

xRoute Smart Control System

Smart Solutions for the Modern Explorer





Take Complete Control, Effortlessly

SMART LIVING AT YOUR FINGERTIPS

All-in-One Control — Everything on a Single Screen!





TABLET

Enjoy a seamless experience with our integrated touchscreen tablet -control everything with just a tap-



MOBILE

Stay connected on the go -monitor and control your caravan via our iOS & Android mobile app-



SMART WATCH

Access essential functions right from your wrist -fast, convenient, and always within reach-



VOICE CONTROL

Control your caravan hands-free -just say the word, and xRoute responds instantly-

Customizable Tablet Options

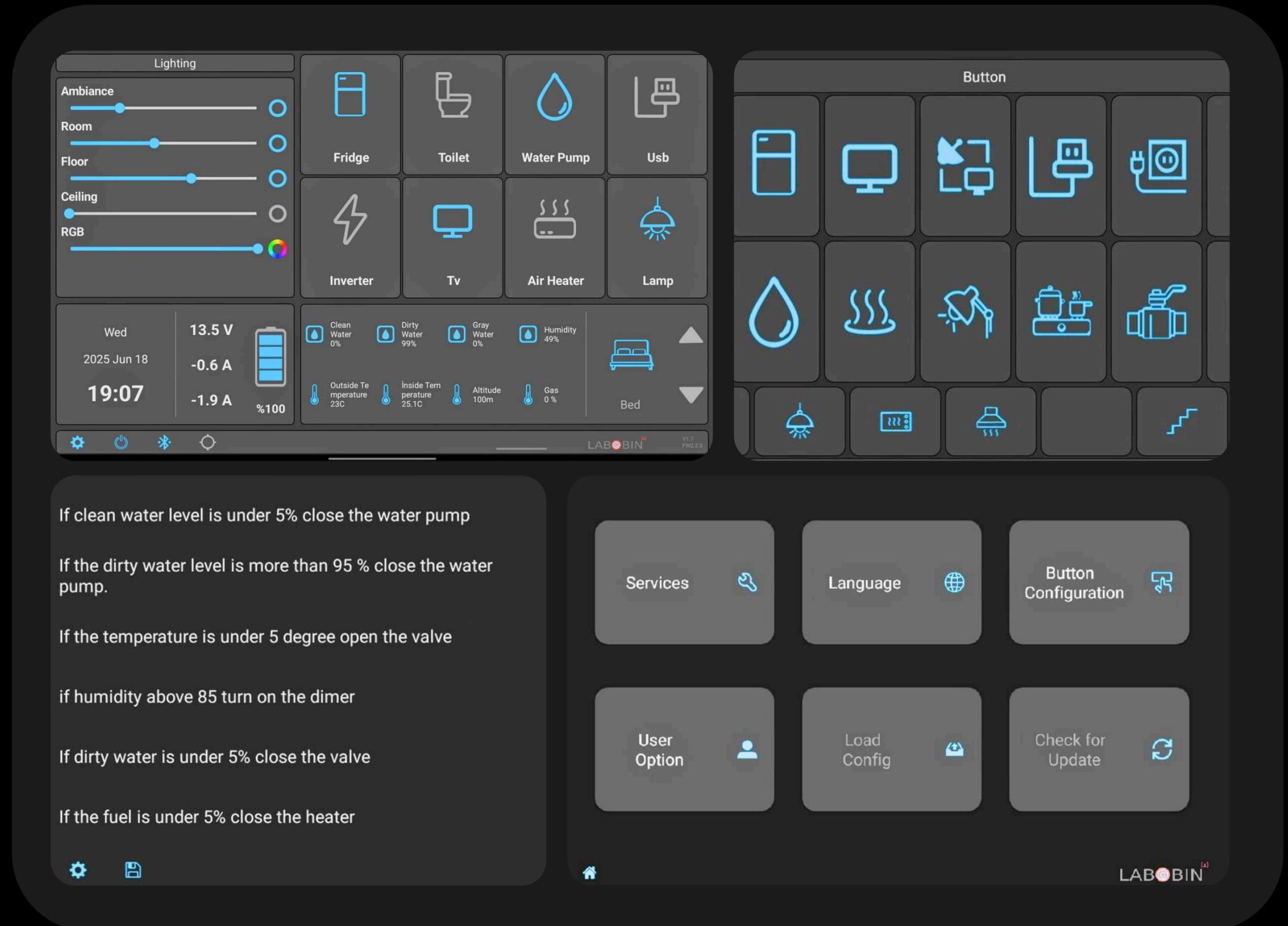
Choose the screen size and specs
that best suit your caravan.
xRoute adapts to your design and
needs.



Easy to Use

Seamless Control at Your Fingertips

Experience effortless caravan management with xRoute's user-friendly interface. Control lighting, temperature, battery status, and more—all from a sleek, intuitive dashboard. Stay connected and in command, wherever your journey takes you!





Lighting Control

Control brightness levels of each area with individual sliders



Device Control

One-touch control for essential caravan electronics



System Status

Date & Time, Battery Status, Power Consumption...



Tank Monitoring

Tank levels with percentage / liter values



Environmental Monitoring

Keep track of key environmental data in real time



Level Sensor Monitoring

Ensure your caravan is perfectly leveled with the built-in tilt sensor



Motorized System Control

Effortlessly operate motorized components such as pop-up roofs, electric beds, TV lifts, and more

Level Sensor Monitoring

Lighting

- Ambiance
- Room
- Floor
- Ceiling
- RGB

Level Sensor Monitoring

Front

Back

Left

Right

System Status:

- Wed 2025 Jun 18
- 19:07
- 13.5 V
- 0.6 A
- 2.1 A
- %100
- Clean Water 0%
- Dirty Water 99%
- Gray Water 0%
- Outside Temperature 23C
- Inside Temperature 25.1C
- Altitude 100m
- Gas 0%

LOGO

Personalize Your Interface

Customize the main screen with your own logo, colors, or background visuals. Whether you prefer a clean look, brand identity or bold pop-art designs...

xRoute lets you make it truly yours



Endless Customization Possibilities

Below are just a few examples of how you can style your xRoute interface. From minimalist designs to vibrant themes - Make it match your journey.

Lighting

Ambiance

Room

Floor

Ceiling

RGB

Fridge

Toilet

Water Pump

Inverter

Tv

Air Heater

Lamp

Wed
2025 Jun 18
18:33

13.4 V
-1.3 A
-3.3 A
%98

Clean Water 0%

Dirty Water 99%

Gray Water 0%

Humidity 51%

Outside Temperature 23C

Inside Temperature 24.2C

Altitude 100m

Gas 0%

Bed

LABOBIN V1.7 FW2.2.0

Lighting

Kitchen

Outside

Bedroom

WC

Cabinet

Floor

Dimer7

Fridge

Tv

Satellite

Usb

Rectifier

Water Pump

Boiler

Reading Lamp

Stove

Valve

Çar
2021 Kas 03
08:59

13.7 V
-0.1 A
0.0 W
%100

Clean Water 100%

Dirty Water 0%

Gray Water 0%

Outside Temperature 7C

Inside Temperature 0.0C

Altitude 0m

Table

LABOBIN V 0.99.2 FW1 0 0

Lighting

Ambiance

Room

Floor

Ceiling

RGB

Fridge

Toilet

Water Pump

Usb

Inverter

Tv

Air Heater

Lamp

Wed
2025 Jun 18
19:02

13.5 V
-0.5 A
-2.5 A
%100

Clean Water 0%

Dirty Water 99%

Gray Water 0%

Humidity 49%

Outside Temperature 23C

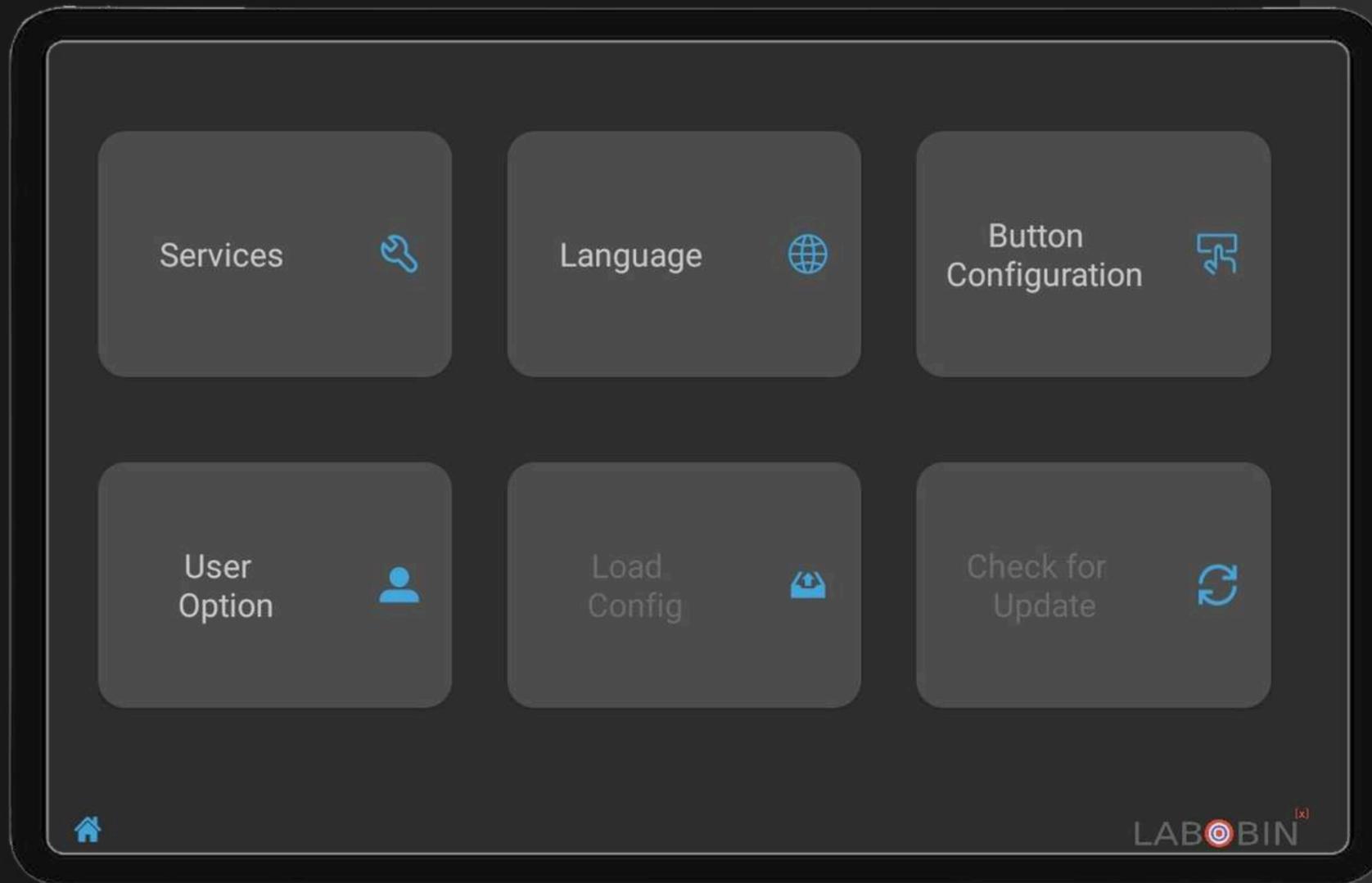
Inside Temperature 25.0C

Altitude 99m

Gas 0%

Bed

LABOBIN V1.7 FW2.2.0



Services - Access system services and diagnostics tools.



Language - Choose your preferred interface language.



Button Configuration - Customize the layout and behavior of control buttons.



User Option - Adjust user-specific preferences and defaults.



Load Config - Import saved configurations instantly.



Check for Update - Keep your system up to date with the latest features and improvements.

Secure Calibration Panel

Access the advanced service menu with a password-protected login to fine-tune every parameter of your system.

- Calibrate voltage, current sensors, and temperature readings
- Adjust and reset device-specific inputs with precision
- Essential for installers and technicians to ensure optimal performance

Professional tools, protected access—built for reliability.



The screenshot shows a dark grey interface with six rounded rectangular buttons arranged in a 2x3 grid. Each button contains a flag icon and a language name. The top row contains English (UK flag), Dutch (Dutch flag), and French (French flag). The bottom row contains German (German flag), Italian (Italian flag), and Turkish (Turkish flag). At the bottom left, there are icons for a home screen and settings. At the bottom right, the LABOBIN logo is visible.

 English

 Dutch

 French

 German

 Italian

 Turkish

User Options Panel

Customize how xRoute behaves—just the way you like it.

- Set automatic actions based on water levels, temperature, humidity, or gas detection
- Adjust button press durations and motor operating times
- Enable low battery mode to conserve energy
- Change text sizes on the main screen for better readability
- Smart preferences for smarter travels.

If clean water level is under 5% close the water pump	<input type="radio"/>	none
If the dirty water level is more than 95 % close the water pump.	<input type="radio"/>	none
If the temperature is under 5 degree open the valve	<input type="radio"/>	none
if humidity above 85 turn on the dimer	<input type="radio"/>	none
If dirty water is under 5% close the valve	<input type="radio"/>	none
If the fuel is under 5% close the heater	<input type="radio"/>	none
If there is a gas leak, close the gas valve.	<input type="radio"/>	none
Set the motor 1 working time (second)	<input type="radio"/>	<input type="text" value="please set Time"/>

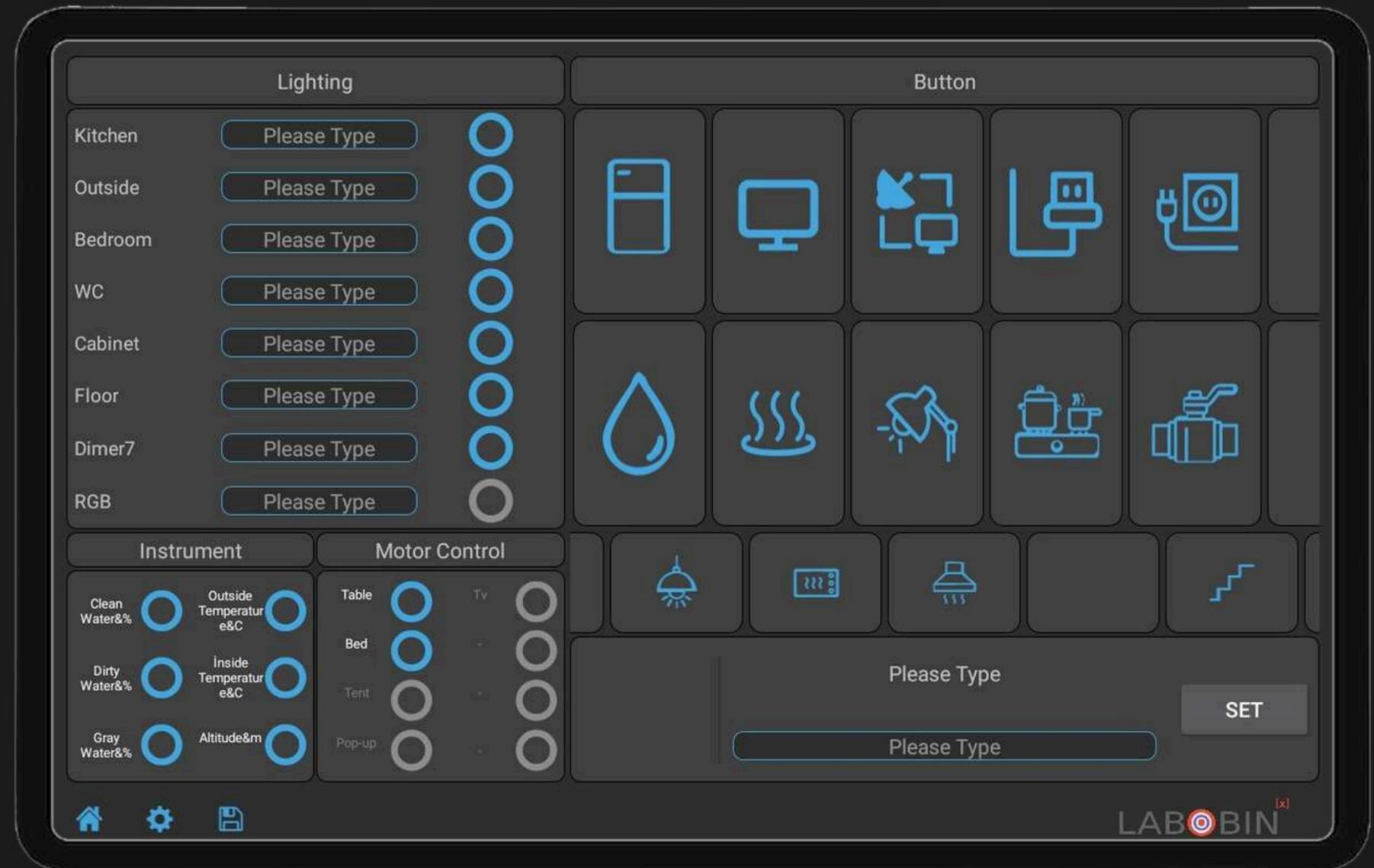


Button Configuration Panel

Easily configure your xRoute interface by assigning names, icons, and functions to each control.

- Customize lighting zones and labels (e.g. Kitchen, Bedroom, RGB)
- Select icons and names for connected devices (e.g. fridge, TV, heater)
- Define instruments such as water tanks, temperatures, and altitude
- Set up motorized devices like pop-up roofs, beds, and tables

All your selections are instantly reflected on the main control screen—designed for a fully personalized experience.



xRoute Mobile App

Smart Control—Anywhere, Anytime

Control your entire caravan directly from your smartphone. The xRoute mobile app, available on iOS and Android, gives you full access to lighting, devices, sensors, and system status—whether you're inside the vehicle or nearby.

- Real-time system monitoring
- Remote control via Bluetooth or Wi-Fi
- User-friendly interface synced with the main tablet
- Secure and responsive performance

Your caravan, in your pocket.

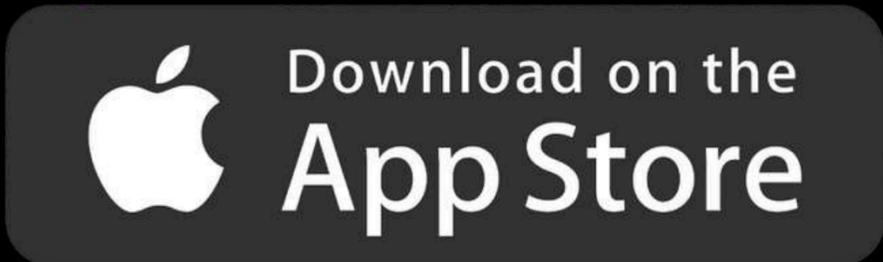




Download xRoute App

Get started by downloading the xRoute mobile app on your device:

Seamless setup, instant control—right from your phone.



xRoute Mobile App Main Dashboard

A sleek and intuitive control panel,
designed for total freedom.

- Instantly view real-time data such as temperature, battery levels, and humidity
- Control lighting, USB ports, power, fridge, and other key devices with a single tap
- Navigate through tabs like Dimmer, Instrument, Motor, and Settings
- Clear icons and dark mode design for optimal visibility—day or night

Your caravan's brain—now in the palm of your hand.





Dimmer Control Panel

Lighting, Just the Way You Like It

Easily adjust brightness levels for every lighting zone in your caravan—from ambient mood lighting to focused task lights.

- Control RGB lights with custom color selection
- Fine-tune individual dimmers with precise percentage control
- Real-time feedback for immediate lighting response
- Weather and humidity info displayed for context-aware control

Perfect lighting, every time—right from your phone.

Instrument Panel

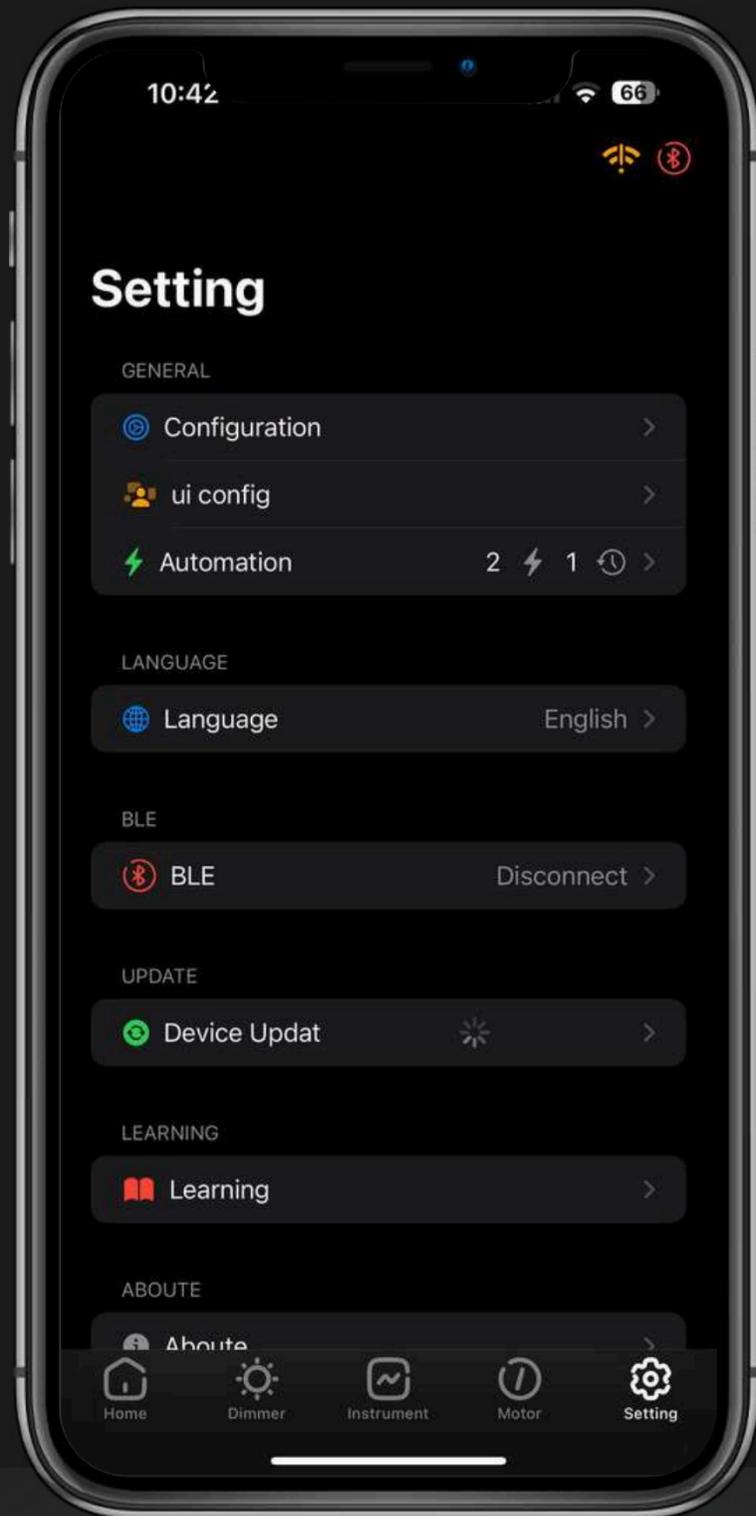
Stay Informed with Real-Time Data

Monitor key system metrics and environmental conditions with precision:

- Battery Tracking: View live voltage and performance graphs for both main and vehicle batteries
- Gyroscope Sensor: Instantly visualize your caravan's tilt and leveling
- Weather & Climate Data: See outside temperature and humidity at a glance

Every detail that matters—always within reach.





Settings Panel

Total Configuration. Fully in Your Control.

Customize every aspect of your xRoute system through the mobile app settings:

- Configuration: Manage system parameters
- UI Config: Personalize interface appearance
- Automation: Set rules and triggers for smart responses
- Language Selection: Choose your preferred language
- Bluetooth Management (BLE): Pair or disconnect your device
- Device Update: Keep your system up-to-date
- Learning Mode: Explore and understand all features
- About Section: View version and device info

Simple. Powerful. Adapted to you.

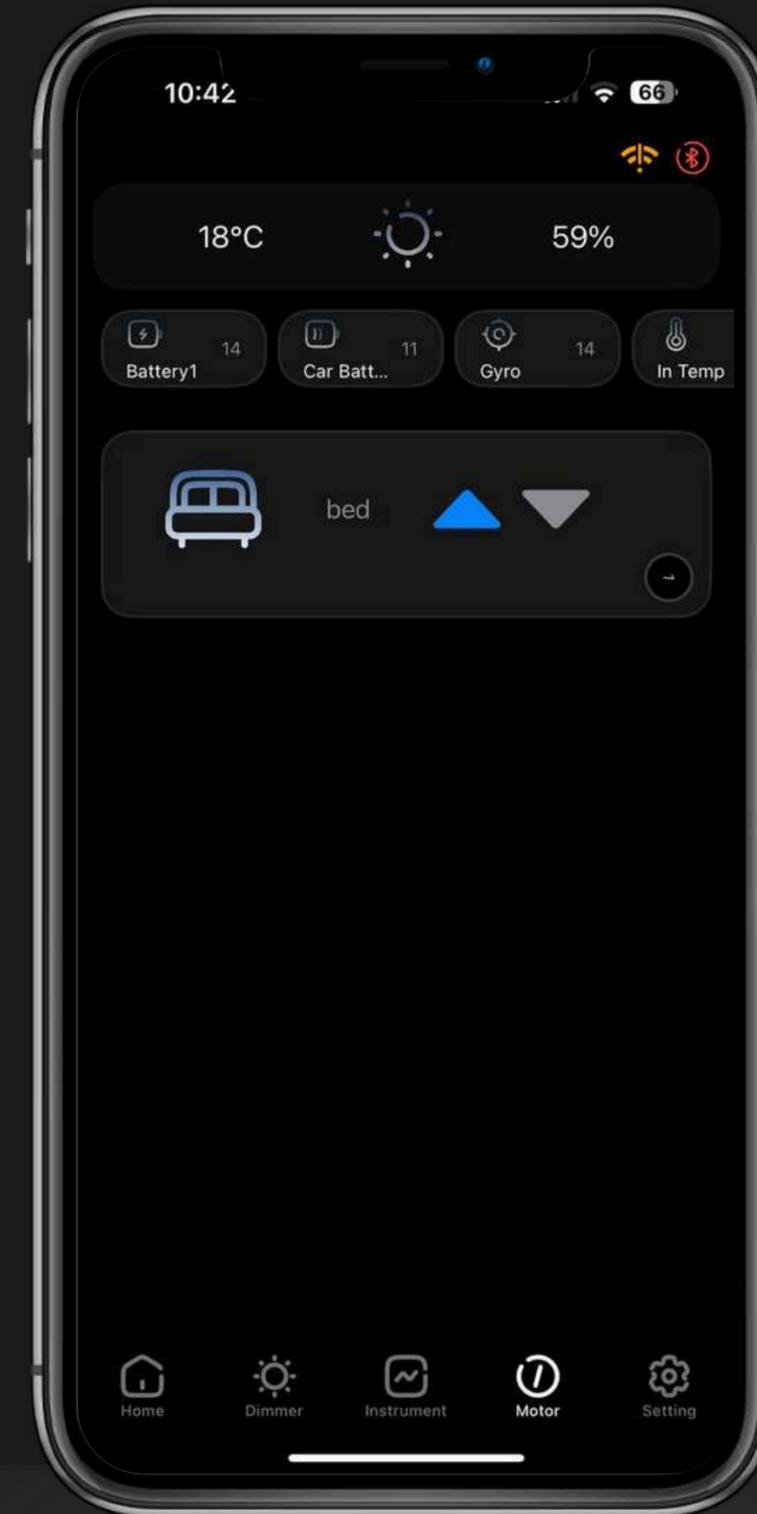
Motor Control Panel

Precision Motion, Seamless Control

Operate motorized components—like electric beds, pop-up roofs, or sliding mechanisms—directly from your mobile device.

- Intuitive up/down controls
- Real-time voltage and current feedback
- Safe operation with auto-stop and timer support
- Monitor surrounding conditions (temperature, humidity, tilt)
-

Move your system with confidence—smooth, smart, and responsive.



Fully Configurable, Infinitely Flexible.

xRoute gives you complete freedom to tailor the system to your exact needs.

From button functions to screen layout, sensor behaviors to automation rules—every element can be personalized.

Whether you're a casual user or a professional installer, every detail is at your command.

This is not just smart control—it's your control.



Device & Icon Configuration

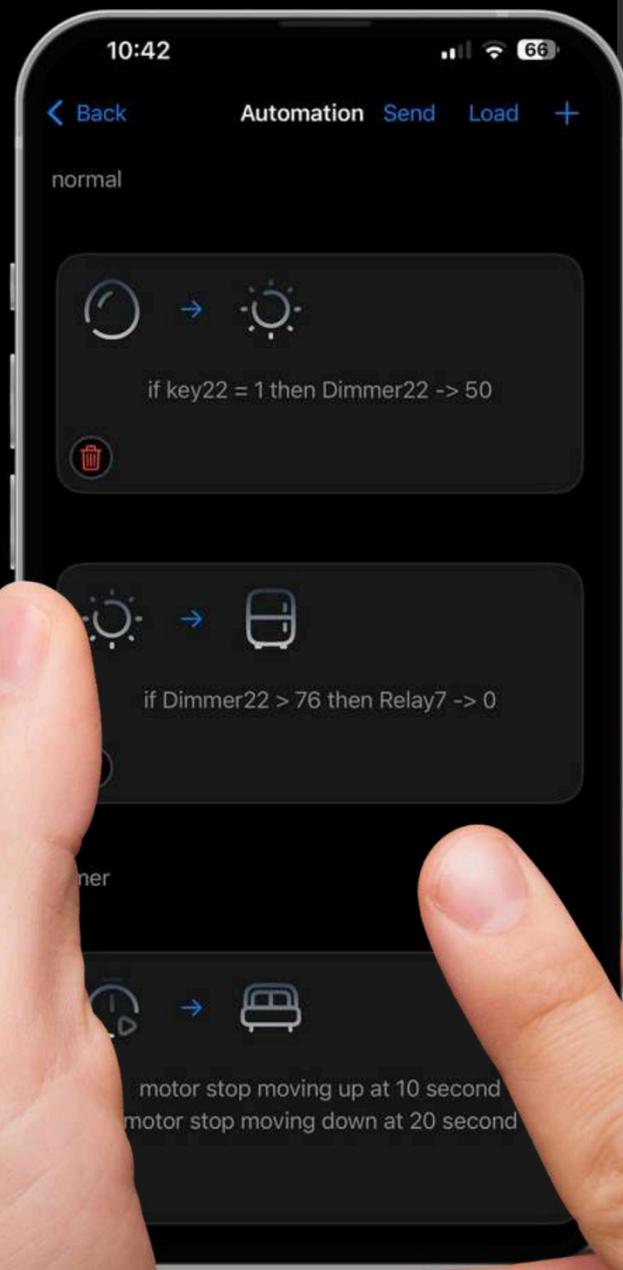
Build Your Own Interface, One Button at a Time

Define how each device appears and functions in the xRoute system:

- Assign custom names and port numbers to relays
- Choose from a wide range of intuitive icons for clear identification
- Easily edit, delete, or add new devices from the app
- Organize your control panel to match your actual setup perfectly

Whether it's a fridge, light, heater, or





Automation & Conditions Panel

Create Unlimited Smart Scenarios

Define powerful automation rules based on any condition—no limits.

- Trigger actions based on sensor data, button presses, dimmer levels, timers, and more
- Chain multiple conditions and responses in a simple logic format (e.g. if-then)
- Use timers to automate motor functions precisely (e.g. stop after 10 seconds)
- Instantly apply, edit, or remove conditions from the app

You set the logic—xRoute does the rest.



xRoute on Apple Watch

Take full control of your caravan—without reaching for your phone or tablet.

- Toggle power, lights, and RGB settings instantly
- Adjust dimmer levels with a swipe
- Monitor key system statuses like temperature and battery
- Perfect for quick access during travel or when relaxing outdoors

Minimal effort, maximum control—now on your smartwatch.



Download on the
App Store

Voice Control: Just Say the Word

Effortlessly command your caravan.
Hands-free

'Hello Buddy'

'Goodbye Buddy'

'Open Fridge'

'Set Room Light to %50 Percent'



xRoute Control Unit



Hardware Overview

Power System

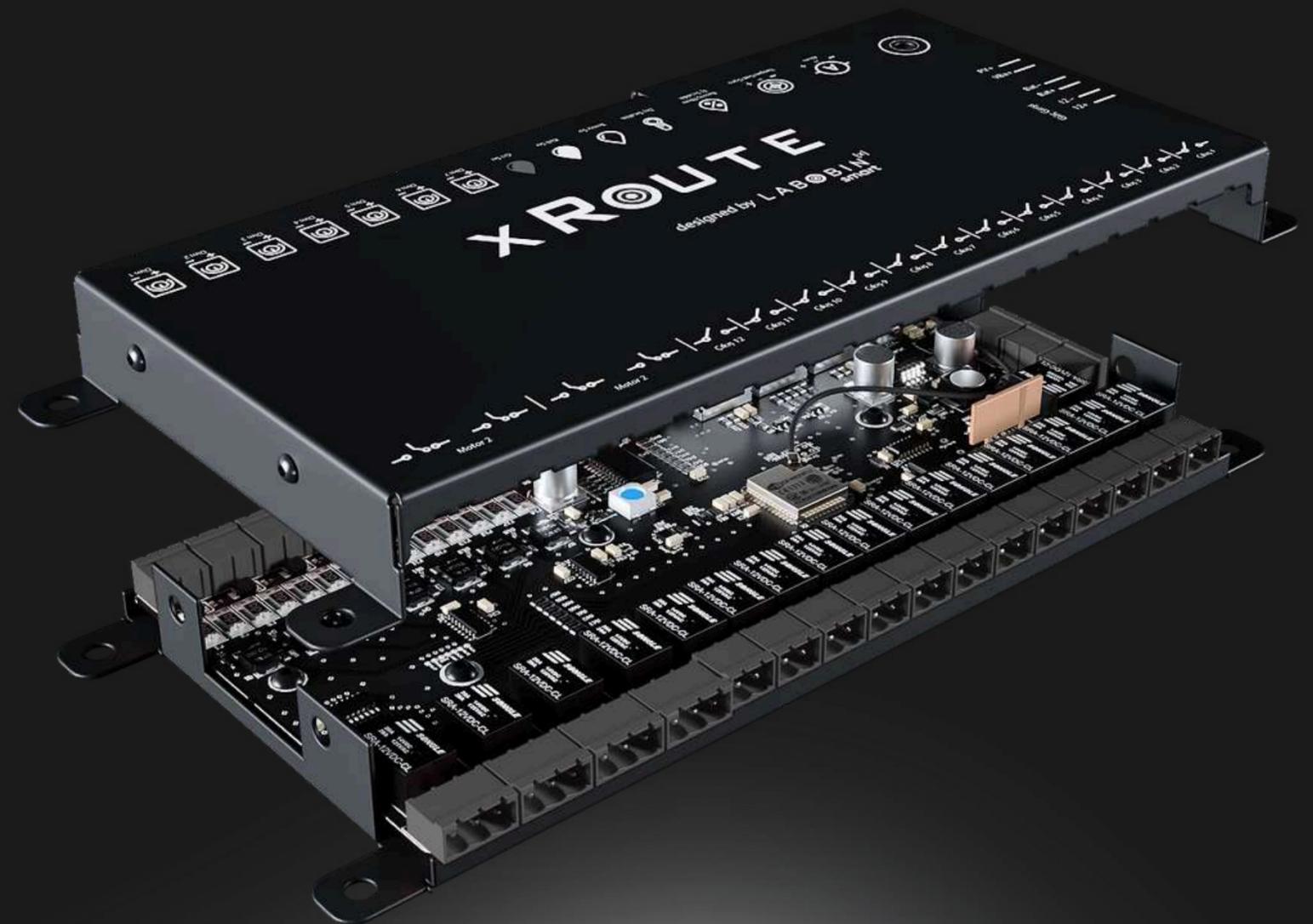
- 9–24V DC input, 16A internal thermal fuse, reverse polarity protection
- Ultra-low idle power consumption (~1.8W)

Relay Outputs

- 16 outputs (12 device + 4 motor control)
- 20A @12V DC / 4A @220V AC
- PWM relay control for energy efficiency

Dimmer Outputs

- 7 channels (4A each)
- 24-bit PWM with RGB calibration
- PWM Half Mode for 12V LEDs on 24V systems



Hardware Overview



Sensor Inputs

- 3x water level sensors (0–400Ω)
- PT100 temperature input
- Analog input for LPG or fuel gauge sensors

Environmental Sensors

- 3-axis accelerometer for tilt sensing
- Altitude, temperature, humidity

Connectivity

- Bluetooth, OTA firmware updates
- RS485 (Modbus RTU-ready)

LED Indicators

- Green Power LED
- RGB Status LED for operational states

Battery Current Sensor

- Accurate real-time current monitoring
- State of charge (SoC) and battery health estimation
- Deep analysis of battery usage trends

PT100 Temperature Sensor

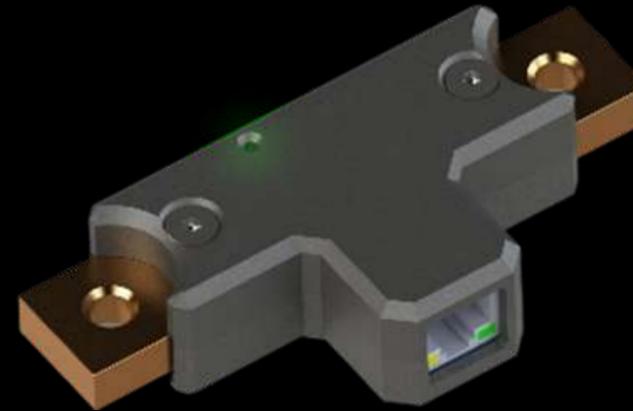
- High-precision temperature sensor using a resistive platinum element
- Measures from -40°C to $+100^{\circ}\text{C}$
- Ideal for measuring water tanks, external environment, or engine area

Temperature & Humidity Sensor

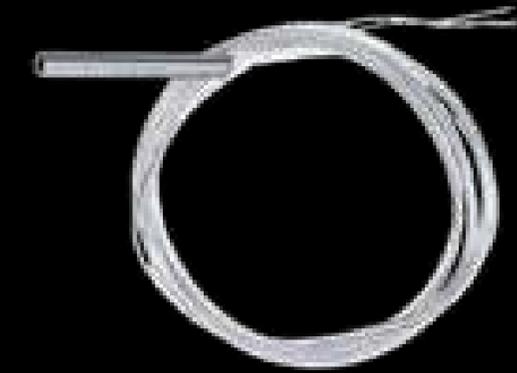
- Measures ambient temperature and humidity
- Compact, ventilated enclosure with status LEDs
- Ideal for indoor climate monitoring and automatic ventilation control

Gas Sensor

- Detects LPG, methane, or other gas leaks
- Triggers alerts or automated cutoffs when gas is detected
- Important for camper safety systems



Battery Current Sensor
(Shunt Type)



PT100
Temperature Sensor



Temperature &
Humidity Sensor



Gas Sensor

xRoute

Comprehensive Feature Summary

Smart Control Hub

- Centralized control for all devices, lighting, sensors, and automation
- Operated via tablet, mobile app (iOS & Android), smartwatch, or voice commands
- Fully customizable user interface with real-time feedback

Powerful Outputs Architecture

- 16 Relay Outputs
- 12 standard outputs + 4 motor-control relays
- Each supports up to 20A DC or 4A AC
- Galvanically isolated for safety and flexibility
- PWM-compatible for low-power signal applications

Powerful Dimmer Architecture

- 7 Dimmer Outputs
- 24-bit PWM resolution for ultra-smooth lighting
- RGB channel support (3 dedicated channels)
- 4A per channel, internally protected
- Supports "PWM Half Mode" for 12V LEDs on 24V systems

xRoute

Comprehensive Feature Summary

Environmental & Sensor Integration

- 3x Water Level Inputs – Supports resistive sensors
- PT100 Sensor- Accurate temperature reading from
- Temperature & humidity
- LPG/gas leak detection
- Battery current sensing
- 3-Axis Accelerometer – Pitch and roll angle measurement for leveling
- Altitude & Humidity Monitoring

Connectivity & Configuration

- Bluetooth Connectivity
- OTA Firmware Updates
- RS485 Port - Modbus RTU compatibility
- Advanced Settings Interface
- Logic-Based Automation – Unlimited condition-based rules (IF-THEN logic)

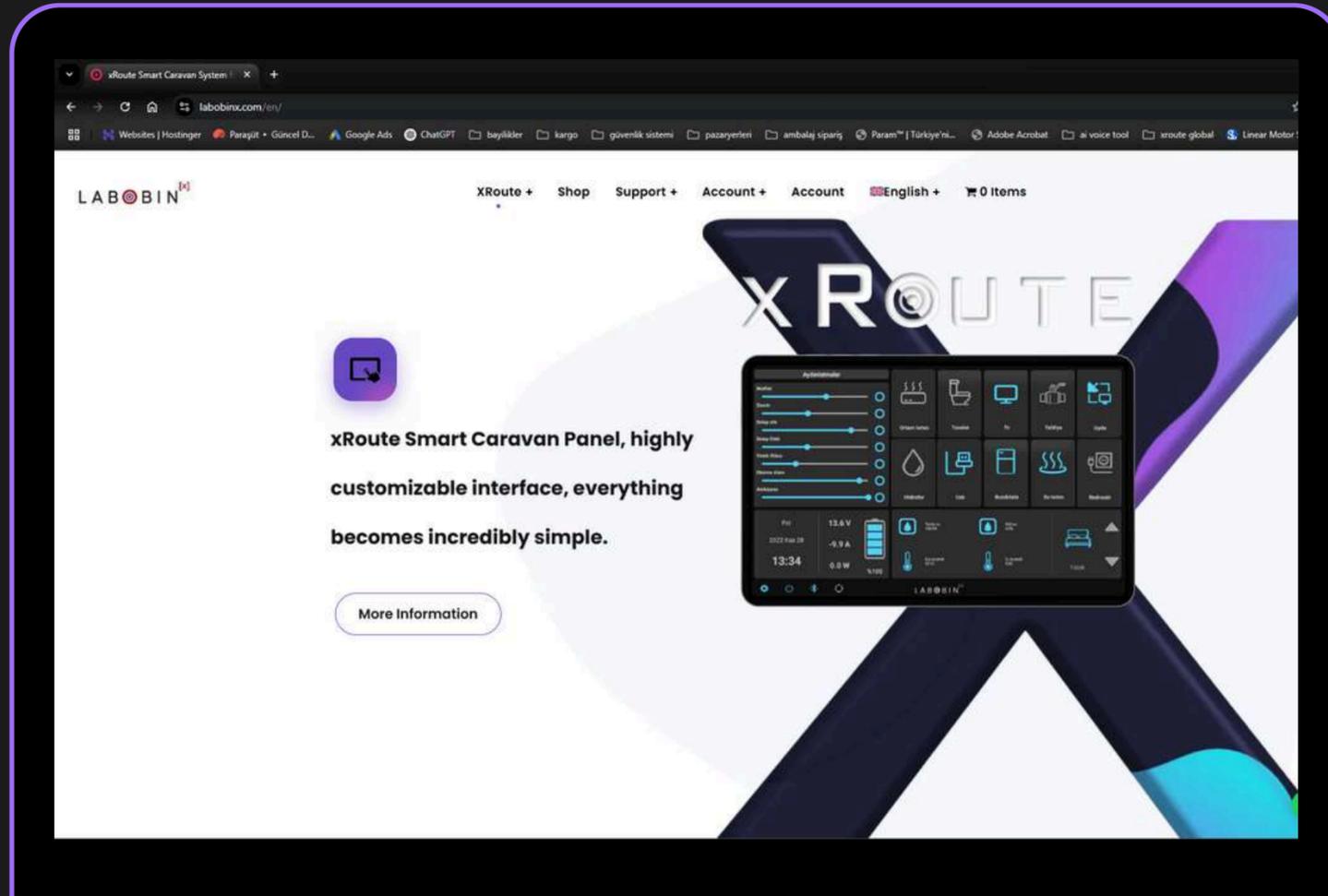
Energy Monitoring & Safety

- Battery Voltage & Current Monitoring – Real-time display of power usage
- Shunt Sensor Compatibility – Fuel gauge-style battery tracking
- Reverse Polarity Protection
- Internal Resettable Thermal Fuses
- Dedicated voltage sensing lines for solar and battery

User-Centric Design

- Customizable icons, names, and button layouts
- Adjustable display elements (font size, dimming behavior)
- Backgrounds can feature logos, color schemes, or artwork
- Multilingual interface

Contact Information



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