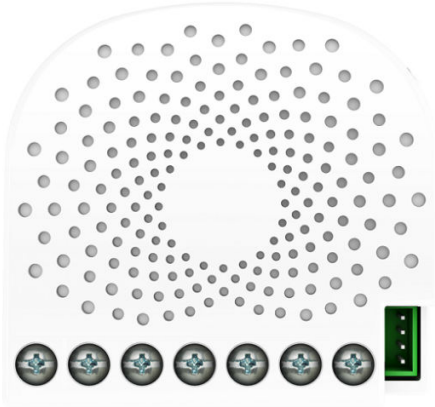
Aeon Labs Dual Nano Switch

(Z-Wave Dual Nano Switch)



Change history

Revision	Date	Change Description
1	7/25/2016	Initial draft.
2	9/08/2016	Update
3	10/11/2016	Update
4	12/01/2016	Update
5	12/17/2016	Update
6	02/27/2017	Update the output specification.
7	06/02/2017	Update
8	08/23/2017	Update
9	3/19/2018	Update

Aeon Labs Dual Nano Switch
Engineering Specifications and Advanced Functions for Developers

Aeon Labs Dual Nano Switch is a Z-Wave power binary switch device based on Z-Wave enhanced 232 slave library V6.51.10.
You can use it to control your home light or bulbs on/off and get the immediate consumption or kWh energy usage over a period of time.
It can connect to 2 external manual switches to control the load ON/OFF independently. Its surface has a pin socket, which can be used for connecting to the touch panel, so you can also use the touch panel to control the Dual Nano Switch.
It can also be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.
It is a security Z-Wave plus device, so a security enabled controller is needed for take full advantage of all functionally for the Nano Switch. It also supports the Over The Air (OTA) feature for the product's firmware upgrade.
As soon as Dual Nano Switch is removed from a Z-Wave network it will be restored into default factory setting.

1. Library and Command Classes

1.1 SDK: 6.51.10

1.2 Library

- Basic Device Class: BASIC_TYPE_ROUTING_SLAVE
- Generic Device class: GENERIC_TYPE_SWITCH_BINARY
- Specific Device Class: SPECIFIC_TYPE_POWER_SWITCH_BINARY

1.3 Commands Class

	Non-Secure included	Secure included
Node Info Frame	COMMAND_CLASS_ZWAVEPLUS_INFO V2 COMMAND_CLASS_BASIC V1 COMMAND_CLASS_SWITCH_ALL V1 COMMAND_CLASS_METER_V3, COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3 COMMAND_CLASS_SWITCH_BINARY, COMMAND_CLASS_CLOCK V1 COMMAND_CLASS_NOTIFICATION_V4, COMMAND_CLASS_MULTI_CHANNEL_V4, COMMAND_CLASS_SCENE_ACTUATOR_CONF V1 COMMAND_CLASS_SCENE_ACTIVATION V1 COMMAND_CLASS_CONFIGURATION V1 COMMAND_CLASS_ASSOCIATION_GRP_INFO V1 COMMAND_CLASS_ASSOCIATION V2 COMMAND_CLASS_MANUFACTURER_SPECIFIC V2 COMMAND_CLASS_VERSION V2 COMMAND_CLASS_FIRMWARE_UPDATE_MD V3	COMMAND_CLASS_ZWAVEPLUS_INFO V2 COMMAND_CLASS_SECURITY V1 COMMAND_CLASS_DEVICE_RESET_LOCALLY V1 COMMAND_CLASS_MARK V1 COMMAND_CLASS_HAIL V1

	COMMAND_CLASS_POWERLEVEL V1 COMMAND_CLASS_DEVICE_RESET_LOCALLY V1 COMMAND_CLASS_MARK V1 COMMAND_CLASS_HAIL V1	
Security Command Supported Report Frame	-	COMMAND_CLASS_BASIC V1 COMMAND_CLASS_SWITCH_ALL V1 COMMAND_CLASS_METER_V3, COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION_V3, COMMAND_CLASS_SWITCH_BINARY, COMMAND_CLASS_CLOCK V1 COMMAND_CLASS_NOTIFICATION_V4, COMMAND_CLASS_MULTI_CHANNEL_V4, COMMAND_CLASS_SCENE_ACTUATOR_CONF V1 COMMAND_CLASS_SCENE_ACTIVATION V1 COMMAND_CLASS_CONFIGURATION V1 COMMAND_CLASS_ASSOCIATION_GRP_INFO V1 COMMAND_CLASS_ASSOCIATION V2 COMMAND_CLASS_VERSION V2 COMMAND_CLASS_MANUFACTURER_SPECIFIC V2 COMMAND_CLASS_FIRMWARE_UPDATE_MD V3 COMMAND_CLASS_POWERLEVEL V1 COMMAND_CLASS_HAIL V1

2. Technical specifications

Model number: ZW132.

Operating distance: Up to 492 feet/150 meters outdoors.

Input: 120VAC to 240VAC, 50Hz to 60Hz

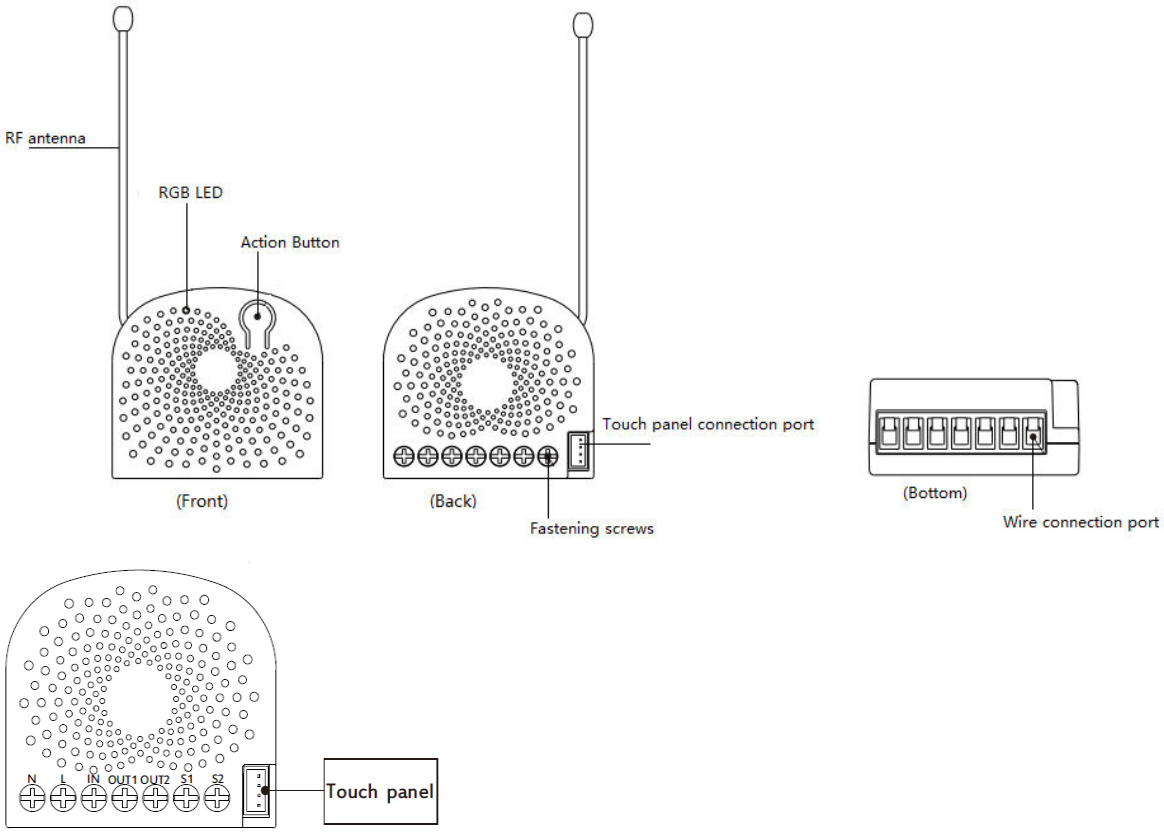
Output: 120VAC to 240VAC, 50Hz to 60Hz, 5A per channel for resistive load. Total current: Max 10A.

Operating temperature: 0℃ to 40℃.

Relative humidity: 8% to 80%.

3. Familiarize yourself with your Dual Nano Switch

3.1 Interface



Notes for the wire connection ports:

N – Power input for neutral
L – Power input for live
IN – Input for load power supply
OUT1 – Output for load 1
OUT2 – Output for load 2
S1 – External switch control for load 1
S2 – External switch control for load 2

4. All functions of each trigger

4.1 Function of Action Button

Button Action	Description
Click one time	1. Send out a Node info without Security CC in command class list (*Non-security inclusion*). 2. Add Dual Nano Switch into a Z-Wave network: 1. Power on your Dual Nano Switch, the RGB LED will be colorful gradient status.

	2. Let the primary controller into inclusion mode (If you don't know how to do this, refer to its manual). 3. Press the Action button. 4. If the inclusion is successful, the LED will be solid. Otherwise, the LED will remain colorful gradient status, in which you need to repeat the process from step 2. **3. Remove Dual Nano Switch from a Z-Wave network:** 1. Power on your Dual Nano Switch, the RGB LED will be solid. 2. Let the primary controller into remove mode (If you don't know how to do this, refer to its manual). 3. Press the Action button. 4. If the remove is successful, the LED will blink slowly and then be colorful gradient status. If the LED still is solid, please repeat the process from step 2.
Quick press 2 times	**1. Send out a Node info that contains Security CC in the command class list** (*Security inclusion*). **2. Add Dual Nano Switch into a secure Z-Wave network:** 1. Power on your Dual Nano Switch, the RGB LED will be colorful gradient status. 2. Let the secure primary controller into inclusion mode (If you don't know how to do this, refer to its manual). 3. Quick press the Action button 2 times. 4. If the inclusion is successful, the LED will be solid. Otherwise, the LED will remain colorful gradient status, in which you need to repeat the process from step 2. **3. Remove Dual Nano Switch from a Z-Wave network:** 1. Power on your Dual Nano Switch, the LED will be solid. 2. Let the primary controller into remove mode (If you don't know how to do this, refer to its manual). 3. Press the Action button. 4. If the remove is successful, the LED will be colorful gradient status. If the LED is still solid, please repeat the process from step 2.
Quick press 4 times	**Activate the automatic identification mode for external switch S1.** The blue LED will fast blink to indicate the Dual Nano Switch is in this mode. *Note:* When the Dual Nano Switch enters this mode, toggle the external switch S1 once and wait 2 seconds for the Dual Nano Switch to detect the external switch type of S1.
Quick press 6 times	**Activate the automatic identification mode for external switch S2.** The green LED will fast blink to indicate the Dual Nano Switch is in this mode.

	Note: When the Dual Nano Switch enters this mode, toggle the external switch S2 once and wait 2 seconds for the Dual Nano Switch to detect the external switch type of S2.
Press and hold 20 seconds	**Reset Dual Nano Switch to factory default:** 1. Make sure the Dual Nano Switch has been powered on. 2. Press and hold the Action Button for 20 seconds. 3. The green LED will be on for 2 seconds and then remain colorful gradient status, which indicates the reset is successful, otherwise please repeat from step 2. **Note:** 1. This procedure should only be used when the primary controller is missing or inoperable. 2. Reset the Dual Nano Switch to factory default will exclude the Dual Nano Switch from Z-Wave network, clear the Association settings, Scene configuration settings and restore the Configuration settings to the default.

4.2 RGB LED indication when Dual Nano Switch is in Energy Mode

RGB	RGB indication	Status
RGB LED	Green	Output load is in small wattage range. US version, the range of load current is (0A, 7.5A] AU/EU version, the range of load current is (0A, 5A]
	Yellow	Output load is in big wattage range. US version, the range of load wattage is (7.5A, 13.5A] AU/EU version, the range of load wattage is (5A, 9A]
	Red	Output load is in warning wattage range. US version, the range of load wattage is (13.5A, 15.5A] AU/EU version, the range of load wattage is (9A, 10.5A]

4.3 RGB LED indication when Dual Nano Switch is in RF Power Level Test Mode

RGB	RGB indication	Status
RGB LED	Blue LED fast blink	Enter into the wireless power level test mode
	Green LED is switched to ON state for 2 seconds	wireless power level is good
	Yellow LED is switched to ON state for 2 seconds	wireless power level is acceptable but latency can occur

	Red LED is switched to ON st ate for 2 seconds	wireless power level is insufficient

5. Special rule of each command

5.1 Z-Wave Plus Info Report Command Class

Parameter	Value
Z-Wave Plus Version	1
Role Type	5 (ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_SLAVE_ALWAYS_ON)
Node Type	0 (ZWAVEPLUS_INFO_REPORT_NODE_TYPE_ZWAVEPLUS_NODE)
Installer Icon Type	0x0700 (ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH)
User Icon Type	0x0700 (ICON_TYPE_GENERIC_ON_OFF_POWER_SWITCH)

5.2 Basic Command Class

Basic Set = 0x01 to 0x63 or 0xFF, turn ON output load.

Basic Set = 0x00, turn OFF output load.

Basic Set = 0xFF maps to Binary Switch Set = 0xFF,

Basic Set = 0x00 maps to Binary Switch Set = 0x00,

Basic Get/Report maps to Binary Switch Get/Report.

5.3 Association Command Class

Dual Nano Switch supports 4 association groups and Max 5 nodes for every group.

Association Group	Nodes	Send Mode	Send commands
Group 1	[1,5]	Single Cast	When the state of Dual Nano Switch (turn on/off the load) is changed: 1. Set Configuration parameter 80 to 0: Reserved (Default). 2. Set Configuration parameter 80 to 1: Send Hail CC. 3. Set Configuration parameter 80 to 2: Send the Basic Report. 4. Set Configuration parameter 80 to 3: Send the Basic Report when using the manual switch to change the load state.
Group 2	[1,5]	Single Cast	Forward the Basic Set, Switch All, Scene Activation Set to associated nodes in Group 2 when the Dual Nano Switch receives the Basic Set, Switch All, Scene Activation Set commands from main controller. (E.g. Send/forward Basic Set to control the other nodes in association Group 2)

Group 3	[1,5]	Single Cast	Send Basic Set (enabled by Configuration parameter 0x51) to the associated nodes in Group 3 when the external switch S1 is operated. *Note:* The Switch Mode of external switch S1 should be identified successfully, which means that the value of Configuration parameter 0x78 should be non-zero, then the Basic Set can be sent to the associated nodes in Group 3 via triggering the S1 switch.
Group 4	[1,5]	Single Cast	Send Basic Set (enabled by Configuration parameter 0x52) to the associated nodes in Group 4 when the external switch S2 is operated. *Note:* The Switch Mode of external switch S2 should be identified successfully, which means that the value of Configuration parameter 0x79 should be non-zero, then the Basic Set can be sent to the associated nodes in Group 3 via triggering the S2 switch.

5.4 Association Group Info Command Class

5.4.1 Association Group Info Report

Group 1: 01 01 00 00 01 00 00 00

Group 2: 01 02 00 00 00 00 00 00

Group 3: 01 03 00 20 01 00 00 00

Group 4: 01 04 00 20 02 00 00 00

5.4.2 Association Group Command List Report

Group 1: 20 03 82 01 5A 01 71 05 32 02

COMMAND_CLASS_BASIC	BASIC_REPORT	20 03
COMMAND_CLASS_HAIL	HAIL	82 01
COMMAND_CLASS_DEVICE_RESET_LOCALLY	DEVICE_RESET_LOCALLY_NOTIFICATION	5A 01
COMMAND_CLASS_NOTIFICATION_V4	NOTIFICATION_REPORT_V4	71 05
COMMAND_CLASS_METER_V3	METER_REPORT_V3	32 02

Group 2: 20 01 27 04 27 05 2B 01

COMMAND_CLASS_BASIC	BASIC_SET	20 01
COMMAND_CLASS_SWITCH_ALL	SWITCH_ALL_ON	27 04
COMMAND_CLASS_SWITCH_ALL	SWITCH_ALL_OFF	27 05
COMMAND_CLASS_SCENE_ACTIVATION	SCENE_ACTIVATION_SET	2B 01

Group 3: 20 01

COMMAND_CLASS_BASIC	BASIC_SET	20 01

Group 4: 20 01

COMMAND_CLASS_BASIC	BASIC_SET	20 01

5.4.3 Association Group Name Report

Group 1: Lifeline (01 08 4C 69 66 65 6C 69 6E 65)

Group 2: Retransmit (02 0A 52 65 74 72 61 6E 73 6D 69 74)

Group 3: Control: Key1 (03 0C 43 6F 6E 74 72 6F 6C 3A 4B 65 79 31)

Group 4: Control: Key2 (04 0C 43 6F 6E 74 72 6F 6C 3A 4B 65 79 32)

5.5 Scene Actuator Conf Command Class

The Dual Nano Switch supports max 255 Scene IDs.

The Scene Actuator Conf Set command is effective, when only Level>=0 and Level<0x64 or Level=0xff, otherwise, it will be ignored.

The Scene Actuator Configuration Get Command is used to request the settings for a given scene, if scene ID is not setting, it will be ignored. If Scene ID =0, then the Dual Nano Switch will report currently the activated scene settings. If the currently activated scene settings do not exist, the Dual Nano Switch will reports Level = currently load status and Dimming Duration=0

5.6 Scene Activation Set Command Class

The Scene Activation Set Command is effective, when only Level>=0 and Level<0x64 or Level=0xff, otherwise, it will be ignored. If the requested Scene ID is not configured, it will be ignored too.

5.7 Manufacturer Specific Report

Parameter	Value
Manufacturer ID 1	US/EU/AU=0x00 CN=0x01
Manufacturer ID 2	US/EU/AU=0x86 CN=0x6A
Product Type ID 1	EU=0x00, US=0x01, AU=0x02 CN=0x1D (29)
Product Type ID 2	0x03
Product ID 1	0x00
Product ID 2	0x84 (132)

5.8 Notification Command Class

Notification Type		Notification Events	
Power Management	0x08	Over-current detected	0x06
Heat Alarm	0x04	Overheat detected	0x02

5.9 Multichannel Command Class

It supports 2 Multi Channel Endpoints that have the same Device Type.

Generic Device Class: 10 - GENERIC_TYPE_SWITCH_BINARY

Specific Device Class: 01 - SPECIFIC_TYPE_POWER_SWITCH_BINARY

1. Multi Channel endpoint 1 capability:

5E - COMMAND_CLASS_ZWAVEPLUS_INFO

59 - COMMAND_CLASS_ASSOCIATION_GRP_INFO

32 - COMMAND_CLASS_METER

25 - COMMAND_CLASS_SWITCH_BINARY

98 - COMMAND_CLASS_SECURITY (If secure included)

The Multi Channel Endpoint 1 can be used to set/get the state of output load 1 and get its power measurements (V, A, kWh, Watt) of metering channel 1.

2. Multi Channel endpoint 2 capability:

5E - COMMAND_CLASS_ZWAVEPLUS_INFO

59 - COMMAND_CLASS_ASSOCIATION_GRP_INFO

32 - COMMAND_CLASS_METER

25 - COMMAND_CLASS_SWITCH_BINARY

98 - COMMAND_CLASS_SECURITY (If secure included)

The Multi Channel Endpoint 2 can be used to set/get the state of output load 2 and get its power measurements (V, A, kWh, Watt) of metering channel 2.

5.10 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 Hex / Decimal	Description	Default Value	Size

0x03 (3)	Over current protection. Output load will be closed after 30 seconds if the current exceeds 10.5A. 0 = Disabled 1 = Enabled	1	1
0x04 (4)	Over heat protection. Output load will be closed after 30 seconds if the temperature inside the product exceeds 100℃. 0 = Disabled 1 = Enabled	0	1
0x14 (20)	Configure the output load status after re-power on. 0 = The last status before the power outage. 1 = Always on 2 = Always off	0	1
0x15 (21)	Enable/disable the IR sensor of WallSwipe. (LSB)Value 1 = 0, disable the IR Sensor. Value 1 = 1, enable the IR Sensor. Value 2 = 0, Wave Option 1 is selected. Value 2 = 1, Wave Option 2 is selected. Value 3 = 0, disable the scene control functionality for Left/Right wave. Value 3 = 1, enable the scene control functionality for Left/Right wave Value 4 = 0, disable the scene control functionality for all wave actions. Value 4 = 1, enable the scene control functionality for all wave actions.	80	4
0x40 (64)	Set the button color of WallSwipe. Value 1= Level 1. Value 2= the color value of Red. Value 3= the color value of Green. Value 4= the color value of Blue.	0x0aFFFFFF	4
0x41 (65)	Set the LED indication color of WallSwipe when the gesture action is UP. Value 1= Reserved.. Value 2= the color value of Red. Value 3= the color value of Green. Value 4= the color value of Blue.	0x32FFFFFF	4

0x42 (66)	Set the LED indication color of WallSwipe when the gesture action is Down. Value 1= Reserved.. Value 2= the color value of Red. Value 3= the color value of Green. Value 4= the color value of Blue.	0x32FFFFFF	4
0x43 (67)	Set the LED indication color of WallSwipe when the gesture action is Left. Value 1= Reserved.. Value 2= the color value of Red. Value 3= the color value of Green. Value 4= the color value of Blue.	0x32FFFFFF	4
0x44 (68)	Set the LED indication color of WallSwipe when the gesture action is Right. Value 1= Reserved.. Value 2= the color value of Red. Value 3= the color value of Green. Value 4= the color value of Blue.	0x32FFFFFF	4
0x45 (69)	Set the LED indication color of WallSwipe when it is in Night light state. Value 1= Reserved.. Value 2= the color value of Red. Value 3= the color value of Green. Value 4= the color value of Blue.	0x0AFF0000	4
0x47 (71)	Set the sensitivity of WallSwipe.	-	-
0x50 (80)	To set which notification would be sent to the associated nodes in association group 1 when the state of output load is changed. 0 = Nothing 1 = Hail CC 2 = Basic Report CC 3 = Hail CC when using the external switch to switch the loads. *Note:* When just only one channel load state is changed, the report message Hail CC or Basic Report CC would be Multi Channel encapsulated.	3	1

0x51 (81)	To set which notification would be sent to the associated nodes in association group 3 when using the external switch 1 to switch the loads. 0 = Send Nothing 1 = Basic Set CC.	1	1
0x52 (82)	To set which notification would be sent to the associated nodes in association group 4 when using the external switch 2 to switch the loads. 0 = Send Nothing 1 = Basic Set CC.	1	1
0x53 (83)	Configure the state of LED when it is in 3 modes below: 0 = Energy mode. The LED will follow the status (on/off). 1 = Momentary indicate mode. When the state of Switch's load changed, the LED will follow the status (on/off) of its load, but the LED will turn off after 5 seconds if there is no any switch action. 2 = Night light mode. The LED will remain ON state.	0	1
0x54 (84)	Set the ON/OFF time of the LED when it is in Night light mode. Value1 = ON (hour) Value2 = ON (minute) Value3 = OFF (hour) Value4 = OFF (minute)	Value1=0x12 Value2=0x00 Value3=0x08 Value4=0x00	4
0x56 (86)	Set the ON time of output load. Value1 = 0, disable or =1, enable. Value2 = ON (day, bit0 - bit6 represent Mon to Sun) Value3 = ON (hour) Value4 = ON (minute)	Value1=0x00 Value2=0x7F Value3=0x12 Value4=0x00	4
0x57 (87)	Set the OFF time of output load. Value1 = 0, disable or =1, enable. Value2 = OFF (day, bit0 - bit6 represent Mon to Sun) Value3 = OFF (hour) Value4 = OFF (minute)	Value1=0x00 Value2=0x7F Value3=0x17 Value4=0x00	4
0x5A (90)	Enable/disable the parameter 91 and 92 below 0 = Disable 1 = Enable	0	1

0x5B (91)	The value here represents minimum change in wattage (in terms of wattage) to induce a Meter Report.	25 (W)	2
0x5C (92)	The value here represents minimum change in wattage percent (in terms of percentage) to induce a Meter Report (available range 1-100).	5 (%)	1
0x64 (100)	Set 101-103 to default.	N/A	1
0x65 (101)	To set which report would be sent in Report group 1 (See flags in table below).	0x00 00 00 00	4
0x66 (102)	To set which report would be sent in Report group 2 (See flags in table below).	0x00 00 00 00	4
0x67 (103)	To set which report would be sent in Report group 3 (See flags in table below).	0x00 00 00 00	4
0x6E (110)	Set 111-113 to default.	N/A	1
0x6F (111)	The time interval of sending Report group 1.	0x00 00 00 0A	4
0x70 (112)	The time interval of sending Report group 2.	0x00 00 02 58	4
0x71 (113)	The time interval of sending Report group 3.	0x00 00 02 58	4
0x78 (120)	Set the external switch mode of S1 0 = Unidentified mode. 1 = 2 state switch mode 2 = 3 way switch mode 3 = push button mode 4 = enter automatic identification mode (The blue Led will fast blink). *Note:* When the switch mode of S1 is determined or identified or configured, this mode value will not be reset after exclusion.	0	1
0x79 (121)	Set the external switch mode of S2 0 = Unidentified mode. 1 = 2 state switch mode 2 = 3 way switch mode 3 = push button mode 4 = enter automatic identification mode (The green Led will fast blink). *Note:* When the switch mode of S2 is determined or identified or configured, this mode value will not be reset after exclusion.	0	1

0x7A (122)	Set the control destination for external switch S1 1 = control the output loads of itself. 2 = control the other nodes. 3 = control the output loads of itself and other nodes.	3	1
0x7B (123)	Set the control destination for external switch S2 1 = control the output loads of itself. 2 = control the other nodes. 3 = control the output loads of itself and other nodes.	3	1
0x90 (144)	Get the connection state of WallSwipe. 0 = disconnected. 1 = connected. Note: this is a Get-only parameter.	-	1
0xF7 (247)	Set the working way for S1/S2 when the Switch mode is 2 state switch mode. Bit 0 =0, S1 is a toggle switch. Bit 0 =1, S1 is an On/Off switch, the out load state and S1 switch state would be in sync when using S1 to control the output load. Bit 1 =0, S2 is a toggle switch. Bit 1 =1, S2 is an On/Off switch, the out load state and S2 switch state would be in sync when using S2 to control the output load. Bit 2- Bit 7, reserved.	0	`1
0xF8 (248)	Set the function of S1/S2. Bit 0 = 0, the function of sending NIF is disabled. Bit 0 = 1, the function of sending NIF is enabled. Bit 1 = 0, the function of entering RF power level test mode is disabled. Bit 1 = 1, the function of entering RF power level test mode is enabled. Bit 2 = 0, the function of factory reset is disabled. Bit 2 = 1, the function of factory reset is enabled. Bit 3- Bit 6 = reserved. Bit 7 = 0, the setting for Bit 0 –Bit 2 are ineffective. Bit 7 = 1, the setting for Bit 0 –Bit 2 are effective.	131	1
0xFB (251)	Enable/disable the factory reset function of Action Button, external switches or WallSwipe. 0 = Disable. 1 = Enable.	1	1

0xFC (252)	Enable/disable the configuration parameters to be locked. 0 = disable. 1 = enable.	0	1
0xFF (255)	1, Value = 0x55555555、Default = 1、Size = 4 Reset to factory default settings and removed from the z-wave network	N/A	4
	2, Value = 0、Default = 1、Size = 1 Reset all configuration parameters to factory default settings	N/A	1

Configuration Values for parameter 101-103:

	7	6	5	4	3	2	1	0
configuration Value 1(MSB)	Reserved							
configuration Value 2	Reserved	Reserved	Reserved	Multi Channel Meter Report (A) on Channel 2	Multi Channel Meter Report (A) on Channel 1	Reserved	Multi Channel Meter Report (V) on Channel 2	Multi Channel Meter Report (V) on Channel 1
configuration Value 3	Reserved	Reserved	Reserved	Multi Channel Meter Report (kWh) on Channel 2	Multi Channel Meter Report (kWh) on Channel 1	Reserved	Multi Channel Meter Report (W) on Channel 2	Multi Channel Meter Report (W) on Channel 1
configuration Value 4(LSB)	Reserved	Reserved	Reserved	Reserved	Meter REPORT (A) of whole Channels	Meter REPORT (V) of whole Channels	Meter REPORT (Watt) of whole Channels	Meter REPORT (kWh) of whole Channels