

# Success Stories



## Electric Vehicle Charging Stations

Smart outdoor public charging stations HMI for electric vehicles.

## Background

With countries worldwide introducing mandates to cut the number of diesel and petrol cars, drivers are looking towards the future dominant car technology, i.e., electric vehicles (EVs). Deloitte predicts that over 25.3 million EVs will be sold by 2030. With the rise in EV use, the demand for electric vehicle charging stations is soaring.

Smart electric vehicle charging stations are connected to the Cloud. This allows all users to log in, locate charging stations on a map, reserve specific locations, pay online, check the charging status, and view focused promotions. The dedicated mobile app can be accessed using a smartphone, laptop, tablet, or directly through a touch screen at the charging station.

## Core Products

- 7" ATEX grade Android Tablet
- 15" C1D2 Panel PC
- ATEX grade embedded system

## Main Challenges

- **Outdoor applications**

Public electric vehicle charging stations are placed outdoor. Hence the HMI must support a wide temperature operating range, sunlight readability, and water and dust protection. Also, it must be tested and certified safe to use and explosion-proof.

- **Wide Range Communication Capabilities**

Wireless and ethernet connectivity on charging stations allows technicians to monitor and manage them remotely and lets users stay updated with their charge progress through Internet notifications.

- **Embedded OS support and One-Stop Shopping**

Besides the open-source operating system, the solution also needed an industrial networking switch and X86 Windows-based embedded platform options for data analysis and distributed device management.

- **Product longevity**

Hardware must last as long as possible since industrial clients drop significant resources into upgrades.

## Why Winmate

- **Rugged Design for outdoor applications**

As the electric vehicle charging stations will need to withstand the environmental requirements, Winmate has designed their Panel PC and rugged tablet to comply with the IP65/IP66 standard while also building a futuristic, sleek, and stylish housing. The panel PC and rugged tablet are equipped with responsive PCAP touchscreen and high luminance display, enabling easy operation and improving usability.

- **Vast Experiences in hazardous environments**

For almost three decades, Winmate has been developing rugged computing and HMI solutions that meet the safety and industrial qualifications. Winmate offers certified ATEX and Class 1 Division 2 (C1D2) solutions for maintaining safe operations and collecting detailed, sensitive data. Following the North American National Electric Code (NEC) and the European ATEX directive for the equipment classification.

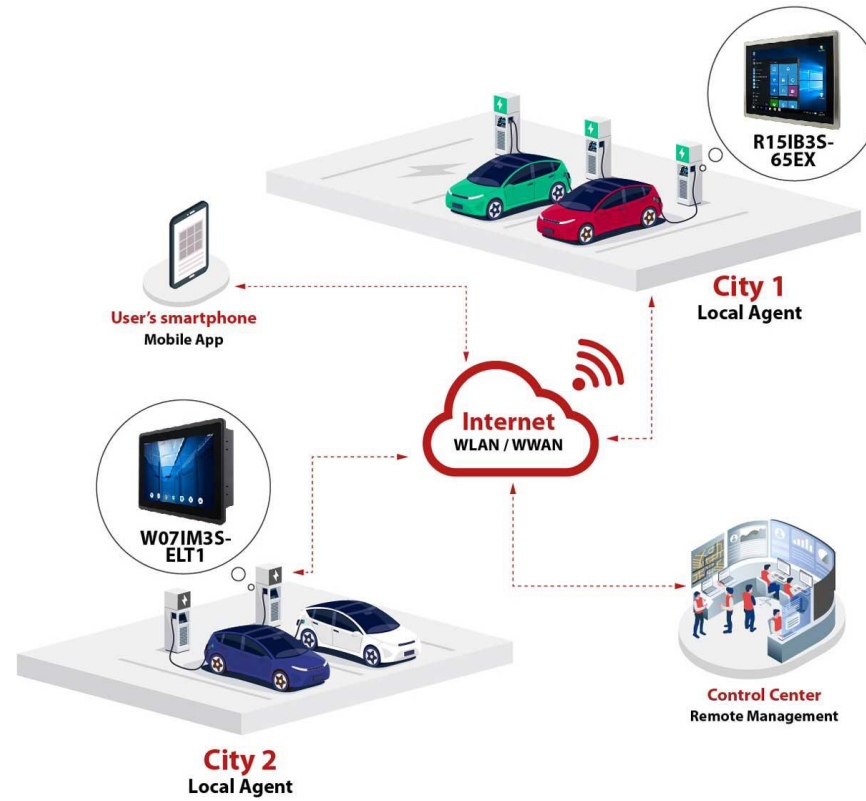
- **Specially built for industrial needs**

Wimate ATEX solutions use a variety of protocols to acquire data from multiple I/O ports and support WLAN connectivity, allowing the system to transfer real-time data to the management center. USB ports and RS232 ports are also available for NFC payment system connection. Also equipped with the onboard low-power processor is ideal for IoT applications while enabling fanless operation and eliminating CPU fans.

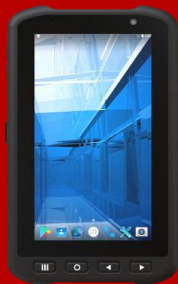
- **Product customization supports**

Wimate offers a wide range of HMI monitors from 7" - 23.8" with a capacitive touch display specially designed for use in public amenities. Winmate also offers the embedded platform solution for data acquisition and device management of the charging system.

# Application Diagram



## Related Products



Winmate  
7" ATEX grade  
Android Tablets



Winmate  
15" C1D2  
Panel PCs