



## LM506 Long Range Bluetooth Dual Mode USB Nano Adapter

Product: LM506  
Part No: 506-0508

### 1 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)  
Support Maximum Asynchronous Data Rate = 3 Mbps  
Support Low Power Application Data Rate = 250 Kbps
- **Supports Bluetooth Low Energy**
- Provide data access via USB 2.0 interface
- Ultra-low power consumption
- 2.4 - 2.4835 GHz ISM Band Operation
- Distributed with Widcomm software
- Small Form Factor 19.47 x 16 x 8.1 mm
- Class 1 adapter with upto 110 m 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. 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



BT v4.0 USB Adapter

### 2 Description

**LM506 Long Range Bluetooth Dual Mode USB Nano Adapter is a Class 1 Adapter designed to be fully compatible with 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 upto 7 Bluetooth devices simultaneously.**

The adapter is backward compatible with BT 2.0 and BT 2.1 + EDR devices and also supports connection to BT 3.0 and BT Low Energy Devices.

The adapter integrates high performance Bluetooth Radio, Baseband, Link Manager, Host Controller Interface and is distributed with Widcomm Software which offers a huge range of Bluetooth profiles for variety of connectivity applications. The adapter is ideally suited for Bluetooth connectivity to serial adapter, laptops, PC, Bluetooth Low Energy Devices, 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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### 3 Packaging Options

SRP - Single Retail Pack

Part No 506-0508

1x Bluetooth USB Adapter

1x Quick Start Guide

1x CD with Widcomm v6.5.0.2000 for Win VISTA/7 and Widcomm v5.6.0.7200 for Win XP

### 4 General Specification

| Specification       | Description                                                                                                                                      |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name        | LM506 Bluetooth USB Nano Adapter                                                                                                                 |
| Chipset             | Broadcom BCM20702                                                                                                                                |
| Bluetooth Standard  | Bluetooth v 4.0                                                                                                                                  |
| Frequency Band      | 2.4 - 2.4835 GHz 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)                                                                                                         |
| Transfer Rate (Max) | 3 Mbps enhanced data rate<br>250 Kbps Low Energy mode data rate                                                                                  |
| RF Output Power     | Class 1 ( +8 dBm)                                                                                                                                |
| Working Distance    | Maximum 110 m in open space                                                                                                                      |
| Rx Sensitivity      | < -82 dBm at <0.1 % BER                                                                                                                          |
| Input Voltage       | DC 5V (via USB port)                                                                                                                             |
| I/O Interface       | USB 2.0                                                                                                                                          |
| LED indicator       | Power/Active                                                                                                                                     |
| OS Support          | Win XP/VISTA/7                                                                                                                                   |
| Environment         | Operating Temperature : 0°C to +60°C                                                                                                             |
|                     | Storage Temperature: -10°C to +70°C                                                                                                              |
|                     | Humidity: 5~90% non-condensing                                                                                                                   |
| Size                | 19.47(L) x 16(W) x 8.1(H) mm                                                                                                                     |
| Weight              | 2.2 g                                                                                                                                            |
| Software/Drivers    | Widcomm v6.5.0.2000 for Windows VISTA/7<br>Widcomm v5.6.0.7200 for Windows XP                                                                    |
| 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 |



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## 5 Outline Drawing

The figure below is an outline of the adapter

