

# **Wireless Car Charging: Market Shares, Strategies, and Forecasts, Worldwide, 2013-2018.**

<https://marketpublishers.com/r/W86F2510255EN.html>

Date: October 2013

Pages: 260

Price: US\$ 3,800.00 (Single User License)

ID: W86F2510255EN

## **Abstracts**

Wireless charging in the automotive industry brings inductive power for EV cars. Short distance power transmission is based on magnetic induction. With this technology, power is transferred when the receiver is close to the transmitter. Magnetic induction has been used for decades in electronic equipment. It is good because it is simple, efficient, and safe. It is now being applied to charging for electric vehicles. As power is induced through the primary charging coil, a magnetic field is produced. The magnetic field is received by the secondary coil. It is converted back into a voltage. Shielding can be added to either coil of the transformer system. The aim is to direct the field effects. This can be useful in multiple pad charging applications. The aim is to eliminate power cross-talk. Wireless inductive charging is gaining popularity for use in consumer rechargeable applications such as cordless power tools, net books, note books and other power-hungry rechargeable devices.

## **WIRELESS CAR CHARGERS EXECUTIVE SUMMARY**

Wireless Charging in the Automotive Industry: Inductive Power for EV Cars

Market Driving Forces

Electric Vehicle Wireless Charging

Electric Vehicle Wireless Charging Market Shares

Electric Vehicle Wireless Charging Market Forecasts

## Contents

### **1. WIRELESS CAR CHARGERS MARKET DEFINITION AND MARKET DYNAMICS**

- 1.1 Wireless Car Charger Global Markets
  - 1.1.1 Wireless Car Charger Operations And Performance
  - 1.1.2 Wireless Car Charger Business and Technology Trends
  - 1.1.3 Wireless Car Charging
  - 1.1.4 Vehicle Sharing
- 1.2 Auto Industry
  - 1.2.1 Electric Vehicle Economic Forces
  - 1.2.2 Cars Represent 20% Of The US Economic Retail Spending
- 1.3 Electric Vehicle Design Trajectories
- 1.4 Electric Vehicle EVs
  - 1.4.1 EVs Cost Effective In City Conditions
  - 1.4.2 Lithium-Ion Car Batteries
  - 1.4.3 Private-Public Partnerships
- 1.5 Lithium-Ion Battery Target Markets
- 1.6 Wireless Car Charging
- 1.7 Wireless Car Charger Health Implications

### **2. WIRELESS CAR CHARGERS MARKET SHARES AND MARKET FORECASTS**

- 2.1 Wireless Charging in the Automotive Industry: Inductive Power for EV Cars
  - 2.1.1 Market Driving Forces
  - 2.1.2 Electric Vehicle Wireless Charging
- 2.2 Electric Vehicle Wireless Charging Market Shares
  - 2.2.1 Bosch / Evatran Group
  - 2.2.2 Bosch Wireless Electric Car Charging Stations
  - 2.2.3 Qualcomm Halo
  - 2.2.4 Visteon
  - 2.2.5 WiTricity WiT-3300
  - 2.2.6 Intel
- 2.3 Electric Vehicle Wireless Charging Market Forecasts
  - 2.3.1 Electric Vehicle EV Market Forecasts and Installed Base
  - 2.3.2 Electric Vehicle EV Market Forecasts
  - 2.3.3 Wireless Charging for Electric Vehicles Percent Penetration of EV
  - 2.3.4 Bosch Financing For Wireless Automotive Charging Installation
  - 2.3.5 Wireless Charging Standards

- 2.3.6 Wireless Charging Competing Standards
- 2.3.7 Three Standards: Qi, PMA (Power Matter Alliance) Powermat, and A4WP (Alliance for Wireless Power)
- 2.3.8 Wireless Charging of Phones in Cars
- 2.3.9 Qi-Enabled Car Console Toyota
- 2.4 Inductive Charging
  - 2.4.1 Inductive Power Wireless Car Charging
  - 2.4.2 Benefits of Wireless Phone and Electronic Device Charging in Cars
- 2.5 Wireless Charging Energy Consumption ROI
- 2.6 Wireless Chargers for Cars Prices
- 2.7 Wireless Car Charging Regional Segments

### **3. WIRELESS ELECTRIC CAR CHARGERS PRODUCT DESCRIPTION**

- 3.1 Qualcomm Halo
  - 3.1.1 Qualcomm Halo Wireless Electric Vehicle Charging
  - 3.1.2 Qualcomm Business Model
  - 3.1.3 Qualcomm IP Portfolio
  - 3.1.4 Qualcomm R&D Capabilities
- 3.2 Bosch / Evatran Group
  - 3.2.1 Bosch/Evatran Group Plugless L2 Inductive Power
  - 3.2.2 Bosch / Evatran Group Plugless L2 Safety
  - 3.2.3 Bosch / Evatran Group Energy - Plugless L2 Efficiency
  - 3.2.4 Bosch / Evatran Needs Alignment Of The Vehicle Adapter and Parking Pad
  - 3.2.5 EVs Compatible With Bosch / Evatran Plugless L2
  - 3.2.6 Bosch Wireless Electric Car Charging Unit \$3,000
  - 3.2.7 Bosch Power Max Home Charging Plug-In System
  - 3.2.8 Evatran Group Supplies the Level 2 240-Volt Wireless Charging Unit
  - 3.2.9 Bosch Financing For Wireless Automotive Charging Installation
  - 3.2.10 Bosch Wireless Electric Car Charging Stations
- 3.3 Plugless Power Smarter EV Charging.
- 3.4 Evatran Group / Plugless Power
- 3.5 Plugless L2 Energy-Efficiency
- 3.6 Nissan Wireless Charging System
  - 3.6.1 Nissan Advanced Parking Assist
  - 3.6.2 Nissan Wireless Charging System
  - 3.6.3 Nissan Wireless Charging Technology Configuration
- 3.7 Daimler
  - 3.7.1 Daimler Tests Cordless Electric Vehicle Chargers

### 3.8 Conductix-Wampfler Inductive Power Transfer IPT®

#### 3.8.1 Conductix-Wampfler IPT® Rail

### 3.9 WiTricity WiT-3300

#### 3.9.1 WiTricity WiT-3300System

#### 3.9.2 WiTricity WiT-3300 Development System

#### 3.9.3 WiTricity Prodigy

### 3.10 Mitsubishi Concept CA-MiEV

### 3.11 Delphi Wireless Car Charging

### 3.12 Toyota

### 3.13 Visteon

## 4. WIRELESS CAR CHARGERS TECHNOLOGY

### 4.1 Short Distance Power Transmission

#### 4.1.1 Inductive Charging

#### 4.1.2 Inductive Charging Benefits

#### 4.1.3 Electric Transport System Via Non-Contact Magnetic Charging

### 4.2 Wireless Charging Standards Bodies

#### 4.2.1 Wireless Charger Qi Standard

#### 4.2.2 Wireless Power Consortium Qi Standard

#### 4.2.3 Qi and the Wireless Power Consortium

#### 4.2.4 Qi and the Wireless Power Consortium

#### 4.2.5 Qi Authorized Test Labs ?

### 4.3 Alliance for Wireless Power (A4WP).

#### 4.3.1 Spatial Freedom Product Design Issues

### 4.4 Power Matters Alliance

### 4.5 Operating Frequency for Loosely Coupled Wireless Power Transfer Systems

#### 4.5.1 Wireless Power Transfer (WPT) Systems

#### 4.5.2 CISPR 11 Radiation Emissions Limits

## 5. WIRELESS CHARGERS COMPANY DESCRIPTION

### 5.1 Alliance for Wireless Power

### 5.2 Bosch Group

#### 5.2.1 Evatran Group Plugless Sales Go Live with Bosch

#### 5.2.2 Bosch Business Overview

#### 5.2.3 Bosch Group Reorganized Its Business Sectors

#### 5.2.4 Bosch Consumer Goods Sales

#### 5.2.5 Bosch Automotive Technology Sales

- 5.2.6 Bosch Group
- 5.2.7 Bosch Healthcare Supports Independent Living At Home
- 5.2.8 Bosch Security Systems Division
- 5.2.9 Robert Bosch Healthcare
- 5.2.10 Robert Bosch Remote Patient Monitoring
- 5.2.11 Bosch Healthcare Telehealth Systems
- 5.2.12 Bosch Healthcare Health Buddy System
- 5.2.13 Bosch Addresses Role of Compliance in Telehealth Adoption
- 5.2.14 Bosch North America Veterans Health Administration
- 5.2.15 Bosch / VRI
- 5.2.16 Bosch Healthcare and GreatCall Partnership
- 5.2.17 Bosch Healthcare - Telehealth And Care Solutions
- 5.2.18 Bosch Group and Health Hero Network
- 5.3 Consumer Electronics Association
- 5.4 Conductix-Wampfler
- 5.5 Convenient Power
- 5.6 Daimler
  - 5.6.1 Mercedes-Benz Qi For Wireless Charging Of Smartphones
  - 5.6.2 Mercedes-Benz "Qi" Technology
  - 5.6.3 Daimler Tests Cordless Electric Vehicle Chargers
  - 5.6.4 Daimler AG/Mercedes-Benz
  - 5.6.5 Daimler AG Revenue
- 5.7 Denso
- 5.8 Energizer
  - 5.8.1 Energizer 160 Countries
  - 5.8.2 Energizer Business
  - 5.8.3 Energizer Industry Participation
  - 5.8.4 Energizer Revenue
- 5.9 Good & Easy Technology
- 5.10 Google
  - 5.10.1 Google 2012 Corporate Highlights
  - 5.10.2 Google Search
  - 5.10.3 Google Revenue
  - 5.10.4 Google Second Quarter 2013 Results
  - 5.10.5 Google Revenues by Segment and Geography
  - 5.10.6 Google / Motorola Headcount
  - 5.10.7 Google / Motorola
- 5.11 HLC Electronics
  - 5.11.1 HLC Electronics Utilizing Advanced Testing Equipment

## 5.12 HTC

## 5.13 Integrated Device Technology

### 5.13.1 Integrated Device Technology Business

### 5.13.2 Integrated Device Technology Revenue

### 5.13.3 Integrated Device Technology Communications Segment

### 5.13.4 Integrated Device Technology Communication Timing Products:

### 5.13.5 Integrated Device Technology Serial RapidIO Solutions

### 5.13.6 Integrated Device Technology Revenue

## 5.14 Intel

### 5.14.1 Intel joins A4WP Wireless Charging Group

### 5.14.2 Intel Company Strategy

### 5.14.3 Intel Architecture and Platforms

### 5.14.4 Intel Business Organization

### 5.14.5 Intel Product Set

### 5.14.6 Intel / McAfee

### 5.14.7 Intel Phone Components

### 5.14.8 Intel Non-Volatile Memory Solutions

### 5.14.9 Intel Revenue by Major Operating Segment

### 5.14.10 Intel Percentage of Revenue by Major Operating Segment

## 5.15 iPDA - Newlift Technologies

### 5.15.1 iPDA - Newlift Technologies Apple MFi CM Licensee

## 5.16 JLW Communication Equipment

### 5.16.1 JLW Communication Equipment Strict Quality Control and Service

## 5.17 Korea Advanced Institute of Science and Technology (KAIST)

## 5.18 LG

### 5.18.1 LG Core Capabilities

### 5.18.2 LG Growth Strategies

### 5.18.3 LG Revenue by Segment

## 5.19 MAPTech Co.

### 5.19.1 MAPTech Releases An Average Of Four New Products Yearly

## 5.20 MC Power Technology

## 5.21 Microsoft / Nokia

### 5.21.1 Microsoft Key Opportunities and Investments

### 5.21.2 Microsoft Smart Connected Devices

### 5.21.3 Microsoft: Cloud Computing Transforming The Data Center And Information Technology

### 5.21.4 Microsoft Entertainment

### 5.21.5 Microsoft Search

### 5.21.6 Microsoft Communications And Productivity

- 5.21.7 Microsoft Revenue
- 5.21.8 Microsoft Customers
- 5.21.9 Microsoft .NET Framework
- 5.21.10 Nokia
- 5.21.11 Nokia / Microsoft
- 5.21.12 Nokia Revenue
- 5.22 Nissan
  - 5.22.1 Nissan Wireless Charging System
  - 5.22.2 Nissan Wireless Charging System
  - 5.22.3 Nissan Advanced Parking System
  - 5.22.4 Nissan Technology Configuration
  - 5.22.5 Nissan Optimizes Product Development
  - 5.22.6 Nissan Revenue
- 5.23 Procter & Gamble
  - 5.23.1 Procter & Gamble / Duracell
  - 5.23.2 Procter & Gamble / Duracell® Quantum
  - 5.23.3 P&G/Duracell/Powermat
  - 5.23.4 P&G / Braun
  - 5.23.5 P&G Brands
  - 5.23.6 Procter & Gamble Innovation
  - 5.23.7 Procter & Gamble Brands
  - 5.23.8 Procter & Gamble Go-to-Market
  - 5.23.9 Procter & Gamble Scale
  - 5.23.10 P&G Strategy
  - 5.23.11 Procter & Gamble Improving Productivity and Creating a Cost Savings Culture
  - 5.23.12 Procter & Gamble Strengthening Upstream Innovation Program and Pipeline
  - 5.23.13 P&G Revenue
- 5.24 Evatran Group / Plugless Power
- 5.25 PowerbyProxi:
  - 5.25.1 PowerbyProxi Efficient Use Of Energy
  - 5.25.2 PowerbyProxi Technology
  - 5.25.3 PowerbyProxi Wireless Standards
- 5.26 Power Matters Alliance
- 5.27 Qualcomm
  - 5.27.1 Qualcomm Business
  - 5.27.2 QMC Offers Comprehensive Chipset Solutions
  - 5.27.3 Qualcomm Government Technologies
  - 5.27.4 Qualcomm Internet Services
  - 5.27.5 Qualcomm Ventures

- 5.27.6 Qualcomm Revenue
- 5.27.7 Qualcomm / WiPower
- 5.27.8 Qualcomm Standardization Capabilities
- 5.27.9 Qualcomm Regulatory and Compliance Capabilities
- 5.28 Rexpower Industrial Development
  - 5.28.1 Rexpower 3,000 Models
  - 5.28.2 Rexpower 5 Million Batteries Rolled Out Monthly
- 5.29 Samsung
  - 5.29.1 Samsung Revenue
  - 5.29.2 Samsung Finds Talent And Adapts Technology To Create Products
  - 5.29.3 Samsung Adapts to Change, Samsung Embraces Integrity
  - 5.29.4 Samsung Telecom Equipment Group
  - 5.29.5 Samsung Electronics Q2 2013 Revenue
  - 5.29.6 Samsung Memory Over Logic
- 5.30 Shenzhen Koeok Electronic Technology
  - 5.30.1 Shenzhen Koeok Electronic Technology Strict QC Processes in Accordance with ISO Guidelines
- 5.31 Shineworld Innovations
  - 5.31.1 Shineworld Innovations Factories
  - 5.31.2 Shineworld Innovations Supported by Reliable and Skillful Workers
- 5.32 Texas Instruments
  - 5.32.1 Texas Instruments Product Information
  - 5.32.2 Texas Instruments Revenue
  - 5.32.3 TI Transforms Mobile Charging
- 5.33 Toyota
  - 5.33.1 Toyota Avalon Wireless Charging Pad
  - 5.33.2 Toyota / Lexus
  - 5.33.3 Toyota Revenue
  - 5.33.4 Lexus
- 5.34 Visteon
- 5.35 Wireless Power Consortium
  - 5.35.1 The Qi Interface Inspires Innovation
  - 5.35.2 Wireless Power Consortium

## List Of Tables

### LIST OF TABLES AND FIGURES

Table ES-1 Wireless Car Charging Market Driving Forces
Table ES-2 Wireless Charging for Cars Market Driving Factors
Figure ES-3 Wireless Car Charging Pads Market Shares, Dollars, 2012
Figure ES-4 Wireless Car Charging Market Forecasts Dollars, Worldwide, 2013-2019
Table 1-1 Wireless Car Charger Market Characteristics
Table 1-2 Principal Features Used To Compare Rechargeable Batteries
Figure 1-3 Examples of Electric Vehicles
Figure 1-4 Example of EnerDel Electric Vehicle
Figure 1-5 Wireless Car Charging Spans Nine Orders of Magnitude
Figure 1-6 Wireless Car Power Charger Star Network Topology Multi Device Architecture
Figure 1-7 Wireless Car Power Charger Receiving Unit and Transmitting Unit System Reference Model
Figure 1-8 Wireless Charging Provides Ubiquitous Power
Figure 1-9 Smart Devices Can Discover Wireless Power Transmitters
Table 2-1 Wireless Car Charging Market Driving Forces
Table 2-2 Wireless Charging for Cars Market Driving Factors
Figure 2-3 Wireless Car Charging Pads Market Shares, Dollars, 2012
Table 2-4 Wireless Car Charging Market Shares, Dollars, Worldwide, 2012
Figure 2-5 Wireless Car Charger Market Forecasts Units, Worldwide, 2013-2019
Figure 2-6 Wireless Car Charging Market Forecasts Dollars, Worldwide, 2013-2019
Table 2-7 Wireless Car Charging Shipments Dollars, Worldwide, 2012-2019
Table 2-8 Electrical Vehicle Installed Base and Wireless Car Charging Shipments Dollars and Units, Worldwide, 2012-2019
Table 2-9 Electrical Vehicle Installed Base and Wireless Car Charging Shipments Dollars and Units, Worldwide, 2012-2019
Figure 2-10 Electric Vehicle EV Market Forecasts, Units, Worldwide, 2013-2019
Table 2-11 Electrical Vehicle Shipments and Wireless Car Charging Market Penetration Dollars and Units, Worldwide, 2012-2019
Table 2-12 Wireless Car Charging Market Penetration of Electrical Vehicles EV Forecasts, Percent, Worldwide, 2012-2019
Figure 2-13 Wireless Car Charging Market Shares, Dollars, 2012
Table 2-14 Wireless Car Charger Regional Market Segments, Dollars, 2012
Figure 3-1 Qualcomm Halo WEVC System Technology
Table 3-2 Qualcomm Halo WEVC System Main Components

Figure 3-3 Qualcomm Halo Business Model

Figure 3-4 Bosch / Evatran Group Plugless L2 Efficiently And Safely Charges Electric Vehicle EV

Table 3-5 Bosch / Evatran Plugless Technology Efficiency

Figure 3-6 Bosch Wireless Electric Car Charging Unit

Figure 3-7 Bosch Wireless Electric Car Charging Adapter Unit

Figure 3-8 Plugless Power Wireless Charging

Figure 3-9 Nissan Wireless Charging Technology Functionality

Figure 3-10 Nissan Wireless Charging Technology

Table 3-11 Conductix-Wampfler IPT Benefits

Figure 3-12 WiTricity WiT-3300

Table 3-13 WiTricity WiT-3300 Components

Figure 3-14 Delphi WiTricity Wireless Car Charging

Table 4-1 Inductive Charging Benefits

Table 4-2 Wireless Power Consortium Qi Authorized Test Labs ?

Table 4-3 Wireless Power and Human Exposure

Table 4-4 Wireless Power Product Spatial Freedom Design Issues

Table 4-5 A4WP Requirements Specification

Figure 4-6 CISPR 11 Radiation Emissions Limits

Figure 4-7 CISPR 11 International Limits for ISM

Table 5-1 Benefits of Alliance for Wireless Power Approach

Table 5-2 Alliance for Wireless Power Key Aims:

Figure 5-3 Conductix-Wampfler Handling systems

Table 5-4 Daimler Charging Coil Construction

Table 5-5 Daimler Wireless Charging Coil Uses

Table 5-6 Integrated Device Technology Product Differentiation

Table 5-7 Integrated Device Technology Applications

Table 5-8 Intel Key Objectives

Figure 5-9 Intel Business Organization

Figure 5-10 Intel Product Set

Table 5-11 Key Elements of Nokia's Strategy

Figure 5-12 Nissan Wireless Charging Technology Functionality

Figure 5-13 Nissan Wireless Charging Technology

Table 5-14 Procter & Gamble Components Of Reportable Business Segment Structure

Figure 5-15 Duracell Powermat

Figure 5-16 P&G Core Strength

Table 5-17 Procter & Gamble Long- Term Strategies

Table 5-18 Procter & Gamble Strengthening Core Business

Table 5-19 Procter & Gamble Cost Savings Programs

Table 5-20 Evatran Group Plugless Power Partners

Figure 5-21 Plugless Power Wireless Charging

Figure 5-22 Samsung Revenue by Segment

Figure 5-23 Visteon Summary

Figure 5-24 Visteon Progression to an Asia-Centric Business

## About

As power is induced through the primary charging coil, a magnetic field is produced. The magnetic field is received by the secondary coil. It is converted back into a voltage. Shielding can be added to either coil of the transformer system. The aim is to direct the field effects. This can be useful in multiple pad charging applications. The aim is to eliminate power cross-talk. Wireless inductive charging is gaining popularity for use in consumer rechargeable applications such as cordless power tools, net books, note books and other power-hungry rechargeable devices.

Market driving forces relate primarily to the need for efficient power generation for autos. Wireless car charger manufacturers are positioning car models with wireless charging to drive demand at the high end. Many electric vehicle car vendors are making wireless power a reality. Only two vehicles are supported now, the Chevy Volt and the Nissan Leaf.

Wireless power is an emerging technology that creates a better charging experience for consumers. Just as Wi-Fi replaced the need to use an Ethernet cable for Internet connectivity, so also wireless power is making recharging wirelessly a feature that is demanded by consumers with an electric vehicle.

According to Susan Eustis, lead author of the WinterGreen Research team that prepared the study, “wireless car charging represents the major force impacting electrical charging. Car vendors are coming together to create standards and to leverage standards to gain competitive advantage with highly differentiated product sets.”

Inductive wireless charging does not use as much grid electricity to achieve device charging. Electricity is generated in a coil. Inductive charging means the primary coil in the charger induces a current in the secondary coil in the device being charged.

Wireless charging is already available for-low power applications. The charging systems are suitable for electronic devices. Wireless chargers use magnetic induction. They offer the promise of being able to place a car over the charging device and have the electrical vehicle EV charge automatically — no fiddling with cables required. Remote power transfer is a complex business with some very fine tuning required to make it work well. Wireless charging is more accurately described as “inductive charging” because it uses magnetic induction.

Inductive charging uses magnetism to transmit energy. The current coming from the wall power outlet moves through the wire in the wireless charger, creating a magnetic field. The magnetic field creates a current in the coil inside the device. This coil is connected to the battery and the current charges the battery. Cars must have the appropriate hardware in them to support wireless charging — a device without the appropriate coil cannot charge wirelessly.

Consideration of wireless car charging market forecasts indicates that markets at \$1.7 million will reach \$4.6 billion by 2019. Growth comes as a result of the rapid adoption of electric vehicles that pushes the user base up by 2019. While wireless car charging is considered a perquisite for an EV, it is soon expected to become a necessary feature.

## I would like to order

Product name: Wireless Car Charging: Market Shares, Strategies, and Forecasts, Worldwide, 2013-2018.

Product link: <https://marketpublishers.com/r/W86F2510255EN.html>

Price: US\$ 3,800.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/W86F2510255EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970

