LM058v2   Bluetooth RS232 Serial Adapter
with External SMA Antenna
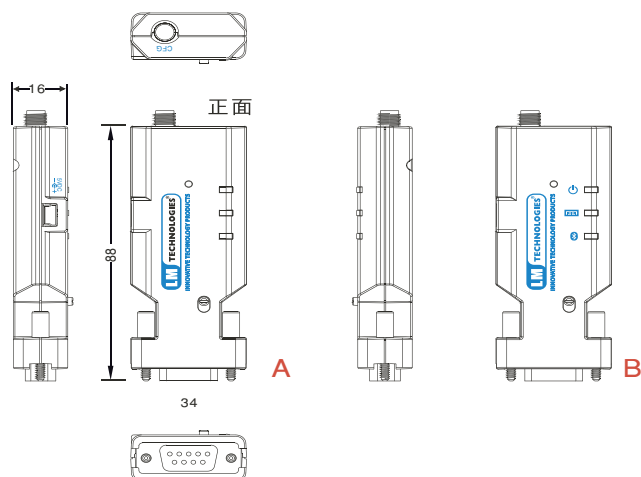
1 Features

• The LM058 can communicate with another Bluetooth serial adapter or other Bluetooth devices such as a laptop, desktop, PDA or mobile phone

• Supports Bluetooth Serial Port Profile (SPP) and Bluetooth Generic Access Profile (GAP)

• CSR Bluecore 4 chipset

• 100 m (329 feet) range with standard 2 dBi Antenna Alternative antennas enable range upto 1000m

• Multiple 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

• Unique Patented Firmware Enabling Serial Printer Functionality

• 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 to report errors like "Out of Paper" or "Printer Offline"

• DTR DSR Handshaking and RTS CTS Flow Control options available depending on the configuration

2 Description

LM058 Bluetooth Serial Adapter provides RS232 cable replacement for devices which use RTS/CTS flow control or DTR DSR Handshaking.This is a Class 1 Bluetooth adapter with external antenna and can operate up to a range of 100m with standard antenna (2 dBi) and upto 1000m with optional antenna (5,7,9 dBi).

LM Technologies Ltd provides a application called LM149 Configuration Software which allows easy configuration of these adapters. Unlike other Bluetooth serial adapters in the market LM's hardware and firmware combination acts as a true straight or twisted serial cable.

LM Technologies Ltd also provides option to configure the adapter from console using an inbuilt menu system. This option may be required for a device which has just keyboard and screen such as cash register.

3 Packaging Options

SRP - Single Retail Pack
Part No 058-0054

1x Bluetooth Serial Adapter
1x DB9 male to female connector
1x USB - mini USB cable for power supply
1x 2 dBi Antenna
1x User Manual & Warranty Card
1x All in one power supply (UK, EU and US)
1x CD with LM149 Configuration Software

Optional:
LM025   Slim Line 9 pin to 25 pin Converter

TRP - Twin Retail Pack
Part No 058-0055

2x Bluetooth Serial Adapter
1x DB9 male to female connector
1x USB - mini USB cable for power supply
2x 2 dBi Antenna
1x User Manual & Warranty Card
2x All in one power supply (UK, EU and US)
1x CD with LM149 Configuration Software

Optional:
LM025   Slim Line 9 pin to 25 pin Converter

AO - Adapter Only
Part No 058-0050

1x Bluetooth Serial Adapter
1x 2dBi Antenna

4 General Specification

Specification	Description
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 100 m (with default 2 dBi antenna)
Connection	Point to Point
Signals	TxD, RxD, DTR, DSR, GND, RTS and CTS
RS232 Interface	D_SUB 9 pin female
Standard	Specification 2.0 + EDR
Frequency	2.400 to 2.4835 GHz
Hopping	Adaptive Frequency Hopping at rate of 1600 hops/sec, 1 MHz Channel
Modulation	GFSK 1 Mbps, DQPSK - 2 Mbps and 8DPSK - 3 Mbps
Tx. Power	Max 18 dBm (Class 1)
Rx. Sensitivity	-83 dBm typical
Antenna	External SMA Antenna
Antenna Gain	2 dBi antenna (default)
Power Supply	+4 to +13 V DC
Current Consumption	Max. 140mA
Operation Temperature	-20 °C to +75 °C
Dimensions	35 mm(W) x 65 mm(D) xx 16mm (H)

5 Pinout for LM058v2

Female DB9
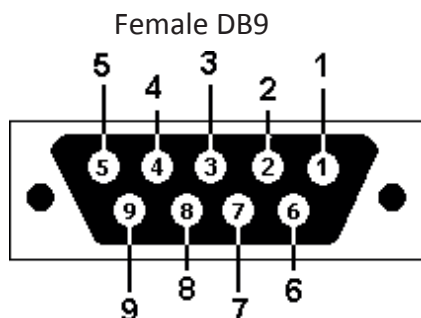
| Pin	Signal	DTE to DCE	DCE to DTE	Description
1	CD	Input	Output	Not Connected
2	RxD	Input	Output	Received Data
3	TxD	Output	Input	Transmitted Data
4	DTR	Output	Input	Data Terminal Ready
5	GND	N/A	N/A	Signal Ground
6	DSR	Input	Output	Data Set Ready
7	RTS	Output	Input	Request To Send
8	CTS	Input	Output	Clear To Send
9	Vcc	Input	Input	Power Supply

6 Factory Settings

The factory settings of COM port are as follows:

Baud rate: 19200bps
Data bit: 8
Parity: none
Stop bit: 1
Flow control: None

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

7 Hardware Structure

The figure below is an outline of the adapter
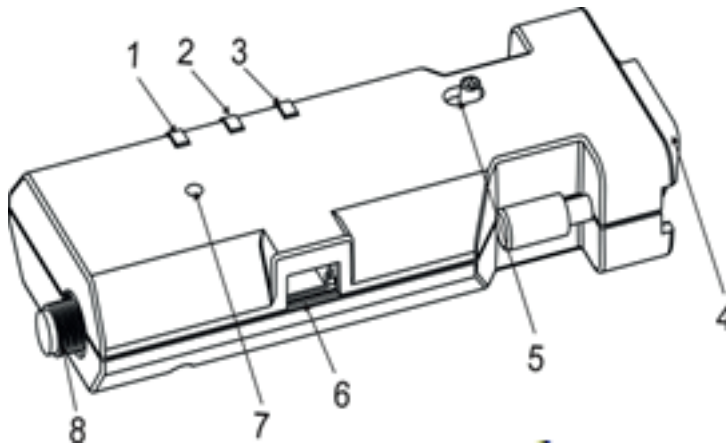
1 Power LED	2 Data LED	3 Link LED	4 RS232 connector
5 Slide switch	6 Mini USB connector	7 Reset button	8 Antenna connector

Reset Button

By pressing the Reset Button you can:
• Disconnect or reconnect a wireless connection (after a short press)
• Restore the factory settings (after a 3 seconds press)

Slide Switch

The slide switch can swap TXD/RXD and RTS/CTS signals.
By changing the position of this switch you can set the adaptor as a DTE
(towards antenna connector) or DCE (towards RS232 connector).