

**SMART
PARKING**

IS EXPECTED TO
GROW WITH

12.8% CAGR

REACHING

\$9,16B

IN 2019

SMART PARKING TECHNOLOGIES

ACCORDING TO MARKET SAND MARKETS, THE GLOBAL PARKING MANAGEMENT MARKET WILL GROW FROM \$5025.9 MILLION IN 2014 TO \$9,160.8 MILLION BY 2019, AT A COMPOUND ANNUAL GROWTH RATE (CAGR) OF 12.8% DURING THE FORECAST PERIOD 2014 - 2019

FROST & SULLIVAN HAS ESTIMATED "TOTAL SMART PARKING MARKET REVENUE IN EUROPE AND NORTH AMERICA STOOD AT \$7.05 BILLION IN 2014 AND IS EXPECTED TO GROW AT A COMPOUND ANNUAL GROWTH RATE (CAGR) OF 18% TO REACH \$43.56 BILLION IN 2025"

SMART PARKING TECHNOLOGIES

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Advantech

Ekkersrijt 5708 Science Park, Eindhoven 5692 ER
Son, The Netherlands
embedded@advantech.eu

www.advantech.eu



Due to number of vehicles proliferation, traffic and parking problems are becoming huge: current transportation infrastructures and car park facilities are unable to cope with density of population

Drivers, urban planners and car park owners see the parking issue from totally different perspectives: drivers just want to quickly find free parking lots close to malls, shops, hotels, restaurants, amusement or entertainment places; urban planners are focused on reducing parking-related traffic in the city; parkings owners and operators - especially in retail and hospitality - are looking for reliable services and technologies, comprehensive traffic engineering expertise, optimum car park occupancy and hassle-free operation and solutions to attract customers

Prompt high-quality parking service is crucial

Smart parking service systems can increase operational efficiency and reduce customer wait times: wayfinding solutions that not only indicates available parking spaces, but also provides specific directions to assist customers locating a parking space

Equipped with cameras and payment terminals, smart parking service systems also supports self-service applications by enabling customers to make payments using cash, credit cards and even mobile devices

Streamlining operations, smart parking service systems can improve service quality and ensure positive customer experiences

Finally, smart parking service system can also be integrated with remote management software that enables managers to remotely monitor devices and conduct database backups and recovery, thereby reducing maintenance downtime and enhancing system security



SMART PARKING AND ELECTRIC VEHICLES CHARGING STATIONS

An Opportunity in Retail and
Hospitality

Probably right now, the biggest supermarket closest to your home is attracting customers offering low cost fuel: last December, BBC announced that "Morrisons, Tesco and Sainsbury's have cut the petrol price below £1 a litre, the lowest UK price level, excluding special promotions, since 2009"

Of course, you may say that future of mobility, as the experts agree, will be electric and indeed it will be

This is really a huge opportunity: electric cars, like all other vehicles, need to be parked and to get their batteries recharged at relatively short intervals. So why not offer electric recharging stations at parking facilities in Retail and Hospitality?

When Retail or Hospitality location is near to thoroughfares, visible from the road, with easy ingress and egress, has access to electrical grid and safe, is eligible to install a charging station for electrical vehicles

Of course, charging stations roll-out requires investments: in a 2013 report, Deloitte stated "that electric vehicle (EV) charging infrastructure can be effectively rolled out, with future earning opportunities available to utilities and other third parties willing to invest in public charging stations. The research indicates that the key to profitability depends on various pricing models and the level of EV penetration. Present trends draw into question whether adequate levels of penetration can actually be achieved, absent subsidies, to offset infrastructure investment cost"

RELATED TOPICS

➔ Overstay parking



Retailers sought to manage the increasing problem of overstay parking and non-customers parking misuse

Smart parking systems can be valuable tool in parking enforcement by monitoring the real-time usage of individual parking spaces

➔ Plate recognition



Automatic number plate recognition (ANPR) is a technology that uses optical character recognition on images to read vehicle registration plates.

It can use existing closed-circuit television, road-rule enforcement cameras, or cameras specifically designed for the task

➔ Video-surveillance



Due to constant influx of vehicles coming in and out of parking lots, control each vehicle is mandatory to nurturing a safe environment for everyone

Implementing a reliable surveillance system within the confines of a parking lot greatly enhances security and safety



PARKING MANAGEMENT: THE ROLE OF HARDWARE, SOFTWARE, SERVICES

Smart parking technologies are enabling a brand new parking experience

Sensor networks that detect vehicle occupancy, embedded pcs, IoT gateways and cloud are providing the basic intelligence behind smart parking systems

These systems provide real-time parking lots availability info to simplify parking spaces finding

Smart parking systems inform drivers where to find vacant parking spaces via smart phones or electronic street panels

Smart Parking systems also allow parking operators to monitor and manage the parking spaces 24/7, obtaining real-time occupancy data and historical analytics reports to optimize operations



Check-in

Engaging shopping experience begins with easy car parking: Smart Parking systems allows you to make it simple and easy for your customers park for free (while all the others pay) or get reserved exclusive parking places



Car park finding

Smart Parking Technologies make enable customers to find quickly and easily parking spaces: less time parking = less stress and happier customers



Parking analytics

Never before possible intelligence enables to see what is happening in parking lots to make data-based decisions. Parking analytics enacts information-based decisions to have a positive impact for customers while parking

an eye to the market

Parking Systems Providers

UK

- **Deteg**, Smart Sensors
- **Smart Parking**, Park App / Payments
- **Serco**, Parking meter systems / Space availability / parking enforcement
- **Parkopedia**, Parking finding App

The Netherlands

- **Q-Park**, Parking builder

GERMANY

- **Siemens**, Barrier Paystation / Parking guidance / Pay-and-display machines, Germany
- **MSR-Traffic**, Counting and single space detection

AUSTRIA

- **Skydata**, Parking Management
- **Kapsch**, Analysis / Fee collection / Parking space management / Sensors
- **Swarco**, Payments / Marking systems / Signage

JAPAN

- **Amano McGann**, Parking Access Control

SPAIN

- **Urbiotica**, On-street parking management / Parking guidance / Shopping centers parking
- **Worldsensing**, Parking finding
- **Libelium Comunicaciones Distribuidas**, IoT
- **ParkHelp**, Parking Guidance / License Plate Recognition / Park Manager Softwares

AUSTRALIA

- **APARC (Australian Parking & Revenue Control)**, Parking payments, Australia
- **Wilson Parking**, Car park operations

USA

- **SP+**, Parking Management
- **TransCore**, Parking Access & Control - RFID
- **Xerox**, Parking guidance / Payments / Enforcement
- **IPS Group**, Payment Systems
- **3M**, Barcode Systems
- **Cisco Systems**, Smart+Connected Wi-Fi infrastructure (IP cameras, sensors, and smartphone apps)
- **Cubic Corporation**, Mobile Payments
- **IBM**, Business intelligence and analytics
- **Haystack**, Park App
- **ParkMe INRIX**, Parking App
- **Streetline**, Parking analytics / Inventory management / Guidance app
- **T2 Systems**, Permit management / Enforcement / Parks / Pay stations / Vehicle counting / Event parking
- **ParkMobile**, Mobile payment app

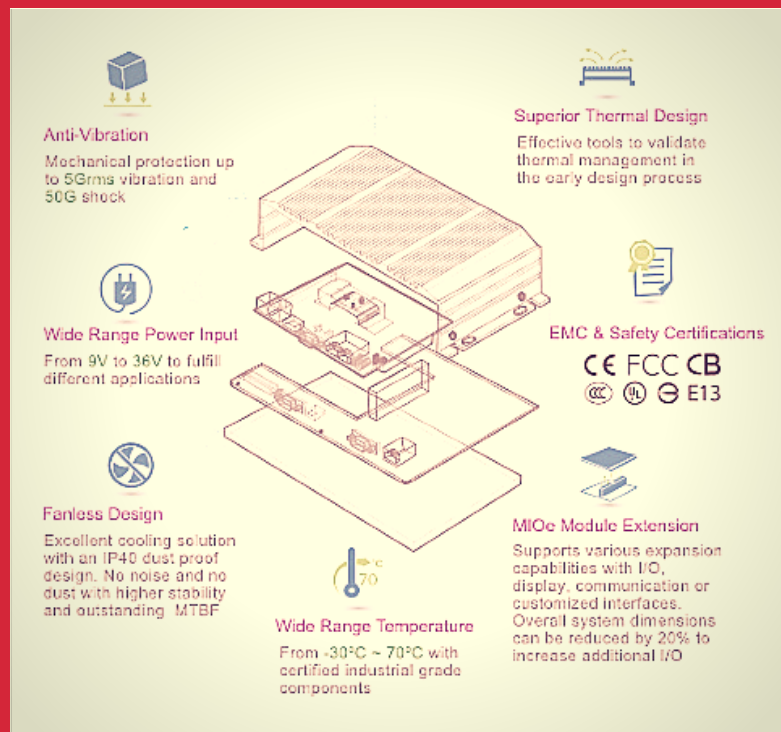
ADVANTECH

Fanless Embedded Systems for Smart Parking

Advantech's ARK fanless embedded systems are self-sensing, intelligent devices that integrate advanced software and hardware technologies, enabling customers to realize IoT applications.

These systems are capable of self-management, seamless communication, and self-protection, and can

be used to conduct real-time monitoring and controlling of connected peripherals, automatic data collection, and reporting of abnormalities. The "Self-Sensing" capability of ARK systems can be easily initiated in various application environments



Request more info: embedded@advantech.eu

Visit:

<http://select.advantech.com/smart-parking/>

ADVANTECH
MISSION

“
ENABLING
AN
INTELLIGENT
PLANET
”

Founded in 1983 and headquartered in Taipei, Taiwan, Advantech is a global company focused on the realization of PC platforms, softwares, embedded and industrial automation solutions, providing systems integration services and customer-centric designs.

With over 7300 employees, 2 manufacturing plant, 4 logistics centers, 15 service centers, Advantech is present in 21 countries worldwide.

In over 30 years of growth, Advantech has established itself as a reference brand in the industrial PC market, reaching the 7th place in Interbrand ranking of the 20 Taiwanese brand with greatest economic value and, according to IHS, already in 2013 by holding the 29.5% market share of global industrial PC.

To achieve its mission - Enabling an Intelligent Planet - Advantech is geared toward the Internet of Things, Smart City and Industry 4.0 and is structured in IIoT divisions, Smart City and Embedded Design-In.

The IoT architecture developed by Advantech is divided into three layers: devices, sensors and gateways; WISE-PaaS cloud services for business intelligence, machine learning and virtualization; cloud platforms for specific sectors.