

The 10 most important questions for frogblue

1. How do the frogs from frogblue work?

Our frogs are installed in the recessed box behind the light switch and work in combination with any standard light switch. The frogs have outputs for switching or dimming lights and inputs for connecting normal light switches. The frogs are simply connected to the AC mains supply and need no cables to connect them to each other. All of the frogs communicate wirelessly via Bluetooth and establish a network for exchanging messages.

Input and output signals from the entire network, including light switches, lamps, blinds, doors etc., can be linked **logically** to each other. We call this a **“virtual cable”**. This all happens wirelessly and is so flexible that it can be adapted to new requirements at any time, even after many years.

With frogblue, light switches can be installed at locations where there isn't even a power connection nearby. This is made possible by purely battery-powered frogs. Assuming 70 operations per day, the battery will last around 10 years. The battery-powered frog can also be used to pass on contact changes from doors or windows, in order to turn on lights, for example, or to trigger alarms.

2. What would be the best way to get started with frogblue?

In a standard terraced house, three dimmers would suffice for the kitchen, dining room, living room at a cost of 139 euros each. Standard light switches from any manufacturer's range can be used. Each dimmer frog can control lights up to 300W and has three inputs for connecting three light switches. These can be configured so that each switch can control the lights in all three rooms alternately, which means you can use the light switch in the living room to switch or dim the lights in the kitchen and dining room too. This would be the small-scale option for around 400 euros, including dimming and multi-way switching.

If another light switch is to be added in the living room, then another frog with three inputs, costing 90 euros, will be required. Further comfort options can be configured by assigning several functions to the light switches. A double click on the switch, for example, can be assigned to centrally switch off everything at once.

3. What can a complete and smart frogblue house do?

With frogblue, everything can be controlled and, most importantly, can be logically linked in the simplest way. If a daylight control switch is integrated in the system and connected to one of the inputs of a frog, then the children's bedroom light can be set to start up with just 30% brightness during the night, for example. If a room door (fitted with a magnetic contact) is opened at night, all the hall lights can be switched on automatically. If someone rings the doorbell at night, it's possible to signal this by flashing the living room lights on and off instead, so that the children aren't woken by the bell.

When you leave the house, you could press one switch to switch off all the lights in the house, close all the blinds and switch the heating to absent mode. If any windows have been left open, this could be signalled by a flashing hall light. An alarm could be set to trigger if a light switch is operated or an interior door is opened during your absence.

frogblue also offers intelligent wall displays, of course, which illustrate the house controls graphically. Alternatively, you can control the system using a tablet or smartphone. And the frogblue system can still also be operated simply via every standard light switch.

4. How can other types of device be linked in to the smart home?

With the frogblue-Link, other products can be easily and securely linked into the frogblue system via USB stick. This works very easily, for example, with the MOBOTIX camera. This can switch on the light via the frogblue-Link if movement is detected, or can start recording if a door is opened.

5. What kind of range does a complete frog system have?

Outdoors, the range is up to 50 m without further forwarding. Indoors, the range depends on the wall construction. In practice, though, the range extends far beyond the normal Bluetooth range, since the signals from each frog are automatically passed on to the target.

6. What about the interference resistance of a frogblue system?

frogblue is wireless but does NOT use radio transmission, because a radio solution is not a digital network. Radio systems soon fail if interference occurs, since a radio channel does not have the redundancy in transmission that modern Bluetooth systems have. Bluetooth, on the other hand, uses a very sophisticated protocol on several channels and is therefore very resistant to interference. Otherwise Bluetooth loudspeakers, for example, would constantly cut out or crackle. This is why radio-based wireless loudspeakers were never able to gain a foothold and only Bluetooth prevailed.

A visit to a trade fair is worthwhile in this respect, since here it quickly becomes apparent that practically nothing works with radio or Wi-Fi. The frogblue Bluetooth system, in contrast, always works without any problems. And this despite hundreds of trade fair visitors and their smartphones all constantly using Bluetooth communication. There's no better test.

7. What about security?

frogblue offers maximum security, since every single message from the frogs is encrypted with 128-bit encryption. Forwarded messages are also re-encrypted. This is in addition to the standard Bluetooth encryption.

Moreover, every message is given a time stamp that is accurate to the second. Messages are only valid if they have just been generated and are not older messages. Messages that were recorded and then transmitted later are recognised and blocked.

The frogblue system doesn't need an Internet connection and doesn't save any data in the Cloud. Everything stays in the house, which keeps it secure.

8. Why are the frogs VDE certified?

We believe it would be improper and unsafe to install AC mains connected equipment without VDE certification. In contrast to the CE mark, which the manufacturer awards itself, VDE certification involves inspection by an independent institute and more than 100 different tests. Fire protection aspects are also checked in addition to electrical safety. This is important, since every experienced installer knows only too well how many multi-function relays without the VDE label have "burned out" in the past. This can't happen with frogblue.

Also, our dimmers and actuators are short-circuit-proof and switch off automatically, even at full load. This is a decisive safety advantage. We also generate very little heat: one double dimmer with 600 watts hardly becomes even warm to the touch.

9. How much energy does a frogblue system consume and at what cost?

One frog uses about 1/5 W of electrical power. A large smart home with perhaps 50 frogs only consumes around 10 W. No one who is familiar with the electrical cabinets associated with wired systems would be surprised if these consume at least 500 watts, around the clock and every single day. frogblue is therefore extremely energy-efficient and truly green, like the frogs themselves. And it makes a difference whether a smart home costs 26 € or 1310 € per year.

10. How do customers protect themselves from losing their programming?

A frogblue system is managed and configured using the frogblue ProjectApp. Here you can specify how lights react to the light switches and how long they stay on. You can set the dimming curve and programme logical connections between the frogs.

The configuration of the entire frogblue system is then saved by the ProjectApp in one single file. This file contains all the parameters and that is all there is. This configuration file can be sent via email or saved to a USB stick. It can also be saved in every frog or in another frogblue component. The configuration data for the smart home therefore stays in the house.

The app or the wall display always displays a green frog (the frogblue logo) to let the customer know that the configuration of the running system has been properly saved.