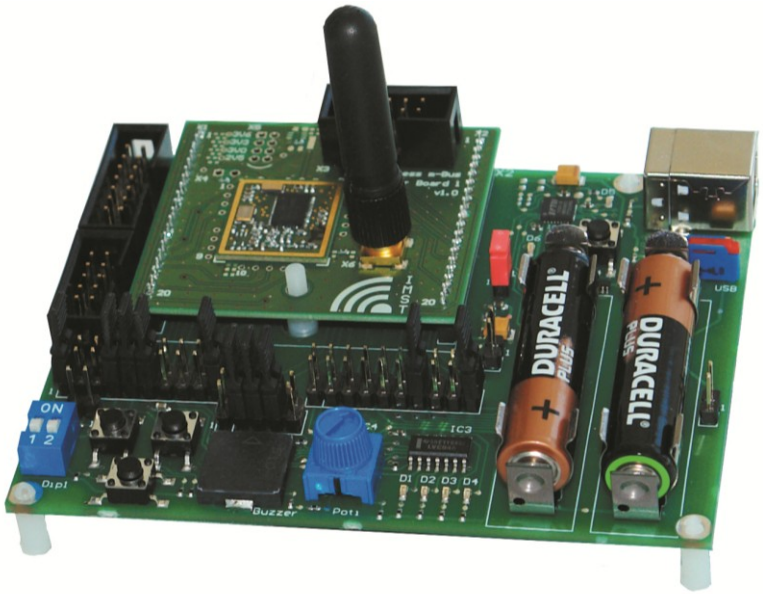
Wireless M-Bus Starter-Kit

Quick Start Guide



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1 Introduction

The Wireless M-Bus Starter Kit is a plug & play solution to explore features and capabilities of the iM871A Wireless M-Bus radio module. This document describes how to get the Starter-Kit SK-iM871A running.

1.1 Content of this Kit

Hardware:

- 2x WiMOD Demo Boards
- 2x module specific adapter boards with soldered radio modules
- 2x external antennas
- 2x male A/B USB cables
- 4x AAA type batteries
- Installation CD containing software and documentation

Software and Documentation:

To run the Starter Kit, a PC with Windows XP (or newer) and at least one USB port are necessary.

Nr	File	Comment
1	\tools\setup.exe	Installation file for the Wireless M-Bus Studio PC software
2	\drivers\CDM20814_Setup.exe	USB PC driver
3	iM871A_StarterKit_QuickStartGuide.pdf	This document
4	\documentation\iM871A_Datasheet.pdf	iM871A Datasheet
5	\documentation\iM871A_WMBus_UserManual.pdf	Wireless M-Bus User Manual for iM871A
6	\documentation\WMBus_StudioManual.pdf	Wireless M-Bus Studio Documentation
7	\documentation\DemoBoard_UserGuide.pdf	User guide for the WiMOD Demo Board
8	\documentation\WMBus_HCI_Spec.pdf	Host Controller Interface Specification
9	\documentation\WMBus_HCIDLL_Spec.pdf	Host Controller Interface Library Specification
10	\documentation\SK-iM871A_Tutorial.ppsx	Starter Kit Tutorial
11	\documentation\iM871A_AN007_Sensitivity_Measurements.pdf	Application Note Sensitivity Measurements
12	\documentation\iM871A_AN008_SK_Current_Measurements.pdf	Application Note Current Measurements
13	\firmware\iM871A_WMBus_FW.hex	Binary firmware file

Visit www.wireless-solutions.de to get the latest information about our products, software and documentation.

2 Getting Started

2.1 Software Setup

The Wireless M-Bus Studio can be used for configuration of the preprogrammed radio modules and allows a simple radio link evaluation as well as Wireless M-Bus packet sniffing.

Setup of the PC

First copy the complete content of the enclosed installation CD to a local folder on your PC. Then install the hardware driver for the USB chip on your PC. Either take it from the local folder (*<local folder>\drivers\CDM20814_Setup.exe*) or get it from the USB chip manufacturer's web site.[1]

Wireless M-Bus Studio

Start installing the Wireless M-Bus Studio by double clicking the executable "setup.exe[2]". The Installation Wizard is started and the Wireless M-Bus Studio tool will be installed on the PC.

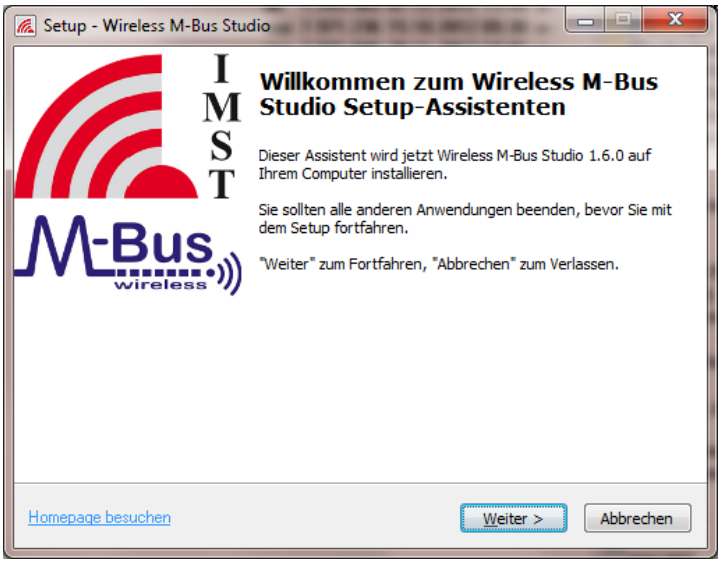

Figure 1: Wireless M-Bus Studio Installation Wizard

Now the required software is ready to be used. For a detailed description of the included applications and its features please refer to the Wireless M-Bus Studio Documentation.

[1] http://www.ftdichip.com/Drivers/VCP.htm.

[2] If the WiMOD Studio does not start it might be possible that the Windows OS on the host PC needs the Microsoft Visual C++ 2008 Redistributable Package (x86). Download this package from the Microsoft link above.

2.2 Hardware Setup

Setup of the Demo Boards

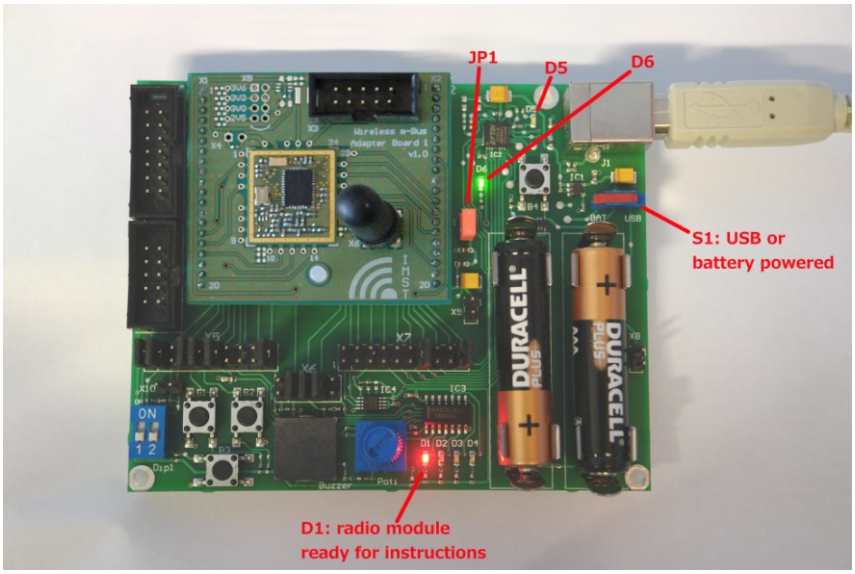

Figure 2: Wireless M-Bus module iM871A and Demo Board

- Plug the adapter boards with the soldered radio module on the Demo Boards.
- Mount the antennas on the boards.
- Make sure that the supply voltage jumpers JP1 are set on both boards
- Verify that the jumper configuration is equal to the default jumper setup:

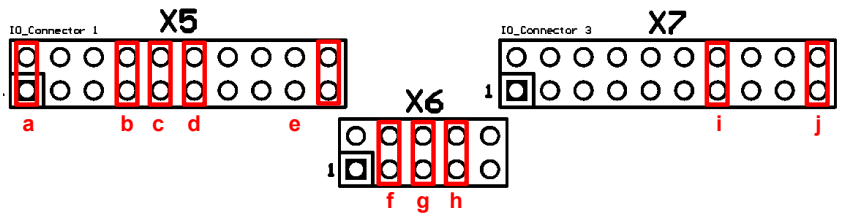

Figure 2-3: Default jumper set-up

Connect the Demo Board with an USB cable to your PC and switch S1 into position "USB". If successful, the power LED (D6) and the USB LED (D5) are turned on. After the Demo Board is detected by your PC as a new hardware please follow the given instructions to install the new virtual COM port.

The red LED (D1) indicates that the radio module is awake and ready to receive instructions from the Wireless M-Bus Studio.

3 Wireless M-Bus Studio

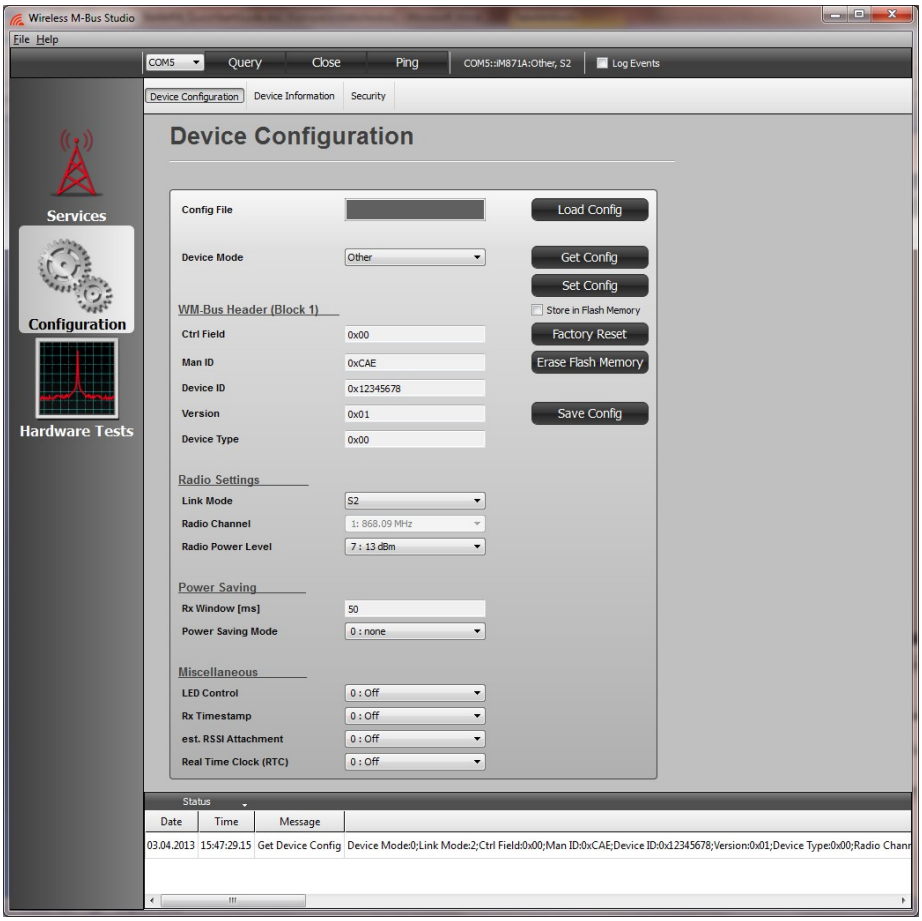

Figure 3-1: Wireless M-Bus Studio

1. Open the Wireless M-Bus Studio tool to configure the radio module
2. Press *Query* button to get an updated list of COM ports
3. Select the used COM port from the COM port list
4. Press *Open* to connect to the Demo Board
5. Repeat step 1-4 for the second board (a new instance of the Wireless M-Bus Studio is needed)
6. Be sure to choose a reasonable parameter combination to establish a Wireless M-Bus communication: Device Mode, Link Mode, Channel, if applicable (=> Get Config)
7. For a visual feedback the LED control can be enabled at both devices
8. Open the *Message Generator* (Services => Message Generator) at the local device to initiate sending example packets to the peer device

4 Important Notice

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