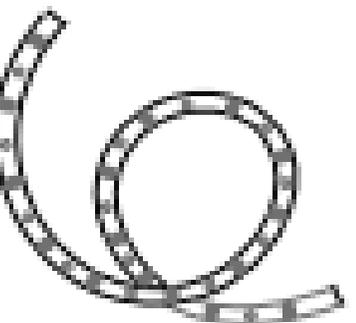


OONI

ColorStrip



1. Ooni by Fantem ColorStrip.

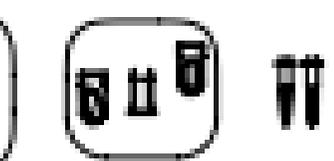
Ooni ColorStrip is a multi-coloured Led Strip which allows control (on/off/dim/color change) via wireless Z-Wave commands.

The ColorStrip can also communicate securely via AES 128 wireless Z-Wave commands and supports Over-The-Air (OTA) firmware upgrades.

2. Familiarise yourself with your ColorStrip.

Package Contents:

1. ColorStrip Controller (x1)
2. 5 meters LED Strip (x1)
3. Back Mount Plate (x1)
4. Power Adapter (x1)
5. Screws (x2)
6. Double-Sided Tape (x1)



ColorStrip Controller



Back Mount Plate



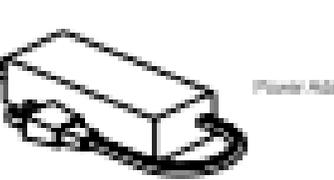
Screws



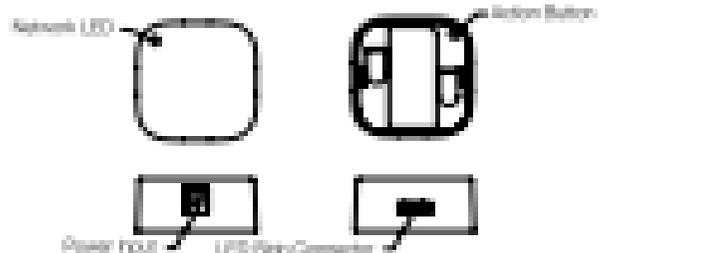
LED Strip



Double-Sided Tape



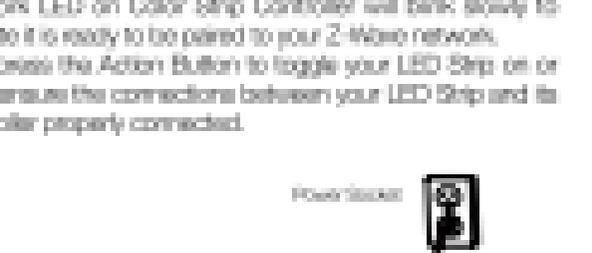
Power Adapter



Install your ColorStrip.

The installation of your ColorStrip has two major steps: the ColorStrip Controller and the LED Strip. LED Strip can be installed inside or outside your home, but the ColorStrip Controller should only be installed inside your home and should not be installed outdoors in elements such as rain and snow.

1. Plug the LED Strip to the Color Strip connector of your Color Strip Controller.
2. Connect the Power Adapter to your Color Strip.
3. Plug the Adapter into an electrical outlet and then the



3. Quick start.

Adding your ColorStrip to a Z-Wave network.

You are now able to manually control the LED Strip directly via pressing your Color Strip' Action Button. It is time to add your Color Strip to your Z-Wave network. To set your Z-Wave gateway/controller into pairing mode, please refer to the respective section within your controller instruction manual.

1. Set your Z-Wave controller into pairing mode.
2. Press the Action Button on the ColorStrip.
3. If the ColorStrip has been successfully added to your Z-Wave network, its Network LED will be solid. If the pairing was unsuccessful, the red LED will be on for 2 seconds and then remain a colourful gradient, repeat the instructions above from step 1.

4. Removing your ColorStrip from a Z-Wave network.

Your ColorStrip can be removed from your Z-Wave network at any time. You'll need to use your Z-Wave network's main controller. To set your Z-Wave controller/gateway into removal mode, please refer to the respective section within your Z-Wave controller instruction manual.

1. Set your Z-Wave controller into device removal mode.
2. Press the Action Button on the ColorStrip.

1. If the ColorStrip has been successfully removed from your Z-Wave network, its Network LED will remain colourful gradient. If the removal was unsuccessful, the Network LED will still be solid, repeat the instructions above from step 1.

4. Advanced functions.

Colour Display Cycle Configuration.

Parameter 27 (4 byte) will cycle the colour displayed by ColorStrip into different modes:

	7	6	5	4	3	2	1	0
Value 1 (Mode)	Colour Transition Style		Colour Change Speed Option		Colour Display Cycle			
Value 2	Brightness							
Value 3	Cycle Count							
Value 4 (LED)	Time Base of Color Change Speed		Colour Change Speed Level					

Colour Display Cycle (4 bits)

The Colour Display Cycle field can have the following values corresponding to 4 different modes:

Colour Display Cycle	Description
0	Inactive (keep the current configuration values)
1	Rainbow Mode (red, orange, yellow, green, cyan, blue, violet)
2	Multi Colour Mode (cycles cycle between selected colours)
3	Random Mode
4	Single Colour Mode
5 to 15	Reserved

Colour Transition Style (2 bits)

The following values correspond to 2 different transition styles between colours:

Colour Transition Style	Description
0	Smooth Colour Transition
1	Fade Out/Fade In Transition

Cycle Count (8 bits)

The Cycle Count is used to define the number of repetitions/ cycles displayed by your ColorStrip in Colour Display Cycle before stopping.

Cycle Count	Description
0	Unlimited
1 to 255	Total number of repetitions/cycles before stopping
255	Inactive (keep the current configuration values)

Brightness (8 bits)

Brightness Level	Description
1 to 30	1 = Min level, 30 = Max level
0 or 255	Inactive (keep the current configuration values)

Time Base of Colour Change Speed (2 bits)

This function would be used when the Colour Transition Style is set to Fade Out/In.

Time Base	Description
0	Time base is 1s.
1	Time base is 10ms.
2	Time base is 100ms.

Colour Change Speed Level (5 bits)

This function would be used when the Colour Transition Style is set to Fade Out/In.

Speed Level	Description
0	Constant speed
1 to 30	Acceleration/decelerate speed from the level 1 to 30
31	Inactive (keep the current configuration values)

The table above shows a decimal representation of the settings that can be set on parameter 27.

Parameter 28 (4 byte) can be used to set up to 8 colours to cycle between when ColorStrip is in Multi Colour Mode. Colours transition from Colour Index 1-8.

	7	6	5	4	3	2	1	0
Value 1 (Index)	Index 1		Index 2				Index 3	
Value 2	Index 4		Index 5				Index 6	
Value 3	Index 7		Index 8					
Value 4 (Index)	Index 1		Index 2				Index 3	

Colour Component list

0	1	2	3	4	5	6	7	8
Colour	Red	Orange	Yellow	Green	Cyan	Blue	Black	Random

Example:

If you set the parameter 39 to 305135616 (0x1200000 in hexadecimal), the colour will be changed from Red to Orange and then Orange to yellow circularly (Red-Orange-Yellow).

When your Strip is in Single Colour Mode and the Fade-Out Fade-In transition style, the parameter 38 would be used to set the RGB value.

	7	6	5	4	3	2	1	0
Value 1 (RGB)	Red value							
Value 2	Green value							
Value 3	Blue value							
Value 4 (RGB)	Reserved							

When your Bulb is in Random Mode, the parameter 39 would be used to set the random seed, then your bulb will

automatically generate random colours to be displayed according to the random seed you set.

	7	6	5	4	3	2	1	0
Value 1 (RGB)	Random seed value							
Value 2								
Value 3								
Value 4 (RGB)								

● Enabling Security Encryption.

In order to take full advantage of all functionality the ColorStrip, you may want your ColorStrip is a security device that uses secure/encrypted message to communicate in your Z-Wave network, so a security-enabled controller/gateway is needed.

1. Set your Z-Wave controller into pairing mode.
2. Press the Action Button on ColorStrip Controller 2 times within 1 second.
3. If ColorStrip has been successfully added to your Z-Wave network, its Network LED will be solid when you turn Strip on.

● NFC function of your ColorStrip.

Your ColorStrip has inbuilt a NFC module. In order to take full advantage of the NFC feature, the Core's Touch panel is needed. When you take the Touch panel near to the NFC point of ColorStrip, you will see light purple LED dim on and then off, at the same time, the product information is read out from ColorStrip via NFC communication and then displayed on the Touch panel's screen.

If your ColorStrip is powered, it will send out a Node information frame to start the inclusion/exclusion when the Touch panel touches your ColorStrip. The Touch panel's screen will pop up a notification message to let you know whether the inclusion/exclusion is successful or not. If the Color Strip is included into your Touch panel, you will see the switch ON/OFF/DIM icons displayed on the Touch panel.

● Resetting your ColorStrip.

Removing ColorStrip from the Z-Wave network will set Color Strip to factory default settings.

If at some stage, your primary controller is missing or inoperable, you may wish to reset all of your Color Strip's settings to their factory defaults. To do this, press and hold the Action Button

for 20 seconds and then release it. Your Color Strip will now be reset to its original settings, and the green LED will be solid for 2 seconds and then remain the colourful gradient status as a confirmation.

⑤ Technical Specifications.

Model number: FT121/US9.

Power supply: 24V/3A DC Adapter.

Max operating power: 72W.

Max standby power: 1.2W.

Colour temperature: 2580 to 3710 Kelvin for Warm white, 4745 to 7050 Kelvin for Cool white.

RGB Led: Support multicolour switch, over 16 million colours.

Operating temperature: 0°C to 40°C(32°F to 104°F).

Relative humidity: 0% to 80%.

Operating distance: Up to 400 feet/150 metres outdoors.

⑥ Warranty.

If you are in need of any technical support during or subsequent to your product's warranty, please get in touch with our support team via <http://www.com/support>. The Company you bought this product from has also guaranteed to assist you with any

of your support needs, and you can also contact them for accordingly.

The guarantee made by the company who you purchased the product from includes the transfer of Fastem full warranty to that Company. They've guaranteed that they'll be able to assist you, the Customer, with all technical support and repair needs on our behalf.

Fastem warrants to the original purchaser of Products that for the Warranty Period (as defined below), the Products will be free from material defects in materials and workmanship. The foregoing warranty is subject to the proper installation, operation and maintenance of the Products in accordance with installation instructions and the operating manual supplied to Customer. Warranty claims must be made by Customer in writing within thirty (30) days of the manifestation of a problem. Fastem sole obligation under the foregoing warranty is, at Fastem option, to repair, replace or correct any such defect that was present at the time of delivery, or to remove the Products and to refund the purchase price to Customer.

The "Warranty Period" begins on the date the Products is delivered and continues for 3 years. Customer shall indemnify, defend, and hold Fastem

harmless from all demands, claims, actions, causes of action, proceedings, suits, assessments, losses, damages, liabilities, settlements, judgments, fines, penalties, interest, costs and expenses (including fees and disbursements of counsel) of every kind (a) based upon personal injury or death or injury to property to the extent any of the foregoing is proximately caused either by a defective product (including strict liability in tort) or by the negligent or willful acts or omissions of Customer or its officers, employees, subcontractors or agents, and/or (b) arising from or relating to any actual or alleged infringement or misappropriation of any patent, trademark, mask work, copyright, trade secret or any actual or alleged violation of any other intellectual property rights arising from or in connection with the products, except to the extent that such infringement exists as a result of Fastem manufacturing process.

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1. This device may not cause harmful interference, and 2. This device must accept any interference received, including interference that may cause undesired operation. 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 the 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.

Warning

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

Certifications (regional):

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FCC ID: XBWAFT121

FC CE RoHS RECYCLED

Association information

5.4 Association Command Class

The LEDStripCommand class manages and can add new functions for each group.

Association Group	Feature	Name	Name Comments
Group 1	0	Off	Off
	0.01	Single Color	When the state of LED Strip changes the LED Strip is color per 1. Set Configuration parameter 0 to 1 (Reserved/Default) 1. Set Configuration parameter 0 to 1 (Set Red CC) 1. Set Configuration parameter 0 to 1 (Set Blue Report) Off
Group 2	0	Off	Off
	0.01	Single Color	When the state of LED Strip changes the LED Strip is color per Switch Level Change, Switch Matrix Strip Level Change, Switch Matrix Fan Speed, Switch Fan to activate mode in Group Color and LED Strip, Switch the Base Set, Switch Level Change, Switch Matrix Level Change, Switch Level Change, Switch Matrix Set, Switch Matrix Set commands from the main console.

5.5 Association Group Info Command Class

5.5.1 Association Group Info Report Command Class

Profile: General Info (Profile 0000) Profile: LED(s)

5.5.2 Association Group Info Report Command Class

Group 1: LED(s)

Group 2: Remote

Configuration parameter information

Parameter Number	Description	Default Value	Min	Max
0x01 (0)	The LED Strip state after to power on is On: Arbitrary combination of ColorPlan mode 1 = Complementary combination of ColorPlan white, Green+Green Off: The last state before to power on.	0	0	1
0x02 (0)	Enable/disable send out reports when transition is changed On: Enable Off: Disable	0	0	1
0x03 (0)	Color mode configuration 1 = RGB CC 2 = Base, CC report	0=000000	0	1
0x04 (0)	Change speed value 1: The speed from OFF to ON value 2: The speed from OFF to OFF value 3: Power on of ON value 4: Power on of OFF	0=000000	0	1
0x05 (0)	Color mode configuration when the LED Strip is in Multicolor mode. (See the color table)	0=000000	0	1
0x06 (0)	Enable/disable return on the last brightness level of the LED Strip when using the Color Switch Set/CC to change to color On: Enable Off: Disable	0	0	1

0x07 (0)	Configure the display mode of ColorPlan when On: Arbitrary combination of ColorPlan mode 1 = Complementary combination of ColorPlan white, Green+Green Off: Disable ColorPlan mode 1 = Select ColorPlan mode 2 = Set ColorPlan mode	0	0	1
0x08 (0)	Enable/disable send out reports when transition is changed On: Enable Off: Disable	0	0	1
0x09 (0)	Color mode configuration 1 = RGB CC 2 = Base, CC report	0=000000	0	1
0x0A (0)	Change speed value 1: The speed from OFF to ON value 2: The speed from OFF to OFF value 3: Power on of ON value 4: Power on of OFF	0=000000	0	1
0x0B (0)	Color mode configuration when the LED Strip is in Multicolor mode. (See the color table)	0=000000	0	1

0x0C (0)	Color mode configuration 1 = Rainbow mode 2 = Multicolor mode 3 = Rainbow mode (Red) 4 = Rainbow mode (Green) 5 = Rainbow mode (Blue) Color mode configuration is in the range 0-1000000	0	0	1
0x0D (0)	Enable/disable send out reports when transition is changed On: Enable Off: Disable	0	0	1
0x0E (0)	Color mode configuration 1 = RGB CC 2 = Base, CC report	0=000000	0	1
0x0F (0)	Change speed value 1: The speed from OFF to ON value 2: The speed from OFF to OFF value 3: Power on of ON value 4: Power on of OFF	0=000000	0	1
0x10 (0)	Color mode configuration when the LED Strip is in Multicolor mode. (See the color table)	0=000000	0	1

0x11 (0)	1: Select 00000000, Select 0 1, Select 2 Reset to factory default settings and removed from the device network 0: Value=0, Default=1, Size=1 Read when configuration parameters factory default settings	0x0	0x0	1
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Parameter 0x14 type will send the LED Strip into different modes

Value 1 (0x00)	0	1	2	3	4	5	6	7	8
Color Transition Style	0	1	2	3	4	5	6	7	8
Color Change Speed Level	0	1	2	3	4	5	6	7	8
Cycle Count	0	1	2	3	4	5	6	7	8

Color Display Cycle (0 bits)

The Color Display Cycle field can have the following values corresponding to 3 different modes:

0x0000

Color Display Cycle	Description
0	Factory (keep the current configuration values)
1	Rainbow: Randomly change yellow, green, cyan, blue, color (period)
2	Multi-Color: Randomly cycle between several colors
3	Reserved
4	Single-Color Mode
5 to 255	Reserved

0x0001

Single-color mode: The LED Strip will be color blinking with one color in this mode.
Rainbow mode: The LED Strip has full-color display and will change through a range of colors (Red<=>Green<=>Yellow<=>Cyan<=>Blue<=>Violet<=>Purple).

Multicolor mode: The LED Strip can change between multiple colors according to the color order which is configurable through configuration parameter 06 (write configuration table of parameter 06 before).

Rainbow mode: The built-in color will be displayed randomly.

Color Transition Style (2 bits)

The following values correspond to 3 different transition styles between colors:

Color Style	Description
0	Smooth Color Transition
1	Fast Out Fade In Transition

Brightness (3 bits)

Level	Description
1 to 255	1 = Min level (0 = Max level)
0 or 256	Factory (keep the current configuration values)

Cycle Count (3 bits)

The Cycle Count is used to define the number of repetitions/cycle displayed by your LED Strip in Color Display Cycle before stopping.

Cycle Count	Description
0	Factory
1 to 255	Total number of repetitions/cycle before stopping
256	Factory (keep the current configuration values)

Note: The process of the transition changes the last color is regarded as a cycle.

Color Change

When the LED Strip is in Rainbow mode, the color change from red to pink (Red<=>Orange<=>Yellow<=>Green<=>Cyan<=>Blue<=>Purple<=>Pink) going through the color is regarded as 1 cycle.

Time Base of Color Change Speed (3 bits)

This function is used when the Color Transition Style is set to Fade style.

Time Base	Description
0	Translucent In
1	Translucent Out
2	Translucent Stop

Color Change Speed Level (3 bits)

This function is used when the Color Transition Style is set to Fade style.

Level	Description
0	Current speed
1 to 255	Accelerated/decelerated speed from the level 1 to 255
256	Factory (keep the current configuration values)

Parameter 0x14 type can be used to set the 8 color index when the built-in color code is 0000.

Parameter 0x14 type	7	6	5	4	3	2	1	0
Value 0 (0x00)	Index 1				Index 2			
Value 1	Index 1				Index 2			
Value 2	Index 1				Index 2			
Value 3 (0x03)	Index 1				Index 2			

Color component bit

Bit	1	2	3	4	5	6	7	8
Color	Red	Orange	Yellow	Green	Cyan	Blue	Violet	Pink

The color will be changed from index 1 to index 8 clockwise when your LED Strip is in color mode.

Color mode

For example:

If you set the parameter 0x14 to 00100000 (0x100000) in hexadecimal which means the index is 0 (Red), defines 2nd (Orange) and the index 3rd (Yellow), the color will be changed from

Blue to pink and then violet<=>Green (Red<=>Orange<=>Yellow).

When your Strip is in Single-Color Mode and the state that Factory transition style, the parameter 06 would be used to set the RGB value.

Value 0 (0x00)	7	6	5	4	3	2	1	0
Value 1	Red value							
Value 2	Green value							
Value 3	Blue value							
Value 4 (0x04)	Reserved							

When your Strip is in Multicolor Mode, the parameter 06 would be used to set the random seed.

Your color will be automatically generate random colors when displayed according to the random seed you set.

Value 0 (0x00)	7	6	5	4	3	2	1	0
Value 0 (0x00)	Random seed value							
Value 1	Random seed value							
Value 2 (0x02)	Random seed value							

