

Empowering the Ride with Smart, Reliable, and Versatile Charging Solutions



The 2 wheeler charging station is an [ebike charging station](#) for e-bikes' fixed parking, smart locking, enhanced ebikes' security and easier smart charging with NO battery replacement required.



What're Main Features and Work Flow of 2 Wheeler Charging Station?

1. The user pushes the vehicle into the 2 wheeler charging station, and the vehicle's front lock hook engages with the charging station's lock.
2. The 2 wheeler charging station's TX module sends an identity verification signal to the RX module every 2 seconds, continuing until the identification is successful.

How to Lock

3. If the identity verification is successful, the ebike charging station's IoT system reports charging information, dock occupancy status, and vehicle ID, activates the charging function, turns on the charging indicator light, and plays an audio prompt indicating charging has started.

4. The vehicle is automatically locked, and information about the lock status, charging status, and dock ID is reported. The instrument display shows the charging status symbol.

1. The user scans the vehicle's IoT code, and the server sends an unlock command.

How to Unlock

2. Upon receiving the unlock command, the vehicle's IoT device sends an unlock signal to the dock via the wireless RX module, then unlocks the electric bike lock and reports successful unlocking to the server.

3. Upon receiving the unlock command from the vehicle's IoT device, the dock unlocks the ebike charging station's lock, deactivates the wireless charging, and reports the ebike charging station's status to the server. An audio prompt indicating the end of charging is played.

Charging Status

1. During the vehicle's charging process at the charging stations, both the vehicle IoT device and the charging station IoT device must periodically send charging status information to the server.

2. The vehicle IoT device periodically retrieves data from the RX module.



WORKFLOW



1. The app sends an "unlock" command to the IoT device.



2. The green light flashes, indicating successful unlock.



3. Return the vehicle; it locks automatically, and the red light turns on (charging).

What's the wireless TX module and RX module?

The wireless charging TX and RX components are the valuable components of ebikes wireless charging solution and they work together to enable wireless energy transfer, communication functions, and mechanical locking capabilities. The TX module is installed on 2 wheeler charging station, and the RX module is installed on the electric bikes.

What's function of IoT device for the wireless charging solution?

The IoT device in a charging pile typically manages the connection between the charging station and the central server. It helps in **remote monitoring**, **status reporting**, and **control** of the charging process.

The IoT device in an e-bike serves to enhance the bike's smart features, enabling **real-time tracking**, **remote control**, and **performance monitoring**.

**SLEEK, DURABLE,
AND AESTHETICALLY PLEASING DESIGN.**



APPLICATION SCENARIOS

Suitable for neighborhoods, tourist spots, industrial parks, campuses, and hospitals.



One-stop Global IoT Solution Provider

WHY CHOOSE OMNI?



20+

20+ years factory

20+

20+ years in client service

200+

More than 200 Employees (over 50 R&D Personnel)

6000

6000 Square Meters of Office Space

4

4 Professional Production Lines

2亿+

Over 150 Million Users Using OMNI Positioning Service

600万+

Sold terminal IoT equipment