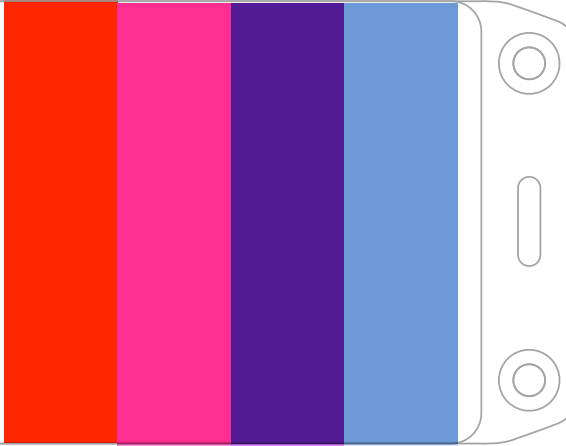# P44-xx: The lighting and automation controller for customised solutions

Based on the proven P44-DSB/P44-LC controllers, variants are available for sophisticated lighting and automation installations of all kinds.

Flexible: freely programmable with IDE and debugger thanks to built-in script language p44script.

Easy to integrate: connect to Smart Homes via built-in matter bridge (beta) or Digital Strom.

Stand-alone: Independent of services and clouds, always maintainable via browser. Ideal for reliable, long-lasting installations.

SmartLEDs
Up to 4000 RGB(W) "pixels" in various designs (stripes, surfaces, curtains, etc.) based on the WS28xx LED chips can display effects, tickers and freely programmable

DC motors, stepper motors
for mechanical elements of all kinds

DMX 512
Spotlights and effects from stage technology

MIDI / MIDI-RTP
Integration with audio installations

Digital I/O
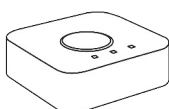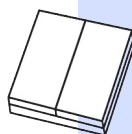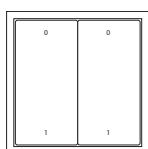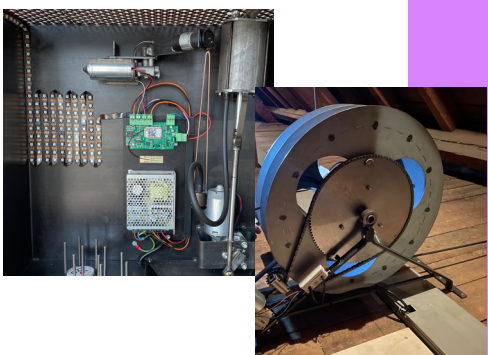Inputs and outputs for sensors, contacts, magnets, switches, etc.

modbus
Server and client, UART + TCP

EnOcean
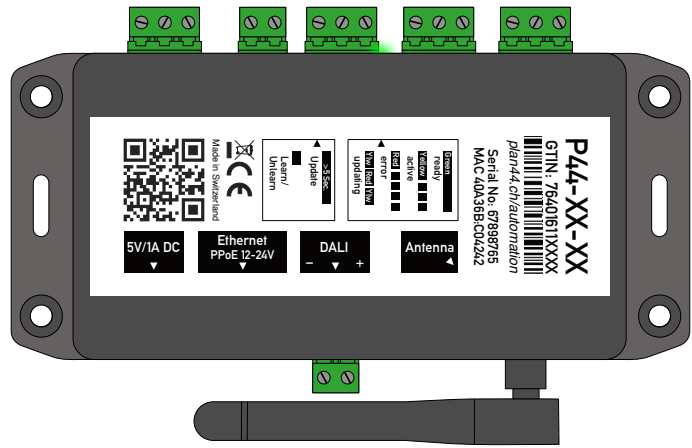Maintenance-free wireless switches are also often very useful in customised automation projects

hue
available as with the standard products

P44-XX-XX

Hardware

- Built on the **embedded P44 platform proven for many years in the P44-DSB and P44-LC**: Omgea2/MT7688 with OpenWrt Linux for economical 24/7 operation.
- **Project-specific additional modules** for further interfaces such as SmartLED control data, LED-PWM, DC motor H-bridges, stepper motors, RS485/DMX512, UART, encoder, optically isolated inputs/outputs, real-time clock, etc.
- Customised **assembly variants** of the existing modules are easily possible.
- Customer/project-specific additional modules can be developed as required.

Software

- Uses the **standard firmware of P44-DSB/LC**, so the firmware can always be kept up to date exactly the same way, even in special versions.
- All **standard P44-DSB/LC functions are available**, i.e. zones, rooms, scenes, function groups etc.
- Project-specific programming is implemented in **p44script on the device itself** via the web interface and the built-in development environment (IDE), and is therefore completely independent of external tools and services, stable and easy to maintain over many years.
- **p44script** is a Javascript-like scripting language optimised for automation tasks, which integrators can use to efficiently implement projects independently or with support from plan44.
- The **p44lrgraphics** functions are available for creating lighting effects with SmartLED chains, making it easy to generate animations, tickers, colour gradients, etc.
- With the concept of **scripted devices** (which are also available in P44-DSB and P44-LC), even unusual special installations can be modelled as standard "lights" or "shutters" and thus seamlessly integrated into a higher-level SmartHome system.
- The built-in **matter bridge (beta)** allows connection to any matter-compatible SmartHome system, e.g. to use **app or voice control**.
- Integration into Digital Strom is also available.

Fields of application

- Customised objects in the SmartHome, e.g. special lighting installations, home theatre devices.
- Electromechanical devices, e.g. lamp lifts, room dividers.
- Exhibition objects with electromechanics and light (and possibly sound)
- Art objects with light and/or mechatronic elements

Project workflow

- Enquiry (e-mail, forum) to clarify the basic feasibility.
- Provision of the required hardware - standard device with extension module, manufactured or, if necessary, developed on a project basis.
- Implementation in p44script - ideally by the manufacturer of the customised object with the support of plan44, or if necessary by plan44 on behalf of the customer.

Further information

- Device variants:: plan44.ch/automation/p44-xx-custom.php
- Project examples: plan44.ch/custom
- Technical documentation: plan44.ch/p44-techdocs
- plan44 online forum: forum.plan44.ch