

ebikemotion®

SMARTHUB

The Hearth of all communications for all integrations

Imagine that you have designed one e-bike system that uses SERIAL or CAN BUS communications (Motor Controller or Smart BMS bus), and now you want to include by example Bluetooth®, SmartPhone APP and front and rear controlled LED lights on it. The solution is very simple. You can install the SmartHub that will get the information of the situation of the lights using analog signals and also the data of the e-bike system by SERIAL data.

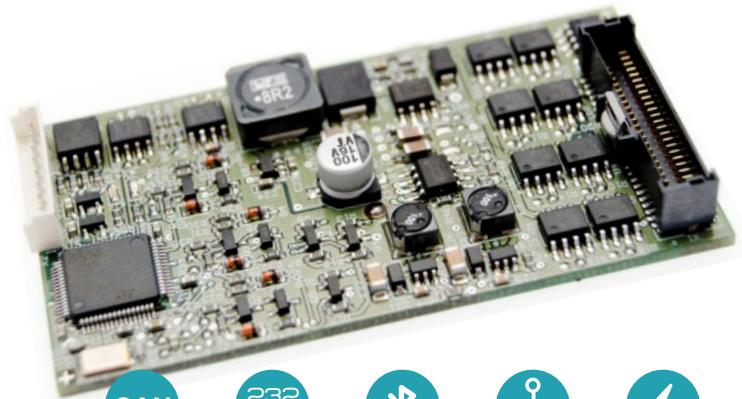
The SmartHub can read and send the information by Bluetooth® using one unified protocol and offer the e-bike information in one APP, controlling the lights or the e-bike through the APP or using the iWoc® remote system. Smarthub to do it, because the SmartHub can convert the input commands (analog ones or received by Bluetooth®) into serial CODE or analog outputs.

Designed & Manufactured in Spain (EU)

Target Applications:

Integration of different bus typologies on e-bike
Creating Analog inputs and outputs based on the information of buses
Create a Bluetooth® gateway in the e-bike
e-performance level over the Motor Controller

Analog I/O
CAN
SERIAL
Bluetooth®
USB
Power Supply



CAN
CAN BUS

**232
485**
SERIAL &
I/O ports

**Bluetooth®
BLE**

Wired

**No Limit
Charging**

ebikemotion® SMARTHUB is like a Babel Tower can read different protocol buses and input signals at the same time, unifying the information and generating new output signals

Is a modular and scalable electronic box designed to communicate any e-bike system with other devices using different communication protocols at the same time. It is like the "Babel Tower" of the e-bikes. The SmartHub works with CAN BUS, SERIAL and UART protocols crossing messages between them and including and analog I/O port for special remote devices like lights, horn, brakes, lock systems, etc.

All the information is accessible by Bluetooth® using the commands included into Open Code of our iWoc® SDK 3.0. the SmartHub works always in combination with the iWoc® joystick or display where is installed the Bluetooth® antenna

EN 15194
DIN EN ISO 13849
According to Directive 2006/42/EG

Made with Automotive
Quality Standards

Nagares SA one of the most important Automotive Electronic Manufacturers of Spain and the R+D in GND (Valencia) is the responsible of the design, production and quality management of the ebikemotion® TRACKER

ebm
bikes

HEADQUARTERS

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RESEARCH CENTERS

BISITE R+D Group
(University of Salamanca)

GND (NAGARES)
(Valencia - Spain)

STAGEMOTION SL
(Palencia - Spain)

PRODUCTION CENTER

NAGARES S.A.
(Motilla del Palancar - Spain)

GRUPELEC (NAGARES)
(Valladolid - Spain)

e-bike BUS Integration

Product Features and Specifications

CANBUS 2.0A & 2.0B and SERIAL/UART Compatible
 Special analog output LED High Power supply lines with the possibility to control the intensity of FRONT light (Night and DayLight)
 Size of the SmartHub Box 42mm (width) x 15mm (height) x 78 to 68 mm of length (depending of the I/O implemented)
 Size of the SmartHub PCB 40mm (width) x 10mm (height) x 74 to 64 mm of length (depending of the I/O implemented)
 Power Operation(11-57V Input Voltage)

Autoconfiguration in e-bike systems powered by 12V, 24V, 36V, 48V, other voltages on request.
 Analog Outputs for Front and Rear Lights and also for Horn (500mA)
 Special analog output LED High Power supply lines for REAR and Brake lights.
 2 auxiliary analog input lines for special use, totally customizable.
 1 USB power supply connection line (2A max)
 Analog input line for Brake

ebikemotion® SMARTHUB is designed with 2 big parts, cover and reception. the cover can be designed ad-hoc of the e-bike in order to be installed with the battery or with the frame, etc. Design depends of the e-bike design and technology could be adapted to your requirements

adaptive
 ah-hoc
 design

the SmartHUB is a device designed to be included inside the FRAME of the e-bike as well as inside of Battery. Specially for ad-hoc systems and projects

