

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.





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.	Тур.	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.

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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.

Silicon Labs CDC Driver Installe	ir .
	Welcome to the Silicon Labs CDC Driver Installer This wizard will help you install the drivers for your Silicon Labs CDC device.
	< Indietro Avanti > Annulla

Click on NEXT.



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> Check the box "I accept the agreement" the click on NEXT.

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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.

Radio Config Device	Info Test		
- Radio Parameters -			
WM-Bus Mode	5 - T2 meter	•	?
Channel	0 - 868.030	Ŧ	•
Power	+12 dBm	•	?
AutoSleep	0 - Disabled	•	2
RxWindow (ms)	0		\bigcirc
	READ		

> 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.

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4. GRAPHIC USER INTERFACE

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Open the GUI by clicking on the icon.



- \geq Select the COM port through "COM SELECTION" tab.
- Set "BAUDRATE" to 115200 baud and "HANDSHAKE" to RTS/CTS
- \triangleright Click on "Open" button. The tabs on the window on the right side become active.

COM SETTINGS	00115
COM SELECTION	COM5 -
BAUDRATE	115200 -
HANDSHAKE	RTS/CTS -
Refrach	Open
nonoan	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):

- Radio Parameters: 0
 - 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)
- WM-Bus Parameters (HEX): 0
 - . C Field: command field default 44
 - . Man ID: manifacturer iddefault 0000
 - Device ID: default 00000000 • default 00
 - . Version:
 - Device Type: default 00
- Module Parameters: \cap
 - 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.

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t de la constante de	Radio Parameters	WM-Bus Parameters (HEX)	HELPBOX	
8	WM-Bus Mode	CEield	2	
	Channel	▼ Man ID	2	
	Power	- Device ID	2	
	AutoSleep	Version	2	
	BrWindow (ms)	Device Type	2	
M-Bus				
	READ WR	ITE READ WRITE		
wireless	<i>·</i> //			
COM SETTINGS				
COM SELECTION	Module Parameters	2001		
BAUDRATE	 Block1_From_Module 	- 22		
HANDSHAKE	 RSSI_Enable 	- READ WRITE		
	5.1 F			
Refresh	Data Indicate timeout (ms)	M.		

> By clicking on **"Device Info"** tab, the following screen is displayed:

L CONPARY	C Radio Config Device Info Test		HELPBOX
МІРОТ	FW VERSION	2	
	FW REVISION	2	
	SN	2	
COM SETTINGS COM SELECTION BAUDRATE HANDSHAKE	READ FW INFO	READ SN CLEAR INFO	
Refresh Open			

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

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

Read Cartig Dovce Ho Text Commands Fleet Module Fleet Mod	HELPBOX
COM SETTINGS COM SETTINGS BAUDRATE HANDSHAKE COM SELECTION BAUDRATE COM SELECTION BAUDRATE COM SELECTION COM SELEC	•
Refrech Open	

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 \circ "Reset Module" button: resets the 32001324 module

- "EEPROM Factory Reset" button: resets the factory default on the 32001324 module
- \circ $\ \ \,$ "Read RSSI" button: gives the RSSI value of the last received frame
- \circ $\ \ \,$ "Send Test Message" button: sends a test message via radio
- "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:

k l	Radio Config Device Info Test		
A AMO	Radio Parameters	WM-Bus Parameters (HEX)	HELPBOX
	WM-Bus Mode 4 - T1 meter 🔹 😯	C Field 44 🕜	WM-Bus Rx_Window:
IPOT	Channel 0 - 868.030 👻 🥝	Man ID 0000 🥝	At the end of transmission, module is set in reception for the time set throught the Rx_Window parameter.
	Power +12 dBm 🔹 🕜	Device ID 00000000 ?	If the module is set only in transmission it's recommended to set this parameter to 0.
	AutoSleep 0 - Disabled -	Version 00	Default value:0
	RxWindow (ms) 0	Device Type 00	Please refer to 32001324 WM-Bus module Datasheet
VLDUS wireless	READ WRITE	READ WRITE	
SETTINGS	Made Description		
COM SELECTION COM5	Di La r Maria O-Disabled	0	
BAUDRATE 115200	Block I_From_Module		
HANDSHAKE RTS/CTS	RSSI_Enable 0 - Disabled -	READ WRITE	
	Data Indicate timeout (ms) 5	?	
Refresh Close			
TE/TINE:01/04/2019 10:44,47; 56464484090100001815077AA900 3A06008A006000E5	00000C1301010000046D0D2F7F230F150C	.0990900099409099409009099999999999	00000000000000000000000000000000000000

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5. MECHANICAL DIMENSIONS



All mechanical dimensions are expressed in [mm].





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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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