



# Bike Sharing 4.0

[pironex-portal.de](http://pironex-portal.de)



Chargers



Locks



Management



Apps



[pironex-portal.de](https://pironex-portal.de)

- A For operators:** pironex-portal.de/admin is an advanced management tool for bike sharing systems. It offers real-time fleet and station monitoring, backend tools for customer management, as well as system and financial reporting.
- B For customers / end-users:** Our system has been designed to provide simple and convenient access to the rental bikes. The cloud-based software enables customers to rent and return bikes on-demand. Our iOS and Android apps ensure seamless access to the system, real time information, user-friendly design and allow users to find and unlock bikes.
- C For you:** We offer customised and branded versions (including adoption of new graphic design, protocols or hardware components) of our website and our mobile applications.

Flexible solution designed to  
meet customer needs

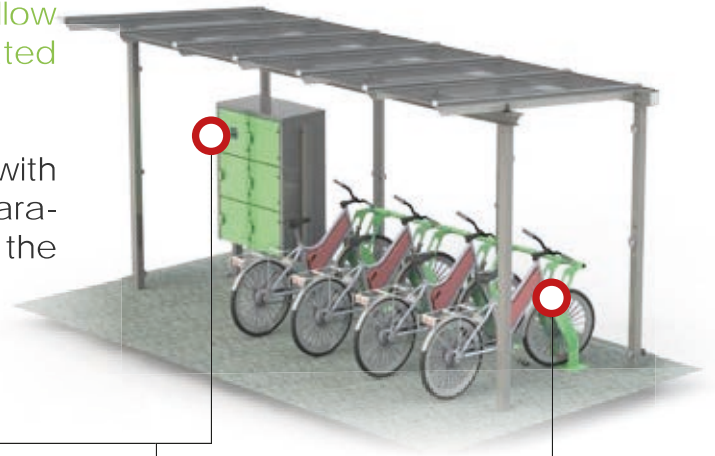




## Rental stations

We offer electronic components for a wide variety of station configurations, that allow setup of multifunctional, fully automated systems which operates 24/7.

Our products enable locking the bikes with smart locks, remote control of system parameters and contactless access to the station.



Bluetooth  
Bike Lock



OLED  
Display



RFID /App  
Access



Frontend/  
Backend



User  
Management



Reservation  
System

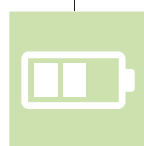
Scalable Bike Share Technology and  
Fleet Management Software



## Charging stations

Our electronic components for rental and charging station contain master units with the power supply, EnergyBus chargers and extremely efficient power management.

Electro-mechanic door locks with integrated return detection enable efficient management of the station.



Chargers  
(EnergyBus)



Touch  
Display



RFID /App  
Access



Frontend/  
Backend



User  
Management



Reservation  
System

"Mobility changes and we play a part of it."



## Smart Bike

Our rental system for bikes is simple to install, operate and manage. It includes bike locks (piSmart-Lock, pi-Bike-Lock) that can be easily integrated into any bicycle frame and can be unlocked via app, user card or login at on-board computer.

Our intelligent equipment for (rental) bikes also includes further components such as on-board computer with e-paper display, transportable chargers for e-bikes as well as tracking or battery management systems.



### One system - many possibilities

Our business model (B2B) is focused on providing a professional service and innovative products to the bike/e-bike/pedelec assemblers and manufacturers, as well as to create a best bike sharing solution adapted to our customer needs.

Created to be flexible and secure, our system allows future expansion and integration. It can be operated both by non-profit organisations as well as by commercial businesses and be either free of charge or on a payment basis.

Our system has been designed to provide simple and convenient bike access, anytime.

The user only needs to register with the service before their first rental. Once registered the user gets access to the system in order to:

1. Check the availability of bikes / e-bikes in their area (via app / web)
2. Reserve a bike via [pironex-portal.de](http://pironex-portal.de), via operator website or through [pironex-app](#) mobile application
3. Unlock the bike through a contactless identification system (RFID or Bluetooth LE)
4. Use the bike for their own needs
5. Take the bike back to one of the bike sharing stations or nearby a bike spot





## Chargers



**piCAN-Wallbox**  
(EnergyBus Wallbox  
with RFID reader  
and safe)



**piCAN-Pocket-Charger**  
(EnergyBus charger  
with Bluetooth LE)



**piCAN-Charger-60V**  
(EnergyBus charger;  
14,4-56V)



**piCAN-Charger-230V**  
(EnergyBus charger with  
integrated power supply)

## Locks



**piSmart-Lock**  
(Bike lock with  
Bluetooth LE and  
RFID reader)



**piSmart-Lock Premium**  
(Bike lock with  
Bluetooth LE, RFID  
reader and GPS)



**piBike-Lock**  
(Bike lock with  
Bluetooth LE)



**piTrack-IoT**  
(GPS/GSM tracker with  
Bluetooth LE)

## Rental Systems



**piBike-HMI**  
(Board computer  
with e-paper display  
and RFID reader)



**piA-SF**  
(Terminal system based  
on an IPC with  
Touch-Screen)



**piCAN-TFT**  
(Terminal system based  
on an IPC with TFT  
display and RFID  
reader)



**piCAN-Terminal**  
(Terminal system with  
OLED display and RFID  
reader)



**piA-AM3352**  
(IPC for remote  
maintenance and  
control)



**piCAN-Bike-Adapter**  
(EnergyBus adapter/  
interface converter)



**piCAN-Box**  
(EnergyBus adapter  
with GPS/GSM, Bluetooth  
LE and RFID reader)



**pironex-portal.de**  
(Reservation,  
management  
and billing system)



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**Reference projects:**

