WM-BUS USB DONGLE USER'S MANUAL
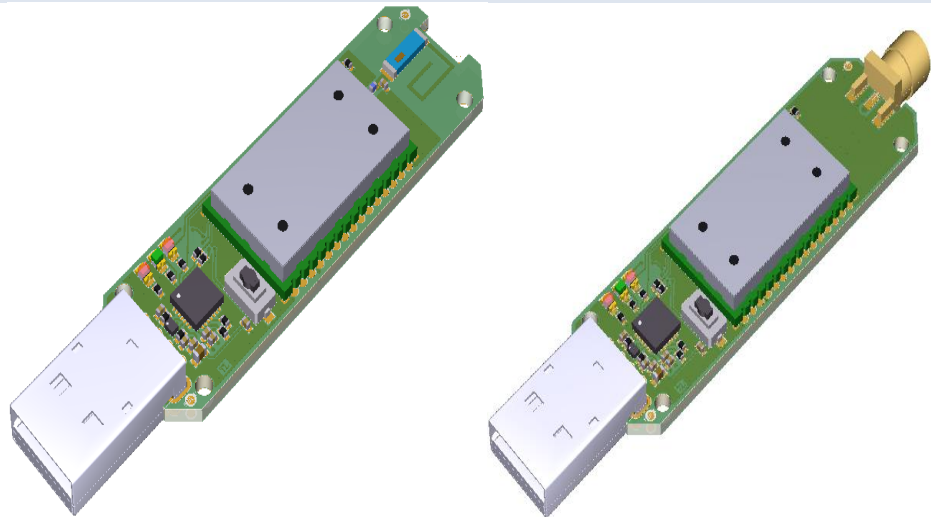
Code: 32001373 /32001374

INTRODUCTION:

This USB-dongle has been developed to test the functionality and radio parameters of the Mipot WM-Bus transceiver 32001324.

The unit interfaces with the PC via USB port and can be configured using a GUI.

The USB-Dongle comes in two different hardware designs. The first with 868 MHz antenna integrated on the printed circuit board and the second with the SMA connector.

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1. ABSOLUTE MAXIMUM RATINGS	
Power supply	+ 5.25 V
RF input (SMA connector)	+10 dBm
Storage temperature	–10 ÷ +55° C
Operating temperature	–10 ÷ +55° C

2. ELECTRICAL CHARACTERISTICS					
Parameter	*Min.*	*Typ.*	*Max.*	*Unit*	*Notes*
External supply voltage on USB	4	5	5.25	Volt	
RF Output Power	0	–	13	dBm	

Please refer to 32001324 WM-Bus module datasheet for more information about commands, radio parameters and electrical characteristics.

1. PRECAUTIONS
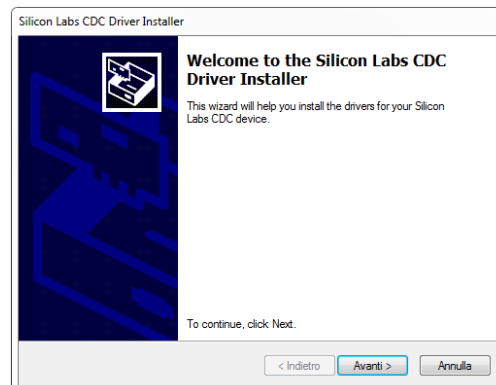
Connect the USB-Dongle in any PC USB port.

Before connecting to the USB-Dongle with SMA connector make sure the antenna is connected or the device could be permanently damaged.

2. INSTALL SILABS COM DRIVERS

➢ Before starting install the USB Silabs drivers.

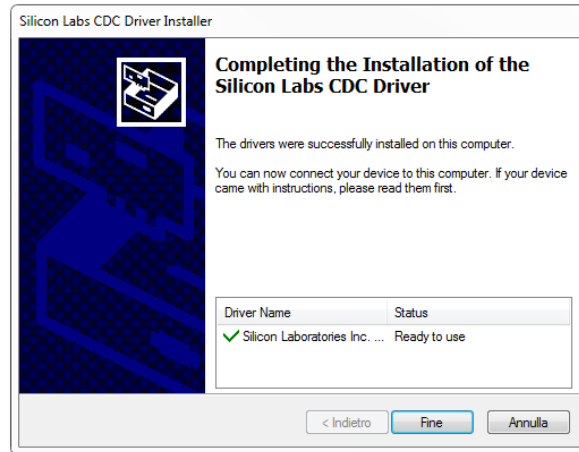| Nome	Ultima modifica	Tipo	Dimensione
dpinst	05/04/2016 16:14	Documento XML	11 KB
Silabs_License_Agreement	05/04/2016 16:15	Text file	7 KB
silabs-cdc	05/04/2016 12:38	Catalogo sicurezza	9 KB
SiLabs-CDC	05/04/2016 12:34	Informazioni di in...	4 KB
SiLabs-CDCInstaller_x64	05/04/2016 16:15	Applicazione	673 KB
SiLabs-CDCInstaller_x86	05/04/2016 16:15	Applicazione	550 KB

➢ Choose **SiLabs-CDCInstaller_x64** if your operating system is 64 bit.
➢ Choose **SiLabs-CDCInstaller_x86** if your operating system is 32 bit.
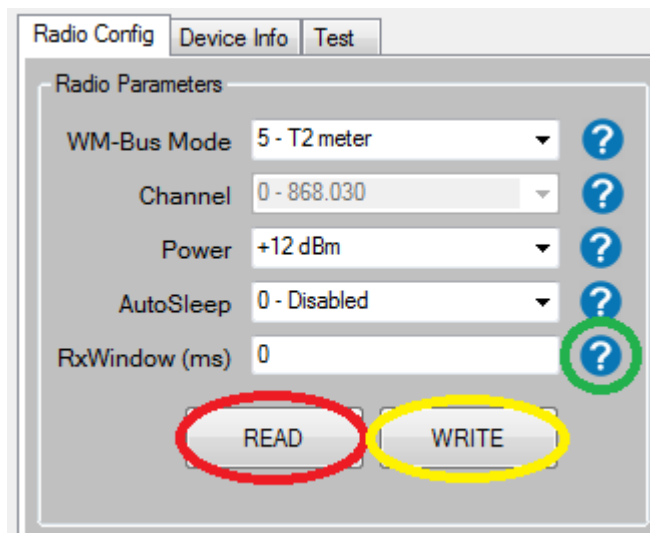

➢ Click on **NEXT**.

➢ Check the box "I accept the agreement" the click on **NEXT**.

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RF WIRELESS

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> ➢ If the drivers have been installed correctly, the **"Ready to use"** status is displayed.

3. GRAPHIC USER INTERFACE – COMMAND STRUCTURE

The GUI allows the configuration of the WM-Bus module parameters, according to the 32001324 module datasheet.
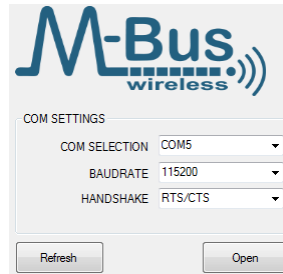

> ➢ Click on **READ** button to read the current parameters of the module.

> ➢ Change the parameters of the module, then click the **WRITE** button to store the new configuration.

> ➢ To get an help description, click on the question mark icon near the desidered field.

4. GRAPHIC USER INTERFACE

➢ Open the GUI by clicking on the icon.

GUI_32001388

➢ Select the COM port through "COM SELECTION" tab.

➢ Set "BAUDRATE" to **115200** baud and "HANDSHAKE" to **RTS/CTS**

➢ Click on **"Open"** button. The tabs on the window on the right side become active.

M-Bus wireless

COM SETTINGS

COM SELECTION	COM5
BAUDRATE	115200
HANDSHAKE	RTS/CTS

Refresh   Open

➢ If the module is connected correctly, the module configuration parameters are displayed, the "WRITE" button is also activated and the parameters can be modified (for details o each parameter, refer to the datasheet of the 32001324 module):

- o Radio Parameters:
    - ▪ WM-Bus Mode: selects the WM-Bus mode
    - ▪ Channel: selects the channel (if the mode is channelized)
    - ▪ Power: selects the RF transmission power (between 0 and +13 dBm)
    - ▪ Autosleep: enable/disable autosleep function
        - • Warning: if autosleep is enable the module won't wake up from remote. You must connect NSS to GND.
    - ▪ RxWindow: sets the reception window after a transmission (applicable only if AutoSleep is enabled)

- o WM-Bus Parameters (HEX):
    - ▪ C Field: command field default 44
    - ▪ Man ID: manifacturer id default 0000
    - ▪ Device ID: default 00000000
    - ▪ Version: default 00
    - ▪ Device Type: default 00

- o Module Parameters:
    - ▪ Block1_From_Module: refer to 32001324 datasheet
    - ▪ RSSI_Enable: enables or disables the RSSI indication of the received radio frame.
    - ▪ Data Indicate TIMEOUT: This parameter rapresent the time between DATA_INDICATE pin goes LOW and the start of UART trasmission.
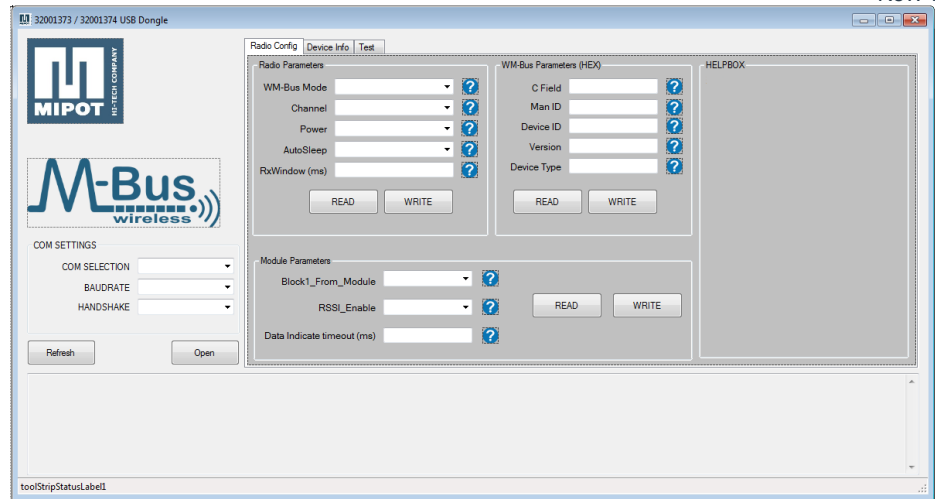
Mipot S.p.A. reserve the right to modify the specifications without notice   Cormòns, April, 02, 2019
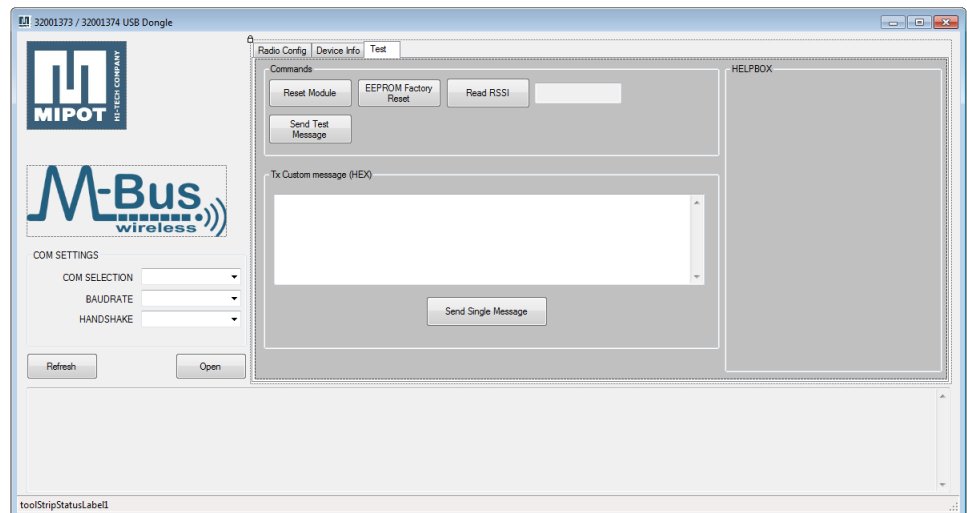
➢ By clicking on **"Device Info"** tab, the following screen is displayed:
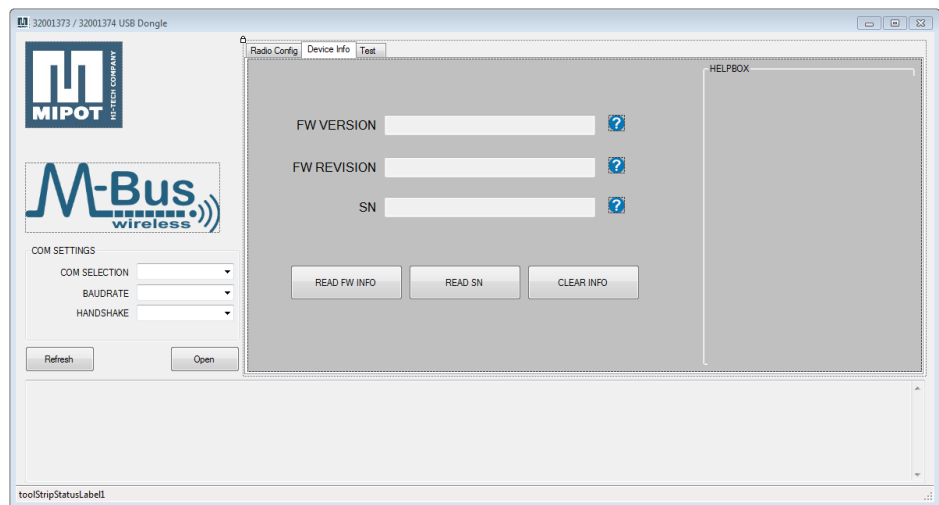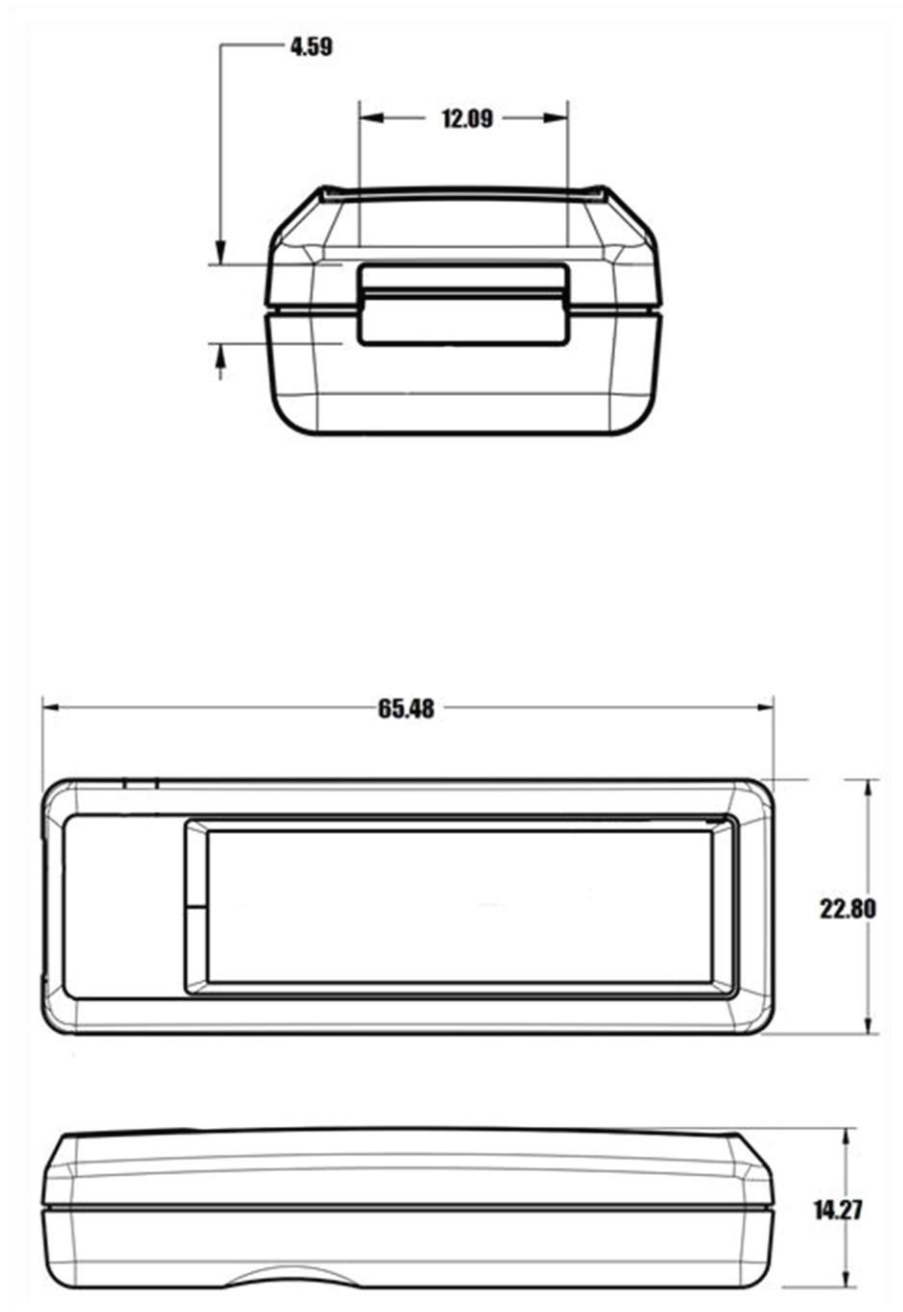

Clicking on the buttons returns informations about the USB-Dongle firmware and serialization.

➢ Accessing the **"Test"** tab the following screen is displayed:

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- o "Reset Module" button: resets the 32001324 module

- o "EEPROM Factory Reset" button: resets the factory default on the 32001324 module

- o "Read RSSI" button: gives the RSSI value of the last received frame

- o "Send Test Message" button: sends a test message via radio

- o "Send Custom Message" button in the "TX Custom Message (HEX)" window: It transmits via radio the text entered in the white box. The text must be in hexadecimal format and have the length specified in the description.

➢ In the following picture a received frame has been captured:

5. MECHANICAL DIMENSIONS

All mechanical dimensions are expressed in [mm].

Please refer to 32001324 WM-Bus module datasheet for more informations about commands, radio parameters and electrical characteristics.

1. REVISION HISTORY

10 APRIL 2019	Rev.1.0

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