

**METROLOGIC INSTRUMENTS, INC.**

## **Zigbee Module with Mesh Network**

**Model No.: ZIG100ND  
FCC ID:LW5ZIG100ND  
IC:3114A-ZIG100ND**

### **Communication User Guide**

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# 1. Introduction

This document describes how to communicate with Metrologic ZigBee kits which have been designed to provide a low cost, low power IEEE802.15.4 wireless mesh networking solution.

## 2. Command conventions

To simplify the communication with Metrologic ZigBee kit, a Reg-style set is used.

Each command with 80 bytes size must be preceded by the <**ST**> prefix, then **CMD\_TY** and **Form Data**, the end by <**ET**> suffix. Any command not following this pattern is either not accepted by the module or will cause a timeout in response.

# 3. Register Map

## Registers List and Default Values

RO = read-only; R/W = programmable; - = undefined

Address	Description	Data Access	Default (hex)
0	<b>Firmware Version Major</b>	RO	0x00
1	<b>Firmware Version Minor</b>	RO	0x00
2	<b>Hardware Version Major</b>	RO	0x00
3	<b>Hardware Version Minor</b>	RO	0x00
4	<b>Power Level</b> 0x00 – Low 0x01 – Middle		0x00
5	<b>Class ID Major</b>	RW	0x00
6	<b>Class ID Minor</b>	RW	0x00
7	<b>Operating Mode</b> 0x00 – Short Sleep Mode 0x01 – Long Sleep Mode	RW	0x00
8	<b>Property</b> Bit 0:Background 0 – Black 1 – Gray Bit1~3:Color Bit Count 000 – 1 bit 001 – 8 bits 010 – 16 bits 100 – 24 bits		0x00
9 ~ 40			0x00
41~63	Reserved		0x00
64 ~ 255			0x00

### **Integrators Responsibility**

- 1) The Zigbee Module has a limited module approval and should not be changed without recertification.
- 2) The MPE calculations need to be checked based on the location of the unit with reference to the user. See applicable FCC/IC guidelines governing MPE and SAR testing.
- 3) The end product needs to include “ This product contains FCC ID LW5ZIG100ND/ IC:3114A-ZIG100ND
- 4) All applicable FCC/IC warnings need to be in the end users manual.

### **FCC and IC Statement**

#### **FCC Regulatory Information:**

NOTE: 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 instruction, 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 and correct the interference by one or more of the following measures:

- a) reorient or relocate the receiving antenna,
- b) increase the separation between the equipment and receiver,
- c) 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.

#### **IC Regulatory Information:**

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

**WARNING:** Changes or modifications to this receiver not expressly approved by Cooper Wiring Devices could void the user's authority to operate this equipment.

**FCC & IC RF Radiation Exposure Statement for both module and OEM integrator:**

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC & IC 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.

**IC statements:**

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.