bluetooth specification. At the bottom of the software stack resides the hardware driver. It transfers HCI commands or events between PC and PC card. Also, it passes HCI data to L2CAP layer. The main task of L2CAP is to multiplex the data of SDP and RFCOMM. The inclusion of SDP makes it possible to perform service discovery on the Bluetooth devices in RF proximity. RFCOMM protocol provides emulation of RS-232 serial ports, it acting on behalf of legacy applications not directly aware of Bluetooth.



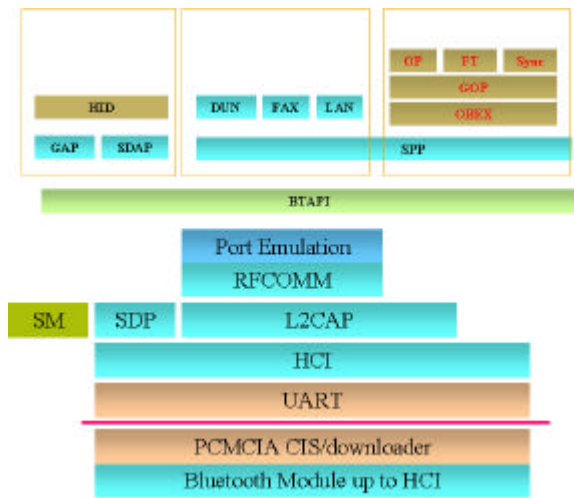
## Service Discovery Application



## Serial Port Profile



The following figure shows the structure of the system.



### Federal Communication Commission Interference 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 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.

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.

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RF Exposure Warning: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device is provided with an internal antenna and minimum 20 cm spacing must be maintained between this PC C Card and all person's body (excluding extremities of hands, wrist and feet) during wireless mode of operation. Further, this transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.