dresden elektronik

Smart Light in a Wireless Way

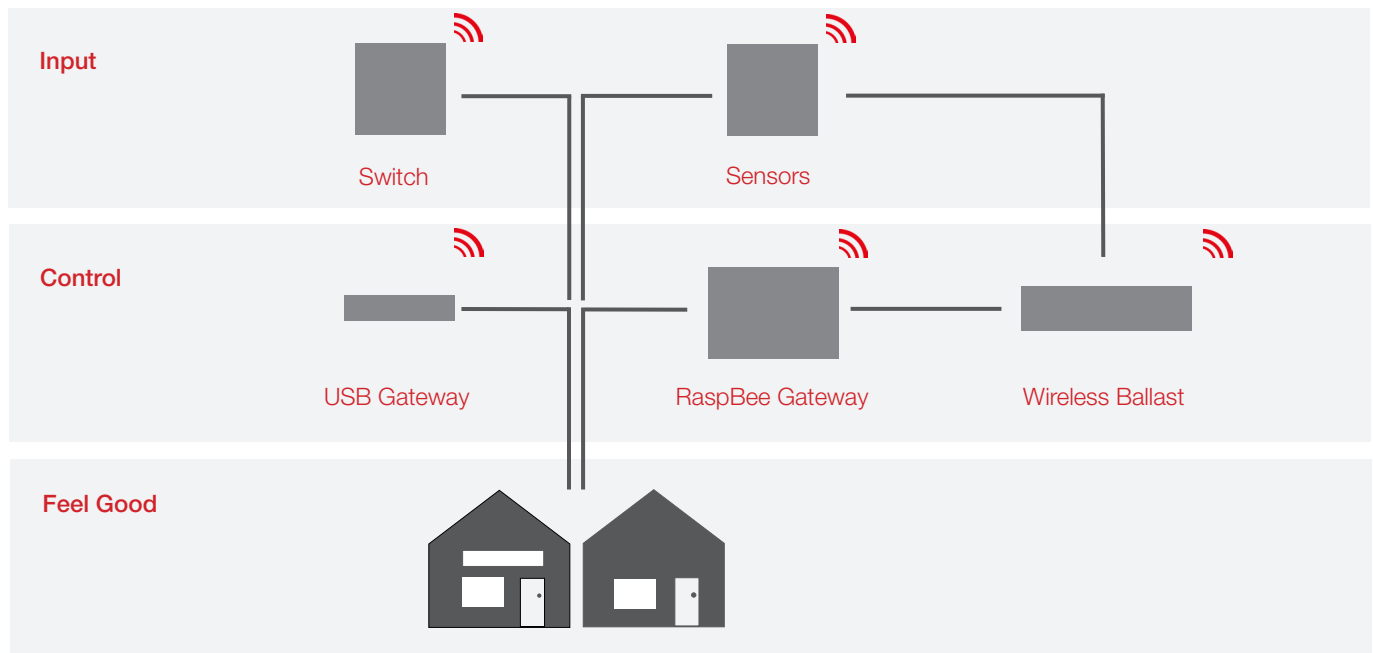# Wireless Light Control with ZigBee
all components from a single source

Product overview

// Gateways
// Wireless Ballasts
// Switches
// Sensors
// LED Stripes
// Kits | Bundles

Wireless Light Control

Create light worlds with ZigBee

With the wireless light solutions from dresden elektronik, individual lighting arrangements can be created simply and easily. The base is the standard ZigBee LightLink. It offers a significantly extended operating functionality for lighting. In addition to simple switching on and off or dimming of the light, special color settings, groupings of lights or scene design are creatable without any problems.
With dresden elektronik you get all necessary components „Made in Germany" from a single source.

Input	Switch	Sensors	
Control	USB Gateway	RaspBee Gateway	Wireless Ballast
Feel Good			

1. Gateways

RaspBee Gateway – Control center of the system

- Combination of RaspBee and Raspberry Pi 3
- 110 x 64 x 30 mm (with housing)
- Components: Raspberry Pi 3, RaspBee premium and MicroSDHC card with software
- Pre-assembled in housing, incl. 1m Ethernet cable and power supply
- 2.4 GHz ZigBee wireless technology
- Operating system completely preconfigured
- Location-dependent and intuitive web-based user interface
- Software updateable online
- Uncomplicated and immediate start-up immediately after the first power-up
- To control the dresden elektronik radio ballasts (FLS) as well as other ZigBee devices such as Philips Hue and OSRAM Lightify
- Not compatible with Philips hue bridge
- Up to 200 devices can be operated

RaspBee – Replacement board for Raspberry Pi with ZigBee firmware

- 48 x 16.5 x 12 mm
- Is based on Atmel's ATmega256RFR2 single-chip microcontroller
- (radio module deRFmega256-23M12)
- Frequency: 2.4 GHz ISM band (worldwide license-free use)
- Chip ceramic antenna
- Range at least 500 m in free-field
- Power Amplifier / Low Noise Amplifier
- With ZigBee firmware, without node limitation, firmware via Bootloader updateable
- Extensive software package for download
- CE, ETSI and FCC compliant

ConBee – Dongle for PC

- USB dongle for space-saving operation on Desktop PCs, Laptops and Raspberry Pi
- 70.7 x 23.0 x 8.3 mm
- Is based on Atmel's ATmega256RFR2 single-chip microcontroller
- (radio module deRFmega256-23M12)
- Frequency: 2.4 GHz ISM band
- Platform-independent, supported operating systems: Windows 7 / 8 / 8.1 / 10, Ubuntu Linux, Raspbian

2. Wireless Ballasts

For every light concept, for every installation, there is the matching ballast. Whether with a smartphone, tablet, PC, radio remote control or switch - with these ballasts you can control luminaires simply and uncomplicatedly. In the ballasts there is a radio module of dresden elektronik, which is equipped with a power amplifier. This also ensures communication via radio (frequency 2.4 GHz) under unfavorable installation conditions.

	FLS-PP lp Power PWM	FLS-A lp / *AE lp 1-10 V Bus/PWM Dim Control	FLS-H lp H-Bridge	Phoscon FLS-CT lp
Dimensions	141 x 30 x 13 mm	200 x 30 x 25 mm	141 x 30 x 13 mm	141 x 30 x 13 mm
Input	12 / 24 V, 6 A max	85-265 VAC / 50/60 Hz	12 / 24 V, 6 A max	12 / 24 V, 6 A max
Output	4 channels PWM 0-100%, 12 / 24 VDC, Total current 6 A max.	Output: 85-265V AC / 8A Control output selectable via switch: 1 or 4 channels, 1-10 V bus or PWM, 0-100% open drain, Each 27 V / 20 mA max.	1 channel (H-bridge), Adjustable white, 12 / 24V, Antiparallel LEDs, Total current 6 A max.	2 channel PWM 6A sum current, Switch-off at limit value exceeded
Standby Energy Consumption	< 0,35 W	< 0,5 W, typ. 0,25 W	< 0,35 W	< 0,35 W
Certification / Usage	Light	Home	Light	Light

FLS-PP lp

ZigBee LightLink certified ballast with power PWM interface for accent lighting with 12/24 V RGB / RGBW LED strip

- RGB color control: stepless regulation of countless color nuances
- Adjustable White: optional usable white channel
- Power supply by constant voltage source
- IP20 | Short circuit, overload and overtemperature protection

FLS-A lp

ZigBee ballast for wireless control of 1-10V or PWM dimmable power supplies for the professional use in halls and large buildings

- Flexible group formation - up to 40 lamps can be controlled together
- Signal- or time-dependent switching, dimming and control
- Suitable for installation in lamps, ceilings, furniture
- IP20 - for indoor operation

FLS-AE lp

ZigBee ballast *with external antenna connectionfor wireless control of 1-10V or PWM-dimmable power supplies for the professional use in halls and large buildings

- Flexible group formation - up to 40 lamps can be controlled together
- Signal- or time-dependent switching, dimming and control
- Suitable for installation in lamps, ceilings, furniture
- IP20 - for indoor operation
- *External antenna connection allows installation in control cabinets or metal housings

FLS-H lp

ZigBee Light Link certified ballast for antiparallel switched LED strips for warm-cold-white effects (two-wire cable 12/24 V)

- For monochromatic lamps
- Power supply by constant voltage source
- IP20 | Short circuit, overload and overtemperature protection)
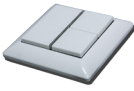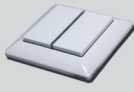
Phoscon FLS-CT lp

ZigBee Light Link certified ballast for for warm white / cold white LED strips

- for LED strips with common anode
- Power supply by constant voltage source
- IP20 | Short circuit, overload and overtemperature protection

3. ZigBee wireless switches for multifunctional operation and control

- Integration into existing frame systems by Gira, Merten, JUNG and Berker
- On / off / dimming of lights
- Save scenes
- Set up groups (search and add a maximum of 20 lights during operation without a gateway)
- Single cell control (brightness, color, saturation)
- 80 x 80 x 13.5 mm
- Frequency: 2.4 GHz
- Rated voltage: DC 3 V
- Battery type: 1 x Lithium CR 2450N (with at least 2 years lifetime)
- Transmission power: max. 10 mW
- IP20 - for indoor operation
- Add lights by touchlink
- Operation also possible without gateway (direct control of a maximum of 20 luminaires)

	Operating concepts	Lighting scenarios
Scene Switch	Control groups and set and save four scenes	up to 4
Lighting Switch	1. two groups respectively on / off / dim 2. a group on / off / dimming and two scenes 3. control a group on / off / dimming and cold white / warm white	up to 2

4. LED Stripes

Matching to our ballasts, we supply you with high quality LED strips for adjustable white systems warm white / cold white and professional RGB LED strips for infinitely adjustable accent lighting:

	Lengths	Type	Power	Brightness	LEDs per / m	Protection class
LED Strip cw|ww	1, 3, 5 m	ww / cw	14.4 W/m	1.000 lm/m	240	IP20
RGB LED Strip	3 m	RGB	7.2 W/m	230 lm/m	30	IP54
RGBW LED Strip	5 m	RGBW	19.2 W/m	800 lm/m	60	IP54

5. Kits | Bundles

The starter kit with gateway, two ballasts of the series FLS-PP lp and other accessories is perfect for the entry into the radio-based lighting control. Ready-to-use solutions for immersion in the worlds of RGB accent lighting and warm-cold-white lighting effects are offered by our bundles.

Starterkit Wireless Light Control	FLS-PP lp Bundle (RGB) Extension Set	FLS-H lp Bundle (cw|ww) Extension Set	Phoscon Color Kit
- 1 x RaspBee Gateway - 2 x ballasts FLS-PP lp - 2 x test LED strips RGB - operating system preconfigured - 1 x power supply with wide range input	- 1 x ballast FLS-PP lp - 1 x RGB LED strip 3 m - 1 x power supply with wide range input	- 1 x ballast FLS-H lp - 1 x LED strip warm / cold white 1,5 m - 1 x power supply with wide range input	- 1 x ballast FLS-PP lp - 1 x 5 m RGBW strip 60 LEDs / m, 19,2 W / m - 1 x 1 m extemsion 1 x power supply with wide range input

Benefits at a glace

// extended operating functionality by ZigBee
// all components from the same manufacturer
// interoperability within the ZigBee world
// easy operation via web interface
// manufacturer support
// Made in Germany

www.dresden-elektronik.de