Door/Window Sensor (2nd Edition)

(Z-Wave Door/Window Sensor (2nd Edition))

Document No:						
Version:	1					
Description:	The purpose of this document is to provide guidelines for the user and application developer of Aeon Labs Z-Wave Door/Window Sensor (2nd Edition).					
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Reviewed Date:		2013-06-26	2013-6-28			
Restrictions:	Partners Only					
approved by:						
Date:						

REVISION RECORD

Revision	Date	BY	Brief description of changes
1	6/7/2013		Initial draft.

Aeon Labs Door/Window Sensor (2nd Edition)
Engineering Specifications and Advanced Functions for Developers
(V1.17)

The Aeon Labs Door/Window Sensor (2nd Edition) is a binary sensor device based on Z-wave routing slave library V4.54.02

1. Library and Command Classes:

1.1 SDK:4.54.02

1.2 Library:

- Basic Device Class: BASIC_TYPE_ROUTING_SLAVE
- Generic Device class: GENERIC_TYPE_SENSOR_BINARY
- Specific Device Class: SPECIFIC_TYPE_ROUTING_SENSOR_BINARY

1.3 Commands:

- COMMAND_CLASS_SENSOR_BINARY_V1,
- COMMAND_CLASS_BATTERY_V1,
- COMMAND_CLASS_WAKE_UP_V2,
- COMMAND_CLASS_ALARM_V1,
- COMMAND_CLASS_CONFIGURATION_V1,
- COMMAND_CLASS_ASSOCIATION_V1,
- COMMAND_CLASS_VERSION_V1,
- COMMAND_CLASS_MANUFACTURER_SPECIFIC_V2

2. Technical Specifications

Operating distance: Up to 100 ft/ 30 meters indoors and 300 ft/100 meters outdoors .

3. Familiarize yourself with your Door/Window Sensor

3.1Interface

4. Function description

4.1 Event and Response

Event	Response
Z-wave Button clicked	Enter the learning mode and send the frame of the Node info The Wake Up Notification command will be sent The device will be woken up for 8 seconds
Z-wave Button held	Held 20 seconds, then d/w sensor will be reset
Tamper switch held	The Alarm report is sent
Tamper switch released	The Alarm report is sent
Magnet switch opened/closed	The Sensor Binary Report is sent（configurable） The Battery report is sent（configurable） The Basic Set Command is sent（configurable）
Triple-click the tamper switch	Enter/Exit the wake up 10 minutes state
Power on	Wake up the device for 10 minutes（configurable）

The user can configure whether the Door/Window Sensor sends the following commands whose destination nodes are all associated nodes. If the Door/Window Sensor has no associated nodes, these commands will not be sent.
The Commands include: Basic set command, Alarm report, Sensor Binary Report, Battery report.
Refer to the table below with respect to the priority of the Destination nodes of Wake Up Notification.

Destination node	Priority
The nodes configured by the Wake up Interval set command	Supreme
The SIS or SUC Node	High
The first Associated Node	Middle
Broadcast	Low

4.2 the LED's state

Status	The LED's state
Wake up	After removed from the network: the LED will Blinks After included into the network: the LED is ON
Sleeping	The LED is OFF

4.2 Wake up time

- The Door/Window Sensor will keep waking up for 8 seconds after sending the wake up notification command.
- The Door/Window Sensor will keep waking up for 8 seconds in order to wait for the next command after receiving a command.
- Triple click the tamper switch and the Door/Window Sensor will enter/exit the state of the waking up for 10 minutes
- The Door/Window Sensor will be woken up for 10 minutes when the power on.(configurable)

- There are 3 ways to exit the Wake up 10 minutes state:
  1. Triple click the tamper switch, and the Door/Window Sensor will sleep immediately if the Door/Window Sensor is in the state of waking up for 10 minutes.
  2. Receive the “Wake up no more information CC” command , sleep right now;
  3. Received the other command except “Wake up no more information CC” , the Water Sensor will wake up 8 seconds and then go to sleep.

5. Special Usage instructions of the command

5.1 Association Command Class

The Door/Window Sensor supports an Association group: group 1.
If the Door/Window Sensor has been included into a SIS or SUC z-wave network, it will be associated to SIS or SUC automatically.

5.2 Alarm Command Class

The Door/Window Sensor(2nd Edition) only supports two Alarm Commands:
ALARM_GET_V2 and ALARM_TYPE_SUPPORTED_GET_V2.

5.3 Configuration Set Command Class

7	6	5	4	3	2	1	0
Command Class = COMMAND_CLASS_CONFIGURATION							
Command = CONFIGURATION_SET							
Parameter Number							
Default	Reserved				Size		
Configuration Value 1(MSB)							
Configuration Value 2							
……							
Configuration Value n(LSB)							

Parameter Number Definitions (8 bit):

Parameter Number	Description	Default Value	Size
1	Toggle the sensor binary report value when the Magnet switch is opened/closed. (Parameter Value=00, Open: FF, Close: 00; Parameter Value=01, Open: 00, Close: FF)	0	1
2	Enable wake up 10 minutes when the power is switched on. (00: Disable; 01: Enable).	0	1
3	Toggle the basic set value when Magnet switch is opened/closed. (Parameter Value=00, Open: FF, Close: 00 Parameter Value=01, Open: 00, Close: FF;)	0	1
121	Determines which report will be sent when Magnet switch is opened/ closed.	0x00000100	4

	(refer to the table of Parameter 121 for details)		
254	Device Tag	0	2
255	Reset configuration settings to factory defaults	--	--

Parameter 121:

	7	6	5	4	3	2	1	0
Configuration Value 1(MSB)	Reserved							
Configuration Value 2	Reserved							
Configuration Value 3	Reserved							Basic Set
Configuration Value 4(LSB)	Reserved	Reserved	Reserved	Sensor Binary	Reserved	Reserved	Reserved	Battery

- Reserved
  Reserved bits or bytes must be set to zero.
- Basic Set (1 bit)
- The Basic set flag signals which the Door/Window Sensor sends(1) or does not send (0) the Basic Set Command when the Magnet switch is opened/closed .
- Battery (1 bit)
- The Battery flag signals that the Door/Window Sensor sends (1) or doesn't send (0) the battery Report when the Magnet switch is opened/close.
- Sensor Binary (1 bit)
- The Sensor Binary flag signals which the Door/Window Sensor sends (1) or does not send (0) the Sensor Binary Report when the Magnet switch is opened/closed.