

SDIO Card Type-B for Bluetooth™

User's Manual

1.0 Draft (June 24, 2002)

TOSHIBA CORPORATION

Revision History

| Revision | Date | Comments |
|------------------|------------|----------|
| <i>1.0 Draft</i> | 2002-06-24 | Draft |
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| | | |

(*) The Bluetooth trademarks are owned by Bluetooth SIG, Inc., U.S.A

Feature

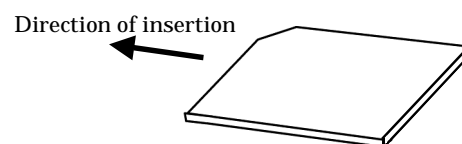
Bluetooth™ SD card is an ultra small and thin card which has built-in antenna, Bluetooth™ function and SD/IO interface compliant with SDIO Card Specification.

Bluetooth™ is a low-cost and low-power wireless communication standard for short range communication which uses 2.4GHz ISM band and GFSK modulation method. Bluetooth™ specification is standardized by Bluetooth SIG and it is industry-widely supported.

SDIO Card Specification is a standard for small size IO devices. SDIO Card Specification is standardized by SD Association and it is also industry-widely supported.

Bluetooth™ SD card can be used with any kind of devices which have SDIO card slot and software for Bluetooth SD card, i.e. PDAs, portable PCs and desktop PCs.

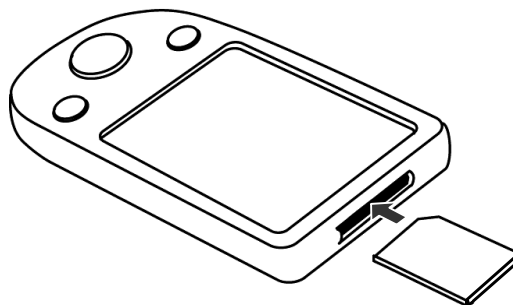
Appearance



Installation

When inserting this card into SD card slot, check the form of the connector and insert it surely.

- Connect the Bluetooth™ SD Card to a PDA.

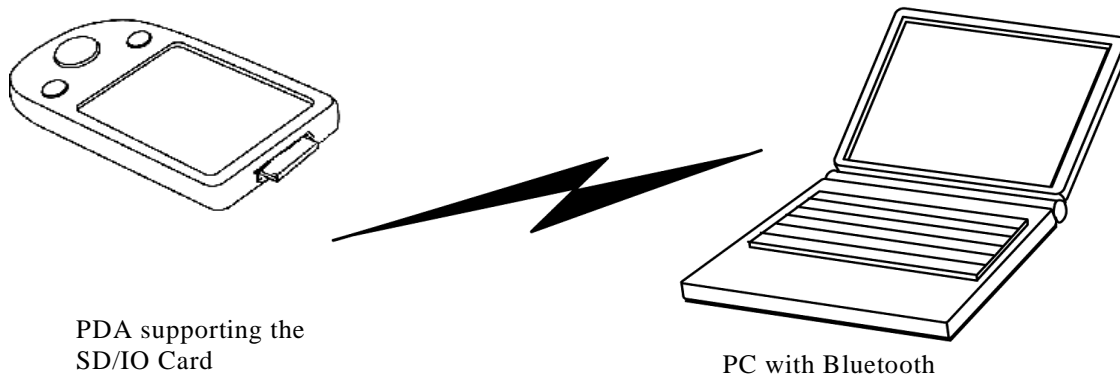


PDA supporting the SD/IO Card

This drawing is an example.
As for the position where the
Bluetooth™ SD card is
connected, refer to the User's
Manual of PDA.

What you can do with the Bluetooth™ SD Card

< Data communication between a PDA and a PC >



Specifications

| | |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model name | SDIO Card Type-B for Bluetooth™ |
| Model No. | SD-BT2 |
| Bluetooth™ specification | Bluetooth™ Ver.1.1 *1 |
| Specification of electric | Operating voltage : 3.1 to 3.6V Power Consumption : 100mA(MAX.) 50mA(AVG. in transmitting/receiving) |
| RF specification | In conformity with Bluetooth radio specification Transmission electric power class : Power class 3 [maximum output : 1mW (0dBm)] Sensitivity of receiving : -70dBm |
| Host-Card Interface | SDIO Card Specification V1.0 SDIO Card Type-B Specification for Bluetooth™ |
| Dimension | 40mm-long x 24mm-wide x 2.1mm-thick A part of protrusion is 2.8mm-thick. |
| Bluetooth™ Protocols/Profiles implemented in the Card | RF, Baseband, LMP, L2CAP*2, SDP*2, RFCOMM*2, GAP*2, SPP(Serial Port Profile) *2 |

*1 : Bluetooth Special Interest Group, Document number 1.C.47/1.1, February 22nd, 2001

*2 : It is supported when the card is in “SDIO Card for Bluetooth Type-B” mode.

Using this products

- **Using this products**

*****WARNING**

Do not perform disassembly, modifications or repairs.

There is a danger of fires, electrical shock, damage to the unit, and injury.

Do not remove the label and do not paste the other labels.

Dismantling this product will invalidate the warranty and any other service plan.

Do not use this unit in an area where people wearing pacemakers may be nearby (such as in a crowded train).

Electrical signals may cause abnormalities in pacemaker operation.

Those with a pacemaker should operate this system from a minimum distance of 22cm or more.

Electrical signals may cause abnormalities in pacemaker operation.

Do not use this unit near medical electronic equipment. Likewise, do not attach medical electronic equipment to this system.

Electrical signals may cause abnormalities in the operation of medical electronic equipment.

Do not use this unit near automatic doors, fire detection devices, or other automatic control devices.

Electrical signals may affect these devices, leading to accidents caused by malfunctions.

Do not use this unit in an aircraft or in a place where this unit may electromagnetically affect other devices.

An electromagnetically wave may affect these devices and cause accidents by malfunctions.

If this unit give any electromagnetic interference to other device during use of this unit, turn off the system that this unit is mounted. If the system is not turned off, eject this unit from the system.

Electrical signals may affect these devices, leading to accidents caused by malfunctions.

Do not put this unit into your mouth to avoid swallowing it.

***** CAUTION**

Do not use unit in the bath, or any other area where there is a chance of submersion or high humidity.

There is a risk of electrical shock.

Do not use
in bath

Do not insert staples or paper clips into the unit.

There is a danger of an electrical short, smoke, or fire.

Warning

Do not use unit in a location exposed to rain or mist.

Rain or mist on the unit may cause fires or electrical shock.

Warning

If the unit is connected to a personal digital assistant, do not touch the SD card during or immediately following operation.

There is a danger of burns resulting from high heat levels. Those with delicate skin should use caution.

Warning

Do not place cups, flower vases or other containers holding liquid near unit.

There is a danger of electrical shock if liquids enter the unit.

If liquids should enter the unit, turn the power off immediately, remove the plug from the electrical outlet, and bring the unit to the place of purchase or a nearby service center for inspection.

Warning

Notes on Operation

- Regarding the operating and storage environment for this unit

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Do not place the unit in direct sunlight, a closed car, near a heating device, or any other location where high temperature is a possibility. This may cause damage to the unit, malfunction, or internal memory loss. | Warning |
| Do not place the unit in a place susceptible to extremely low temperatures. This may cause damage to the unit, malfunction, or internal memory loss. | Warning |
| Do not subject unit to rapid temperature changes. Dew formation may cause damage to the unit, malfunction, or internal memory loss. | Warning |
| Do not place unit in an extremely dusty location. This may cause damage to the unit, malfunction, or internal memory loss. | Warning |
| Do not use the unit in the following locations. Near a microwave oven, or areas with a risk of electrical shock or static electricity. Depending on the environment, electricity may not reach unit. | Warning |
| Do not place the unit in a place with risk of strong vibration. This may cause damage to the unit, malfunction, or internal memory loss. | Warning |
| When cleaning the unit, do not use benzene or paint thinner. This may cause damage or discoloration to the case. | Warning |

Restrictions for Use

- **Restrictions for Use**

- | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">● This product was not designed to be used with systems directly responsible for sustaining human life (*1). Avoid using this product with such systems. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*1: Systems directly responsible for sustaining human life include the following:

(Life support systems, systems for use in surgery, related medical equipment)

- | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">● When this product is to be used in installations responsible for human safety or the maintenance of public installations (*2), special transport, maintenance, operation, and wiring (*3) becomes necessary. Please contact our service center. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*2: Installations responsible for human safety and public installations include the following.

(Main control systems for nuclear power plants, safety installations in nuclear power plants,

other systems responsible for maintaining public safety)

(Mass transport systems, vehicle operation systems, or aerial control systems)

*3: Special wiring refers to safety systems (fool proofing, failsafe system installation, redundant installation)

installed in close consultation with a representative from our company.

• FCC information

FCC notice

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, (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution

CAUTION: Change or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

MPE(Maximum Permissible Exposure)

"RF Exposure Compliance-----

In order for this device to comply with FCC rules, under the provision of Part 15.247(b)(c), it must operate in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Maximum Permissible Limits (MPE).

It is recommended that the antenna of this device be placed at 20 cm or more from its user and any nearby persons, during continuous and extend data transmission. The users of this device should ensure that the operation of this device is in compliance with these provisions."

• IC (Industry Canada)

To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment that is installed outdoors is subject to licensing.

The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

"Operation of this device is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

"The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca/rpb"

< Notice >

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

End user can not modify this transmitter device.

Any unauthorized modification made on the device could avoid the user's authority to operate this device.

• Taiwan

Article 14 Unless approved, for any model accredited low power radio frequency electric machinery, any company, trader or user shall not change the frequency, increase the power or change the features and functions of the original design.

Article 17 Any use of low power radio frequency electric machinery shall not affect the aviation safety and interfere with legal communications. In event that any interference is found, the use of such electric machinery shall be stopped immediately, and reusing of such products can be resumed until no interference occurs after improvement.

The legal communications mentioned in the above item refer to radio communications operated in accordance with telecommunication laws and regulations.

Low power radio frequency electric machinery shall resist against interference from legal communications or from industrial, scientific and medical radio emission electric machinery.

• EU R & TTE directive

European Union (EU) and EFTA

This equipment complies with the R&TTE directive 1999/5/EC and has been provided with the CE mark accordingly.

Note that the radio frequency band used this equipment has not been harmonized in all the EU.

< Support Regions/Countries >

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland, The Netherlands, United Kingdom

Ohme, June 18 , 2002

Place, Date

Sign