DFI

Smart Charging Solution

DFI Compact Embedded System
Bringing the Smartness in Your Charging Solution

As customers expect that electric vehicles can run as far as normal cars, many electric car makers have launched a new generation of household electric cars equipped with a 32A bigger battery. The new electric cars take more time to charge. To relief customers of this drawback, fast charging is the solution that will help customers charge their cars faster at home. Therefore, DFI is collaborating with a client in Europe to build a smart charging system that integrates solar power into electricity system. We are not only eco-friendly, but we are also improving the user experience of the electric cars while saving end-users' money and time.

Region: Europe
Country: the Netherlands
Application: Smart Charging

The Challenge

The original electric grid is not able to supply enough power for fast charging. Normally a way to solve this issue is to upgrade the grid to get more power, but it will cost a lot for the general customers. Given that upgrading the grid is not a feasible option for everyday customers, coming up with a more cost-efficient solution becomes a high priority of our client.

" We need a smart electric system that can automatically alter solar power into electricity system. "

Requirements

Solar power system is prevailing in European households. Our client needs to build a smart electric system at end-users' house. The system has to be able to automatically alter solar power into electricity system, detect the power capacity of solar panel and communicate with the cloud system. It is a power controller and monitor so that customers can better understand their power consumption and manage it in real-time.
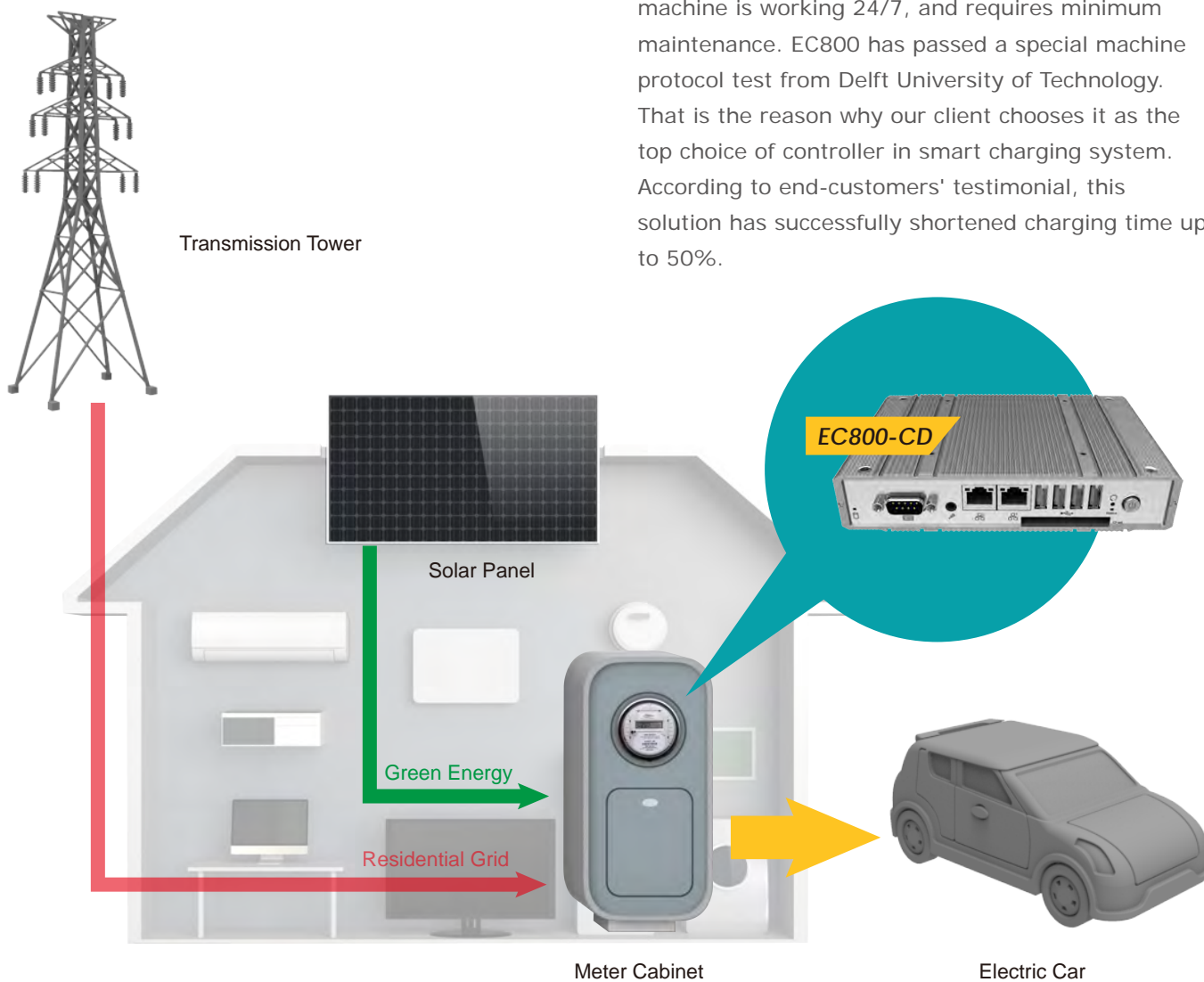

EC800-CD

While user is charging their car, the computer will switch solar power into charging power supply and make it charge faster.According to end-customers' testimonial, this solution ha ssuccessfully shortened charging time up to 50%.

DFI Solution

We installed DFI's compact embedded computer in an electric cabinet as the controller. It can transfer electric meter numbers to the cloud server via WiFi, reporting real-time power usage data and switching power resource. While user is charging their car, the computer will switch solar power in to charging power supply and make it charge faster. This makes the car charging more eco-friendly and time-saving. Besides, customer can also see the report and make electric monitor setting on the cloud system. The EC800 functions well in extreme environment (0~60 Celsius or -20~70 Celsius), and with DFI's manufacturing technology, its average MTBF is over 100 thousand hours. These features make sure the machine is working 24/7, and requires minimum maintenance. EC800 has passed a special machine protocol test from Delft University of Technology. That is the reason why our client chooses it as the top choice of controller in smart charging system. According to end-customers' testimonial, this solution has successfully shortened charging time up to 50%.

Transmission Tower

EC800-CD

Solar Panel

Green Energy

Residential Grid

Meter Cabinet

Electric Car

DFI Application Story

Smart Charging Solution

EC700-BT

Fanless Embedded System
Intel® Atom™ E3800
DDR3L onboard
3 Mini PCIe
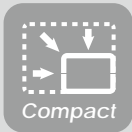2 LAN, 4 COM, 5 USB, 8-bit DIO

EC800-CD

Fanless Embedded System
Intel® Atom™ D2000/N2000 Series,
Intel® NM10 DDR3 onboard
1 SIM, 3 Mini PCIe
2 LAN, 2 COM, 4 USB, Isolated 4-bit DIO

EC70A-SU

High Performance Fanless Embedded System
6th Gen Intel® Core™
Dual DDR4
2 Mini-PCIe
2 LAN, 4 COM, 4 USB 3.0, 8-bit DIO

Compact

DFI's Low Power & Compact Embedded System

DFI's industrial compact embedded systems powered by 6th Gen Intel® Core™ U series processors and/or Intel® Atom™ processor, and can deliver extremely low power in an ultra-small size as well as efficient fanless thermal solutions. The systems are also capable with extensive I/O interfaces and have efficient wireless connectivity to the cloud; making them an ideal candidate to a wide range of industrial applications such as factory automation, IoT gateways, and smart healthcare.

DFI Application Story

Smart Charging Solution
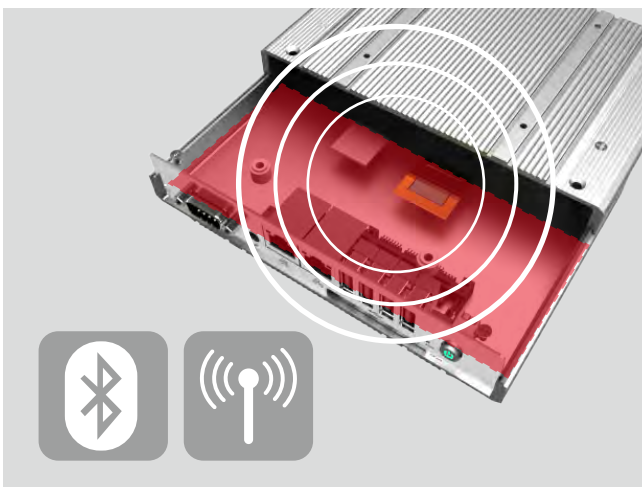
DFI

Founded in 1981, DFI is a global leading provider of high-performance computing technology across multiple embedded industries. With its innovative design and premium quality management system, DFI's industrial-grade solutions enable customers to optimize their equipment and ensure high reliability, long-term life cycle, and 24/7 durability in a breadth of markets including factory automation, medical, gaming, transportation, smart energy, defense, and intelligent retail.

Website: www.dfi.com

eStore: estore.dfi.com

For more information, please contact your DFI regional sales representative or send us an email: inquiry@dfi.com