

# CANMAte DeviCe User MANUAI



**DEEP THOUGHT**  
S Y S T E M S P V T . L T D



## Introduction

CANMate is a high performing, low cost CAN to USB converter suitable to sniff any CAN network operating at or near full load and at full speed. Major features of CANMate include the following.

- Conforming to CAN specifications CAN 1.2, CAN 2.0A and CAN 2.0B
- Standard and extended frame handling
- Support for remote frames
- Capability to sniff CAN buses operating up to 1Mbps
- No frame loss even at or near full load on the bus
- Loopback mode support for self testing
- Multiple baud rate support
- LED status indication
- USB powered so no external power supply is required
- Inbuilt bootloader for facilitating easy firmware upgrades by the users themselves.
- **CANMate App**, a free PC application for basic tasks like displaying and logging messages and transmitting messages is provided along with the device
- **NODESim App**, another PC application from for time triggered and message triggered sending and reception of CAN messages enabling CANMate to simulate the operation of a CAN Node
- **CANMate dll** provides **API** support for writing custom application programs to interact with CAN bus systems

## Installation

CANMate product package contains the following items. Please make sure that all of these are present in the package you receive. Otherwise contact the distributor or Deep Thought Systems to get the missing pieces.

1. CANMate hardware box
2. USB A – Mini B USB cable of 1.5 meter length
3. Installation CD
4. Quick reference Guide
5. Warranty leaflet

## INSTALLATION Instructions

1. Connect CANMate device to one of the USB ports in the PC using the USB cable.
2. The Orange LED should be lit indicating that the device is powered up.



3. This device uses FTDI serial to USB converter and if the FTDI drivers are already installed in the PC, PC should enumerate the device and should open a virtual COM port. If this is the case, proceed to step 5
4. If FTDI drivers are not installed, install FTDI drivers from the CD and reconnect the hardware. Hardware should be enumerated now and PC should open a virtual COM port. This can be verified through Device Manager
5. Run setup.exe from the CD. Setup will install CANmate App, NodeSim and CANMate Dll.

**Note : There could be a newer version of CANMate App and NodeSim than that provided in the CD. So please check our website to get the latest software.**

### Operation

The Mini USB B pin should be connected to PC through the USB cable supplied. 9 Pin D connector has the CAN lines and pin out is given below.

- |   |       |
|---|-------|
| 2 | CAN_L |
| 3 | GND   |
| 6 | GND   |
| 7 | CAN_H |

A 120 Ohm termination resistor is hardwired with the board and hence separate termination resistor is not required to be connected while using CANMate hardware.

Default CAN baud rate is 500 Kbps and this is the baud rate device used after powering up. Hence the application should change the baud rate to the desired one after power up.

There are 2 LEDs available for status indication, orange and green. Status codes are given below

|                     |                  |
|---------------------|------------------|
| Steady Orange       | Power UP         |
| Steady Green        | CANMate Opened   |
| Fast RED Blinking   | CAN TX Operation |
| Fast Green Blinking | CAN RX Operation |

Alternate Slow RED and Green blinking CAN Error.

Device needs to be reset if the LEDs alternately blink indicating an error condition. This can be achieved in the software by closing and opening the device again.