

# ZigBee Home Monitoring Gateway



---

## User Guide

---

# Table of Contents

---

<b>CHAPTER 1 INTRODUCTION .....</b>	<b>1</b>
<b>Package Contents .....</b>	<b>1</b>
<b>Specification.....</b>	<b>1</b>
<b>LEDs.....</b>	<b>2</b>
<b>CHAPTER 2 INITIAL INSTALLATION .....</b>	<b>5</b>
<b>Requirements.....</b>	<b>5</b>
<b>Procedure.....</b>	<b>5</b>
<b>CHAPTER 3 BOARD DESCRIPTION .....</b>	<b>6</b>
<b>Components and connectors .....</b>	<b>6</b>
<b>CHAPTER 4 .....</b>	<b>10</b>
<b>FCC STATEMENT .....</b>	<b>10</b>
<b>FCC STATEMENT.....</b>	<b>10</b>

Copyright © 2012. All Rights Reserved.

Document Version: 1.0

All trademarks and trade names are the properties of their respective owners.

## Chapter 1



# Introduction

*This Chapter provides an overview of the ZigBee Home Monitoring Gateway's features and capabilities.*

Congratulations on the purchase of your new ZigBee Home Monitoring Gateway. The ZigBee Home Monitoring Gateway is a consumer electronic device, which is used for home monitoring and security.

## Package Contents

The following items should be included:

- The ZigBee Home Monitoring Gateway Unit
- Power Adapter

If any of the above items are damaged or missing, please contact your dealer immediately.

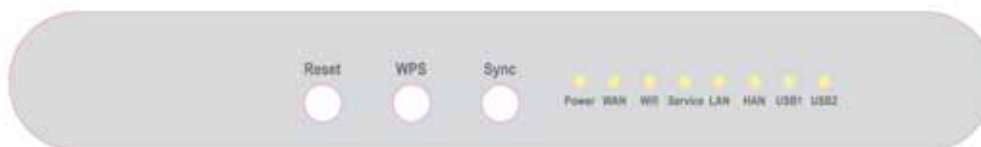
## Specification

- DDR2 SDRAM 64MB
- NAND 32MB Flash
- Four Ethernet ports with RJ45 connectors.
- Front Panel LEDs
- Zigbee module
- Two USB 2.0 ports
- Sync button
- WPS button
- Reset button
- Power In connector
- Two Internal antennae

## LEDs

### Front-mounted LEDs

The ZigBee Home Monitoring Gateway has 8 LEDs.

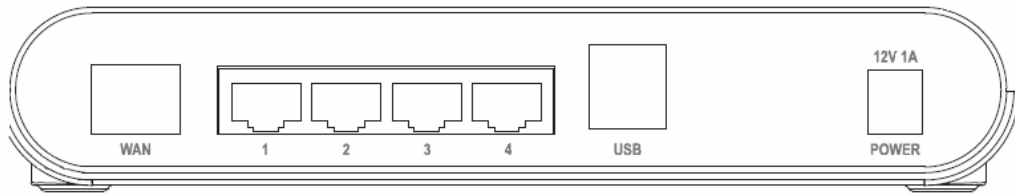


<b>Reset</b>	<p>This button has two (2) functions:</p> <ul style="list-style-type: none"><li>• <b>Reboot.</b> When pressed and released, the ZigBee Home Monitoring Gateway will reboot (restart).</li><li>• <b>Clear All Data.</b> This button can also be used to clear ALL data and restore ALL settings to the factory default values.</li></ul> <p>To Clear All Data and restore the factory default values:</p> <ol style="list-style-type: none"><li>1. Power On.</li><li>2. Keep holding the Reset Button down for 8 seconds.</li></ol> <p>Release the Reset Button. The ZigBee Home Monitoring Gateway is now using the factory default values.</p>
<b>WPS button</b>	<p>Push the WPS button on the device and on your other wireless device to perform WPS function that easily creates an encryption-secured wireless connection automatically.</p>
<b>Sync Button</b>	<p>Push this button to synchronize for portal server or ZigBee clients.</p>
<b>POWER (Green)</b>	<ul style="list-style-type: none"><li>• <b>On</b> - Power On</li><li>• <b>Off</b> - Power Off</li><li>• <b>Flashing</b> - Reboot or Firmware upgrade.</li></ul>
<b>WAN (Green)</b>	<ul style="list-style-type: none"><li>• <b>On</b> - Connection to the Gateway attached to the WAN (Internet) port is established.</li><li>• <b>Off</b> - No connection to the Gateway.</li><li>• <b>Flashing</b> - Data is being transmitted or received via the connection.</li></ul>
<b>WiFi &amp; WPS</b>	<p><b>WiFi</b></p> <ul style="list-style-type: none"><li>• <b>On (Green)</b> - Wireless connection available</li><li>• <b>Off (Green)</b> - No Wireless connection available.</li><li>• <b>Flashing (Green)</b> - Data is being transmitted or received via the Wireless connection.</li></ul>

	<p><b>WPS</b></p> <ul style="list-style-type: none"> <li>• <b>On (Amber)</b> - Problem occurred while trying to enable the WPS function.</li> <li>• <b>On (Green)</b> - WPS function is enabled.</li> <li>• <b>Flashing</b> - Data is being transmitted or received via the connection.</li> </ul>
<b>Service</b>	<ul style="list-style-type: none"> <li>• <b>On (Green)</b>- Open for Sensor Binding (Add)</li> <li>• <b>Off</b> - System is in ready mode, no sensor is needed to be bined (added.)</li> <li>• <b>Flashing</b> - Sensor is binding (adding)</li> </ul>
<b>LAN (Green)</b>	<ul style="list-style-type: none"> <li>• <b>On (Green)</b>- LAN connection established.</li> <li>• <b>Off</b> - No active connection on the corresponding LAN port.</li> <li>• <b>Flashing</b> - Data is being transmitted or received via the corresponding LAN (hub) port.</li> </ul>
<b>HAN</b>	<ul style="list-style-type: none"> <li>• <b>On</b> - Zwave//ZigBee function enabled.</li> <li>• <b>Off</b> - Zwave/ZigBee function disabled</li> <li>• <b>Flashing</b> - Data is being transmitted or received via the connection.</li> </ul>
<b>USB (1~2)</b>	<ul style="list-style-type: none"> <li>• <b>On (Green)</b>- USB connection established.</li> <li>• <b>Off</b> - No active connection on the corresponding USB port.</li> <li>• <b>Flashing</b> - Data is being transmitted or received via the corresponding USB port.</li> </ul>

---

## Rear Panel



<b>WAN port (10/100BaseT)</b>	Connect the DSL or Cable Modem here. If your modem came with a cable, use the supplied cable. Otherwise, use a standard LAN cable.
<b>LAN (1~4) Port</b>	Use standard LAN cables (RJ45 connectors) to connect your PCs to these ports.
<b>USB (1~2) Port</b>	The two connectors are USB hosts with support for mass storage devices.
<b>Power Port</b>	Connect the supplied power adapter here.

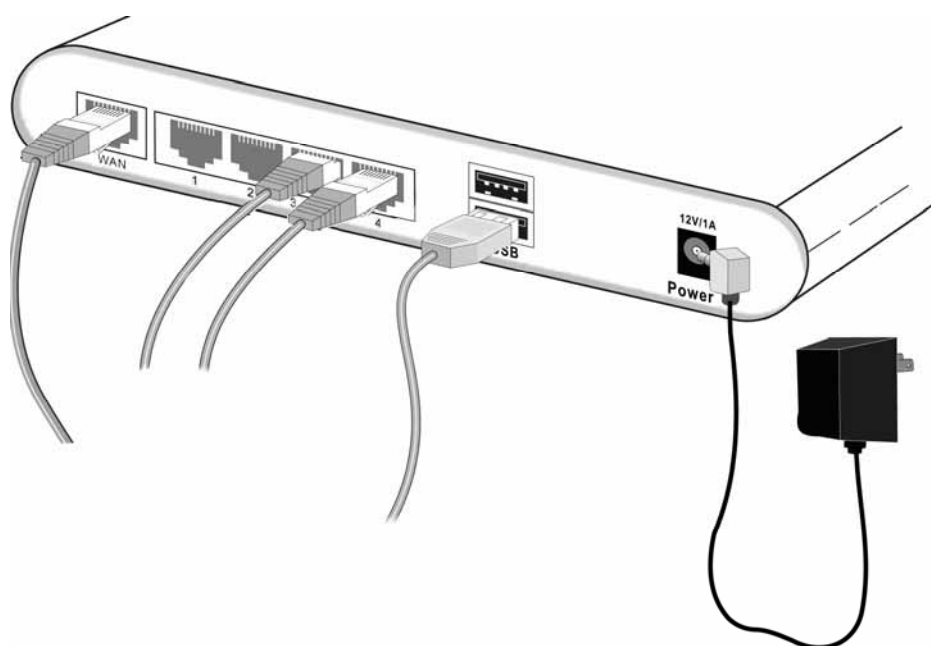
# Initial Installation

*This Chapter covers the software installation of the ZigBee Home Monitoring Gateway.*

## Requirements

- Network cables. Use standard 10/100BaseT network (UTP) cables with RJ45 connectors.

## Procedure



### 1. Choose an Installation Site

Select a suitable place to install the ZigBee Home Monitoring Gateway.

### 2. Connect LAN Cables

Use standard LAN cables to connect devices to the Ethernet ports on the ZigBee Home Monitoring Gateway.

### 4. Power Up

Connect the supplied power adapter to the ZigBee Home Monitoring Gateway. Use only the power adapter provided. Using a different one may cause hardware damage.

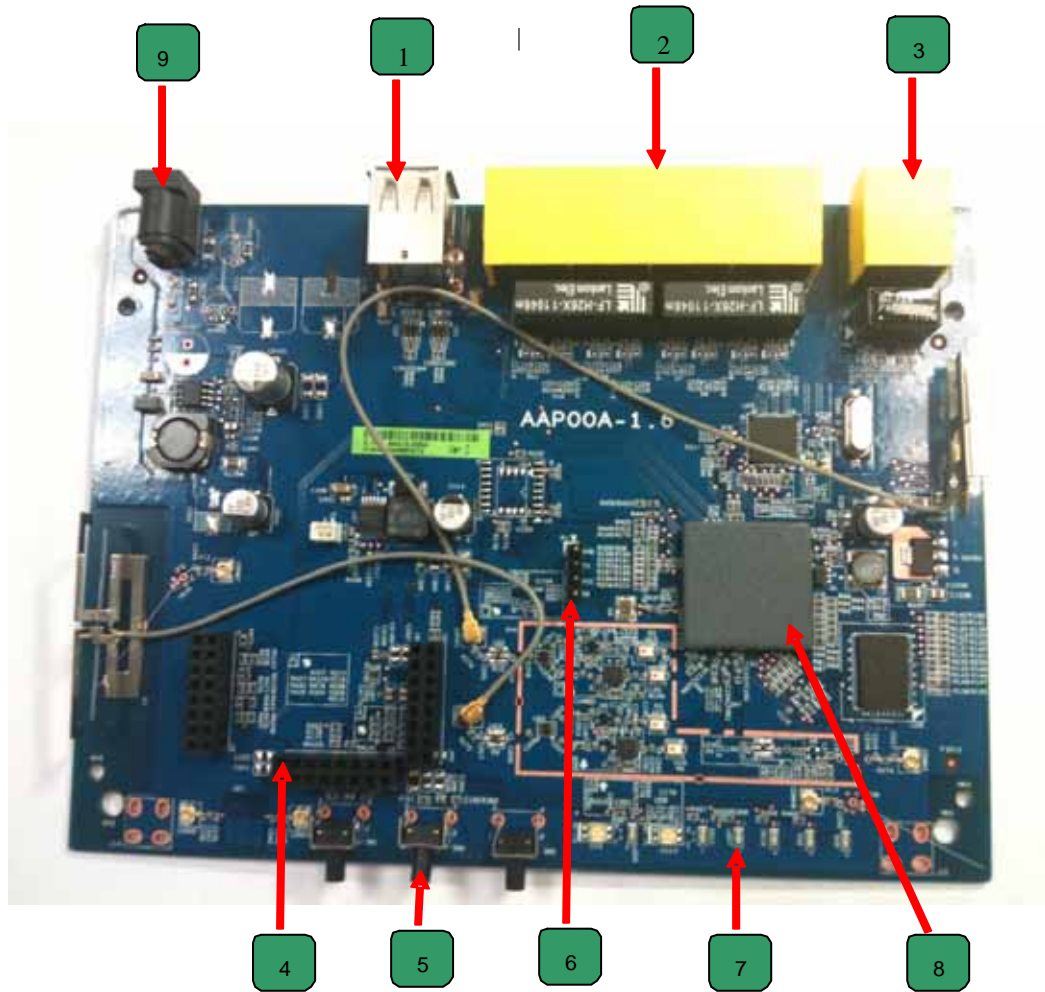
### 5. Check the LEDs

- The *POWER* LED should be ON.
- The *LAN* LED should be ON (provided the PC is also ON.)

# Board Description

*This Chapter provides board description for the ZigBee Home Monitoring Gateway.*

## Components and connectors





- 
- 1. USB type A connector
  - 2. LAN port
  - 3. WAN port
  - 4. Expansion slot connectors
  - 5. Push buttons.
  - 6. Console port
  - 7. LEDs
  - 8. RT3662 processor
  - 9. DC power jack

## Console port connection guide

For platform debugging, please locate the console cable accompanied with the development kit. Then follow the steps illustrated below:

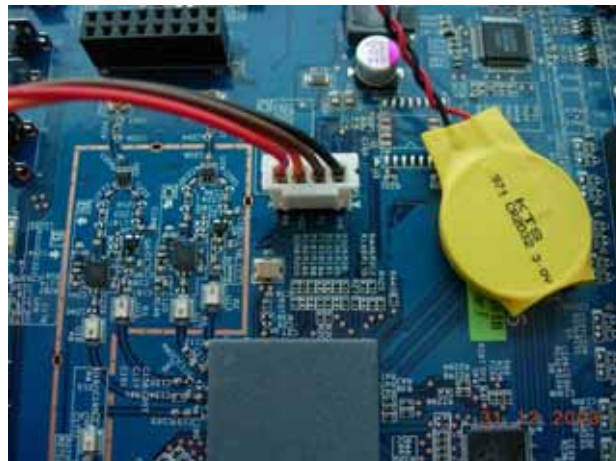


Platform debugging cable

### Pin definition



1. Connect cable to console port



2. Execute minicom on Linux host machine

```

root@localhost:~# minicom
Welcome to minicom 2.2

OPTIONS: i18n
Compiled on Mar  9 2007, 07:21:38
Port /dev/ttyS0

Press CTRL-A Z for help on special keys

```

3. Press Ctrl+A then Z to enter minicom configuration

```

root@localhost:~# minicom
Welcome to
-----
Minicom Command Summary
-----
Commands can be called by CTRL-A <key>

Main Functions                                Other Functions
-----
Dialing directory..D  run script (Go)....G  Clear Screen.....C
Send files.....S      Receive files.....R  cOnfigure Minicom..O
Comm Parameters....P  Add linefeed.....A  Suspend minicom...J
Capture on/off....L  Hangup.....H        eXit and reset....X
send break.....F      initialize Modem...M  Quit with no reset.Q
Terminal settings..T  run Kermit.....K     Cursor key mode...I
linewrap on/off...W  local Echo on/off..E  Help screen.....Z
Paste file.....Y      scroll Back.....B

Select function or press Enter for more.

Written by Miquel van Smoorenburg 1991-1995
Some additions by Jukka Lahtinen 1997-2000
i18n by Arnaldo Carvalho de Melo 1998
-----

```

4. Set Comm port to baud rate 57600, 8 data bits, no parity bits, and one stop bit.

```

File Edit View Terminal Help
Welcome to minicom 2.3

OPTI+-----[Comm Parameters]-----+
Comp| A - Serial De|
Port| B - Lockfile Loc| Current: 57600 8N1
| C - Callin Pro| Speed          Parity   Data
| D - Callout Pro| A: <next>      L: None   S: 5
| E - Bps/Par/B| B: <prev>      M: Even   T: 6
| F - Hardware Flo| C: 9600        N: Odd    U: 7
| G - Software Flo| D: 38400       O: Mark   V: 8
|               | E: 115200     P: Space
Change which
+-----+
| Screen a| W: 1          Q: 8-N-1
| Save set| X: 2          R: 7-E-1
| Save set|
| Exit    |
+-----+
Choice, or <Enter> to exit?

```

# FCC STATEMENT

---

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

### FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.