



# LM506 Long Range Bluetooth 4.0 BLE USB Nano Adapter

Standard and Bluetooth Low Energy Dual-Mode Smart-Ready

Product LM506  
 Part No 506-0508  
 Revised 10/APR/2015



## Features

- Compatible with Bluetooth v4.0 specification. Backward compatible with Bluetooth 3.0, 2.0/2.1 + EDR devices.
- BT 4.0 dual mode (Standard Bluetooth and Bluetooth Low Energy)
- Supports Maximum Asynchronous Data Rate of 3 Mbps.
- Supports Low Power Application Data Rate of 250 Kbps.
- Supports Bluetooth Low Energy.
- Provides data access via USB 2.0 interface with ultra-low power consumption.
- 2.4 - 2.4835 GHz ISM Band Operation.
- Configurable using Widcomm software available to download at: <http://www.lm-technologies.com/support/downloads>
- Small Form Factor 19.47mm x 16mm x 8.1mm Class 1 adapter with a range up to 110m in open space.
- Wide range of Bluetooth profiles supported (like HF, A2DP, OPP, FTP, DUN, PAN, SPP, HCRP, SYNC, BTLE profiles etc).
- Eliminates the need of cable between your computer and other Bluetooth Devices.
- Stereo Audio supported with VoIP calls over Bluetooth also supported.
- Interoperable with PDAs, Phones and Bluetooth Low Energy Devices used in Medical, AMR applications.
- Supported on Windows XP, VISTA & 7, iBeacon.

## Overview

The LM506 Long Range Bluetooth Dual Mode USB Nano Adapter is a Class 1 Adapter designed to be fully compatible with the Bluetooth v4.0 Standard. It is a dual mode HCI Adapter supporting Bluetooth v3.0 and Bluetooth Low Energy.

This is a very small form factor and high performance adapter which allows you to connect to up to 7 Bluetooth devices simultaneously. The adapter is backward compatible with Bluetooth 2.0 and Bluetooth 2.1 + EDR devices and also supports connection to Bluetooth 3.0 and Bluetooth Low Energy Devices (BLE).

The adapter integrates high performance Bluetooth Radio, Baseband, Link Manager, Host Controller Interface and is configurable with Widcomm Software which offers a huge range of Bluetooth profiles for a variety of connectivity applications. The adapter is ideally suited for Bluetooth connectivity to serial adapters, laptops, PC's, Bluetooth Low Energy Devices and Mono and stereo headsets. Due to its small size, long range, high performance, ultra low power consumption and high sensitivity, this adapter is ideally suited for Bluetooth connectivity applications where the adapter can fit discreetly into portable devices that have USB port.



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### Packaging Options

**SRP - Single Retail Pack**  
 Part No 506-0508

**AO - Adapter Only**  
 Part No 506-0502

1 x Bluetooth USB Adapter.

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- User Manuals and Widcomm Configuration Software available to download via our website - <http://www.lm-technologies.com/support/downloads>

### General Specification

Product Name	LM506
Chipset	Broadcom BCM20702
Power Classification	Class 1
Adapter Type	USB Adapter
Interface	USB 2.0
Bluetooth Specification	Bluetooth v 4.0, backward compatible with BT3.0/2.1/2.0 + EDR
Frequency	2.402 - 2.480 MHz ISM Band
Modulation Method	GFSK for 1 Mbps, $\pi/4$ -DQPSK for 2 Mbps, 8-DPSK for 3 Mbps
Spread Spectrum	FHSS (Frequency Hopping Spread Spectrum)
Operating Temperature	Operating Temperature : 0°C to +60°C
Storage Temperature	Storage Temperature: -10°C to +70°C
Humidity	Humidity: 5~90% non-condensing
Data Transfer Rate (Max)	3 Mbps enhanced data rate 250 Kbps Low Energy mode data rate
Range	Maximum 110 m in open space
Tx Power	Class 1 ( +8 dBm)
Input Voltage	DC 5V (via USB port)
Antenna	Internal
Rx Sensitivity	< -82 dBm at <0.1 % BER
LED Indicator	Power/Active (BLUE)
OS Support	Win XP / VISTA / 7 / 8, Linux, Bluez 4.98 and above
Default Firmware	Broadcom HCI ROM Firmware
Software	Downloadable Widcomm v6.5.0.2000 for Windows VISTA/7, Widcomm v5.6.0.7200 for XP
Size	19.47mm (L) x 16mm (W) x 8.1mm (H)



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## General Specification

Weight	2.2 g
Bluetooth Profiles	GAP,SPP,HSP, HFP, DUN, FTP, FAX, PAN, LAN, HID, SYNC, HCRP, A2DP, AVRCP, BIP, GOEP, SDAP, OPP, Bluetooth Low Energy, Bluetooth Proximity Profile
Certification	CE, FCC, RoHS

## Dimensions

