

## B102476/3 Bluetooth RS232 Adapters

### Features

- Bluetooth pairing and unpairing tools
- Integrated antenna
- Bluetooth Class 1 Radio
- Data encryption
- Automatic Bluetooth connection
- Support Microsoft Windows Bluetooth COM port
- RS232 interface in DB9 male or female
- LED indicators
- Configuration via Bluetooth or USB
- Touch button power switch
- Battery powered
- Battery level meter
- Battery overdischarge protection (manually activate)
- Up to 45 hours continuous use (9600bps) on 2 AA batteries.



### Specifications

Bluetooth	Bluetooth v2.1 + EDR Class 1 Radio		
RS232	Connector: DB9 male/female Baud rate: 1200bps to 115200bps Parity: Even, Odd, None Data length: 8-bit Stop bits: 1-bit, 2-bit		
Part Number	B102476	DB9 male	2-AA-battery pack
	B102473	DB9 female	2-AA-battery pack

### Typical Applications

#### 1. RS232 Extension over Bluetooth

##### App 1 Pair with your Bluetooth (SPP) enabled devices

Follow *Device Pairing* instruction to pair this adapter with your Bluetooth enabled device. The paired Bluetooth devices will connect automatically. You can access your Bluetooth enabled device remotely via Bluetooth adapter's RS232 port.

##### App 2 Pair two Bluetooth adapters

Follow *Device Pairing* instruction to pair the two adapters. The paired adapters will connect automatically.

#### 2. Microsoft Windows Virtual COM Port over Bluetooth

Power on Bluetooth adapter. Locate Bluetooth icon  on Microsoft Windows taskbar. Click on it and select *Add a Bluetooth Device*. Follow Microsoft Windows on-screen instructions to install the device. The authentication pin code is 1234. A virtual COM port (Outgoing direction) with SPP description will be created. To check the COM port number, click  on Windows taskbar and select *Open (Bluetooth) Settings*. Click *COM Ports* in *Bluetooth Settings* window.

### System Requirements

Configuring Bluetooth adapters on a PC requires:

- Microsoft Windows 8, Windows 7, Windows Vista, or Windows XP.
- eeTerminal (download from [www.devicefunctions.com](http://www.devicefunctions.com)).
- Bluetooth connection to PC or USB adapter H0087135M/F.

# DEVICE FUNCTIONS

## LED Indicator - Bluetooth connection

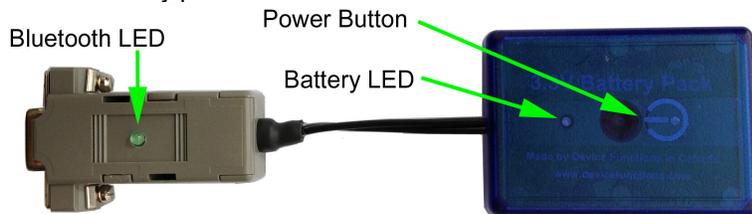
Status	LED Flash Rate
Connected	Solid on
Waiting for connection	Once per second
Configuring	10 times per second

## LED Indicator - Battery meter and battery switch

Status	LED Flash Rate
Battery switch (touch button)	Solid on while touching, otherwise off
Battery good	LED off
Battery low (Alkaline)	Once every 3 or 2 seconds
Battery extremely low (Alkaline)	Once per second
Battery low (Rechargeable)	Once per second
Battery cutoff (Rechargeable)	LED off

## Battery Power On and Power Off

Touch on power button  until battery LED lights up. Left your finger. Touch twice more consecutively. The battery LED must be on with each touch. This turns on battery power. The same procedure is used to turn off battery power.



## Battery Level Meter

The battery level meter tells the current battery power in percentage. Power on the adapter. Place your finger on  power button. The battery LED will start flashing in a few seconds. Count the number of flashing until the battery LED stops flashing. Lift your finger. The battery level is read as,

Number of Flashing	Battery Power Level
10	90% - 100%
9	80% - 90%
8	70% - 80%
7	60% - 70%
6	50% - 60%
5	40% - 50%
4	30% - 40%
3	20% - 30%
2	10% - 20%
1	Less than 10%

## Change Batteries

B102476/3 requires two AA batteries. Both Alkaline and rechargeable batteries can be used. Unscrew the screw on the battery pack. Remove the cover gently. Remove the old batteries and place the new batteries in. Align the + and - signs on the batteries with the + and - signs on the battery holder. Put on the cover and tighten the screw.

## Rechargeable Battery Overdischarge Protection

This feature can be activated when changing batteries to rechargeable batteries. It prevents rechargeable batteries degradation caused by overdischarge. To activate overdischarge protection, touch on  power

# DEVICE FUNCTIONS

button while placing in the second rechargeable battery. The LED must be solid on. Left your finger. Touch twice more consecutively. The LED will flash three times. This indicates that the over discharge protection is activated.

Overdischarge protection is off by default. You need to activate this feature every time when you change rechargeable batteries.

## Touch Button Adjustment

Unscrew the screw and gently remove the cover. Remove one battery. Touch on  power button while placing back the battery. The LED is solid on. Keep touching on  power button until LED off. Lift your finger. Wait until the LED is solid on again. Place your finger over  power button. Keep your finger on  power button until LED starts flashing. Lift your finger. When the LED stops flashing, the touch button recalibration is done.

The following procedure can be used to restore manufacture's touch button setting. Unscrew the screw and gently remove the cover. Remove one battery. Touch on  power button while placing back the battery. The LED is solid on. Keep your finger on  power button until LED off. Continue keeping your finger on  power button until LED starts flashing. Lift your finger. When the LED stops flashing, the touch button is restored.

## DB9 Connector Pin Descriptions

Pin #	DB9 Male Connector	DB9 Female Connector
1	1 - 4 - 6	1 - 4 - 6
2	Rx	Tx
3	Tx	Rx
4	1 - 4 - 6	1 - 4 - 6
5	GND	GND
6	1 - 4 - 6	1 - 4 - 6
7	7 - 8	7 - 8
8	7 - 8	7 - 8
9	NC	NC

## Serial Port Configuration and Bluetooth Pairing

### Configure via Bluetooth

You have 60 seconds to start configuration via Bluetooth after power on. Start eeTerminal, then power on Bluetooth adapter. Bluetooth connection to PC is required.

Step 1 Start configuration

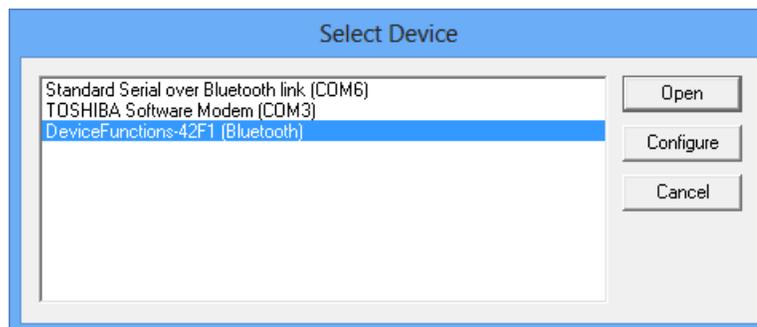


Fig 1

Click *File* from eeTerminal's menu bar and click *Open Device*. A *Select Device* window, Fig 1, will popup in a few seconds with a list of devices. You may need to repeat this process until your

# DEVICE FUNCTIONS

Bluetooth adapter is found. Turn off Bluetooth adapter then turn on if 60 seconds passed.

Select your Bluetooth device from the device list and click *Configure* button. A *Bluetooth Settings* window, Fig 2, will popup in a few seconds. If there is no *Bluetooth Settings* window, more than 60 seconds have passed from power on. Turn off Bluetooth adapter and start from beginning.

## Step 2 Configure Bluetooth adapter

- Encryption support is always enabled. The paired device must also support link encryption in order to set an encrypted connection.
- Authentication pin code is 1234. Authentication is turned off by default. You may need this code when pairing with other devices, such as PC.
- RS232 settings. Set serial port's baud rate, parity, and stop bits.
- Device Pairing. In order to make a Bluetooth connection, two Bluetooth devices must be paired. Click *Add New Device* button. Visible Bluetooth devices in range will be listed in a few seconds. You may need to click *Add New Device* multiple times to find Bluetooth devices. Select a Bluetooth device and click *Pair* button. **NOTE: You can only unpair this adapter using USB adapter H0087135 after you save the pairing information.**
- Device Unpairing. Click *Unpair* button if enabled to erase pairing information.

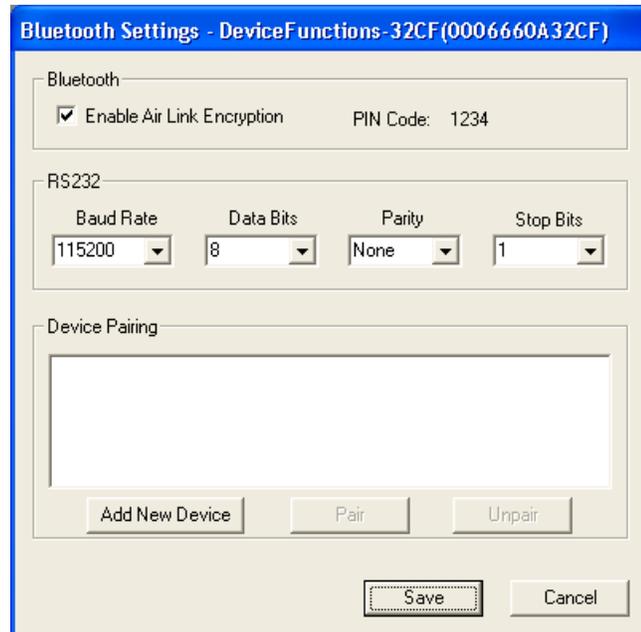


Fig 2

## Step 3 Save Bluetooth adapter's settings

Click *Save* button to save new settings or click *Cancel* button to cancel any modifications. The new settings will take effect immediately once saved.

## Configure via USB

You can start configuration via USB at any time when Bluetooth adapter is not connected (The LED is flashing). USB adapter H0087135 is required. If you use Windows XP, you can only configure Bluetooth adapters via USB. **Make sure ONLY one of the PAIRED Bluetooth devices is powered on at a time.**

### Step 1 Start configuration

Plug H0087135 in your PC's USB port. Connect Bluetooth adapter with H0087135. Power on Bluetooth adapter.

Start eeTerminal. Click *File* from eeTerminal's menu bar and click *Open Device*. A *Select Device* window, Fig 3, will popup with a list of devices.

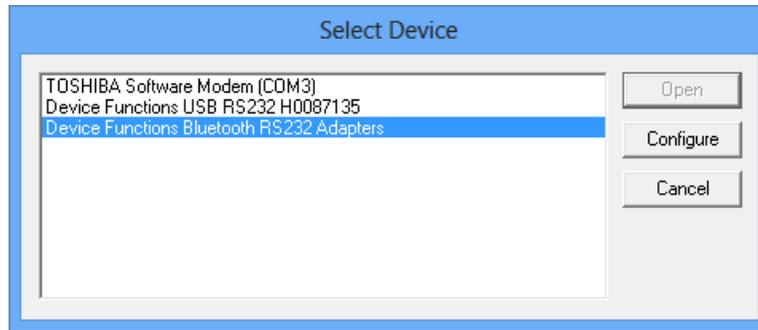


Fig 3

Select *Device Functions Bluetooth RS232 Adapters* from the device list and click *Configure* button. The *Bluetooth Adapter Serial Port Settings* window, Fig 4, will popup. If you have Bluetooth adapter's RS232 settings, select the settings and click *Ok* button. If you don't have the information, click *Auto Baud* button. After H0087135 establishes communication with the Bluetooth adapter, a *Bluetooth Settings* window, Fig 2, will popup.



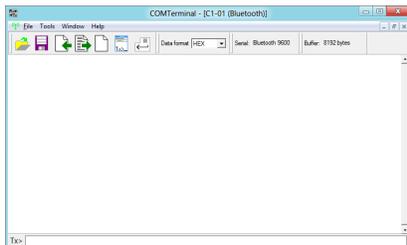
Fig 4

- Step 2 Configure your Bluetooth devices  
Refer to Step 2 in *Configure via Bluetooth*.
- Step 3 Save your Bluetooth device's settings  
Refer to Step 3 in *Configure via Bluetooth*.

## Accessories

### eeTerminal

Configure, read, and write Bluetooth adapters. Upload/download files.



### USB Adapter H0087135M/F

Configure Bluetooth adapters



## Environmental Conditions

- Operating temperature range 0°C TO +45°C
- Storage temperature range -20°C TO +35°C
- Relative humidity 0% to 90%, non-condensing