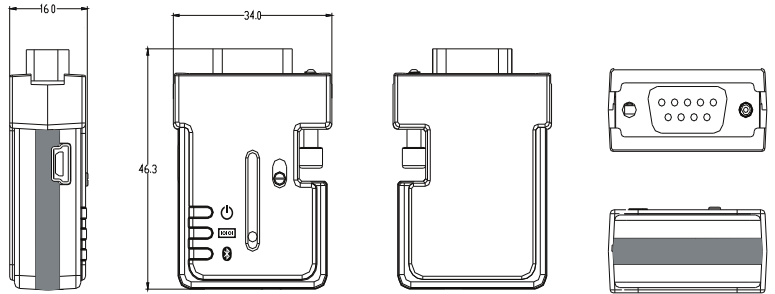




LM048 Bluetooth RS232 Serial Adapter

100m Distance with On-Board Antenna

Product LM048
 Part No 048-0000
 Revised 25/NOV/2015



Features

- World's smallest RS232 Bluetooth adapter.
- Multi power supply options, AC Mains via Mini USB, USB-Mini USB.
- No mains power cable needed as adapter can also be powered from RS232 Pin 9.
- Supports up to 100 meters (in open space).
- Unique Patented Firmware Enabling Serial Printer Functionality.
- DTR DSR Handshaking and RTS CTS Flow Control options available depending on the configuration.
- No need of external host or software, simply works as a standalone product.
- Ability to transfer DTR, DSR, RTS and CTS line status over air providing true Serial Cable replacement solution.
- This functionality allows serial printers using DSR or CTS line for error reporting such as "Out of Paper", "Printer Offline" etc.
- Supports Bluetooth Serial Port Profile (SPP) and Generic Access Profile (GAP).
- CSR BC04 Bluetooth chipset with Bluetooth 2.0 + EDR firmware based design. Bluetooth 2.1 + EDR firmware also available.
- Ease of configuration and setup using LM149 Software.
- FCC, RoHS, BQB and RTTE certified.

Overview

Data transfer made easy with the world's smallest RS232 Bluetooth adapter. This adapter provides RS232 cable replacement for devices which use RTS/CTS flow control or DTR DSR handshaking.

The LM048 can be powered from RS232 Pin No.9 (4v-13v) or from Mini USB Port via the AC mains adapter or Mini USB-USB cable. Our new patented firmware replicated all RS232 control signals (DTR, DSR, RTS, and CTS) to transfer over the Bluetooth link. Unlike other Bluetooth serial adapters in the market, a pair of LM048 adapters with their unique hardware and firmware combination, can act as a true straight or twisted serial cable solution.

LM Technologies® provide an application called LM149 Configuration Software, which allows easy configuration of these adapters. LM Technologies® also provide an option to configure the adapter from a console using an in-built menu system. This option may be required for a device which only has a keyboard and screen, such as a cash register.



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Packaging Options

SRP - Single Retail Pack
 Part No 048-0006

- 1 x Bluetooth Serial Adapter.
- 1 x DB9 male to female connector.
- 1 x USB - mini USB Cable for power supply.
- 1 x All in one power supply (UK, EU and US).

TRP - Twin Retail Pack
 Part No 048-0012

- 2 x Bluetooth Serial Adapters.
- 1 x DB9 male to female connector.
- 1 x USB mini USB Cable for power supply.
- 1 x All in one power supply (UK, EU and US).

Twin Pack Pre-Paired
 Part No 048-0011

- 2 x Bluetooth Serial Adapters.

AO - Adapter Only
 Part No 048-0000

Optional
 LM025 Slim Line 9 pin to 25 pin Converter.

Optional
 LM025 Slim Line 9 pin to 25 pin Converter.

- See our website to download any applicable Product Software, Manuals and Notes - <http://www.lm-technologies.com/downloads>

General Specification

Baud Rate	1.2/2.4/4.8/9.6/19.2/38.4/57.6/115.2/230.4/460.8/921.6 Kbps
Coverage	Up to 100m
Connection	Point-to-Point
Signal	TxD, RxD, RTS, CTS, DTR, DSR and GND
RS-232 Interface	D_SUB 9 pin female
Standard Bluetooth	Specification 2.0 + EDR
Frequency	2.400 to 2.4835 GHz
Hopping	1,600/sec, 1Mhz channel space
Modulation	GFSK-Mbps, DQPSK-2 Mbps, and 8-DPSK-3Mbps
Tx Power	Max 18 dBm (Class 1)
RX Sensitivity	-86 dBm typical
Antenna	Chip Antenna
Antenna Gain	Max 1 to 2 dBi
Power Supply	+4 to 13V DC
Current Consumption	Max 90 mA
Operation Temperature	-20°C to +75°C
Dimensions	46.3mm (W) x 34mm (D) x 16mm (H)

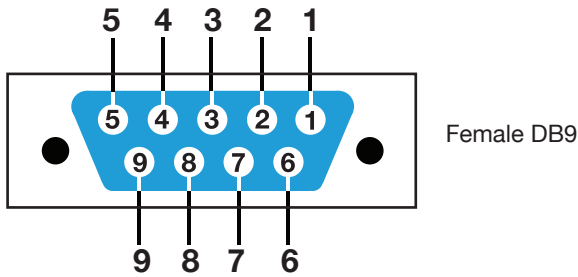


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Signals



Pin out for LM048 Adapter

Pin	RS232 Signal	DTE to DCE Direction	DCE to DTE Direction	Description
1	CD	Input	Output	Not Connected
2	RxD	Input	Output	Receive Data
3	TxD	Output	Input	Transmit Data
4	DTR	Output	Input	Data Terminal Ready
5	GND	n/a	n/a	Signal Ground
6	DSR	Input	Output	Data Set Ready
7	RTS	Output	Input	Request to Send
8	CTS	Input	Output	Clear to Send
9	Vcc	Input	Input	Power Supply

Factory Settings

The factory settings of the COM Port are as follows:

Baud Rate 19200 bps
 Data Bits 8
 Parity None
 Stop Bits 1
 Flow Control None

Customised settings are available as factory settings upon special request; Bonding, Pre-Pairing, different Baud Rates, Data Bits, Parity and Flow Control Settings.



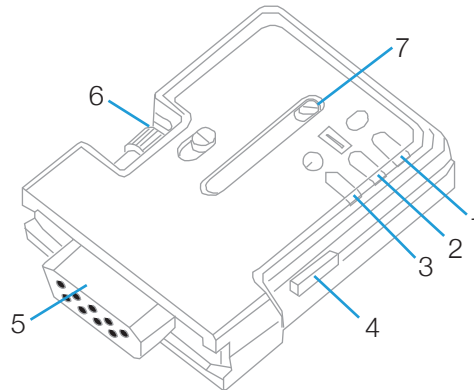
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Hardware Structure

- 1 Link LED.
- 2 Data LED.
- 3 Power LED.
- 4 Mini USB Connector.
- 5 RS232 Connector.
- 6 Slide Switch.
- 7 Reset Button.



Switch Functions

Reset Button

- By pressing the Reset Button you can:

Disconnect a wireless connection (after a short press).
 Restore the factory settings (after over 3 seconds press).

Slide Switch

- The slide switch can swap TxD/RxD, RTS/CTS and DTR/DSR Signals. By switching, you can set the adapter as a DTE (towards antenna connector) or a DCE (towards RS232 connector).

Additional Dimensions

