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Sipark SSD car park guidance system

Professional solution designed to industrial standard



Data concentrators using advanced CAN bus technology can do more than control up to 240 multi-color sensors



Parking space availability at a glance: Could there be a more pleasant invitation to the car park?



The ultrasound sensor determines with absolute accuracy if a parking space is occupied or empty and it can even detect motorbikes

Sipark SSD: exactly the professional solution designed to industrial standard that you are looking for



No matter if you are looking for a parking solution for 10 or 15,000 parking spaces – with our Sipark® SSD car park guidance system you will always be on the safe side. Since our system monitors every single parking space, it is far more accurate and flexible than the usual counting systems. Moreover, Sipark SSD is based exclusively on hard- and software components that are setting worldwide standards in a wide variety of industrial sectors and have proven their high functionality and reliability in countless applications. More than 100,000 parking spaces in multi-story and underground car parks all over the world are already being monitored and controlled in a professional manner by Sipark SSD.

From the smallest to the most extensive solution

With its completely modular structure, Sipark SSD can be perfectly adapted to suit projects of any size. So no need to pay for an overdimensioned solution – the system can always be expanded to cover additional parking spaces or include new functions. Based on this system we have already realized special projects with only 10 parking spaces, but also the world's largest car park guidance system covering a total of 15,000 parking spaces. Whatever the scale of the project, we always provided the customer with an economical solution perfectly tailored to his requirements.

100 percent accuracy and transparency

“Measuring instead of counting” is the working principle of Sipark SSD. Every single parking space is equipped with an overhead ultrasound sensor that detects its occupancy status and transmits the data in real time to the control system. This guarantees an accuracy of virtually 100 percent because it prevents the accumulation of possible counting errors. The total transparency of occupancy levels and exact locations enables a number of advantageous functions that mere counting systems cannot provide.

Quick and reliable guidance to the next available parking space

For the car park users, Sipark SSD means convenient and stress-less parking because they are reliably directed on the shortest route to the nearest free parking space. But for the car park operator, Sipark SSD means much more: optimized occupancy, reduced emission levels, flexible parking space allocation or reservation for specific groups of users, a multitude of statistical analysis tools etc. In short: Sipark SSD provides everything for optimum car park management.

The right sensor for every application

The Sipark SSD ultrasound sensors are installed in the ceiling above every single parking space. Usually at a height that allows only passenger cars to be parked underneath. But we also have the right solution for monitoring truck parking spaces: overhead sensors with an especially high vertical detection range (5 meters). If you need to reliably detect obstacles in clearance areas, we can provide front sensors that monitor the space horizontally instead of vertically. And even if your budget does not allow the installation of an individual parking space monitoring system, we can offer you an efficient solution: Our counting sensor unit works with much higher accuracy than any loop detector/barrier system.

The principle: measuring instead of counting. The design: internationally proven industrial standard

Sipark SSD is the only self-correcting guidance system that guarantees close to 100 percent reliability in directing the driver to the right parking space. This makes it far superior to normal counting systems, which may not only produce counting errors, but even accumulate them.

Every space is monitored individually

Every parking space is equipped with an overhead ultrasound sensor that detects the current occupation status with absolute accuracy. This means that the operator always has a complete overview of how many and in particular also which parking spaces are currently occupied and which are free. This facilitates car park administration and helps optimize occupancy levels.

In addition, it is possible to assign special-zone status to certain parking spaces and reserve them for a specific group of users – permanently or for a certain period of time only. The dynamic direction signs will then lead each group of users directly to the zone reserved for them. The system drastically reduces the time drivers need to spend for searching a free space. If the system includes zone or lane counting units, it is even possible to prevent the entry of too many drivers into a sector with only a few remaining free spaces.

Robust technology according to international industrial standard

For small or mid-sized car parks, a PC is sufficient for running Sipark SSD. But in these cases we use especially robust Industrial PCs that have proven their reliability in tough industrial environments. For larger applications we rely on a technology that has become the established solution worldwide for demanding applications in all industrial sectors: Simatic controllers.

With our Simatic controllers, we realize large, high-availability systems with decentralized control that benefit from all the advantages of international industrial standard components.

The “heart” of the solution, the occupancy sensor, is based on an especially reliable ultrasound technology for added robustness and insensitivity to interferences.

Sipark SSD uses the AS-i bus system developed for industrial electronics applications. With AS-i, power and data are transmitted on the same line – for safe and reliable data transmission and low cabling costs.

Our new multi-color ultrasound sensor allows a whole range of new guidance functions because it provides distinctive color coding for up to six different types of parking spaces. These functions are based on CAN bus technology, which has proven its excellent performance and high data transmission capacity in industrial environments. Existing Sipark SSD systems can easily be upgraded with our new multi-color sensors and displays.

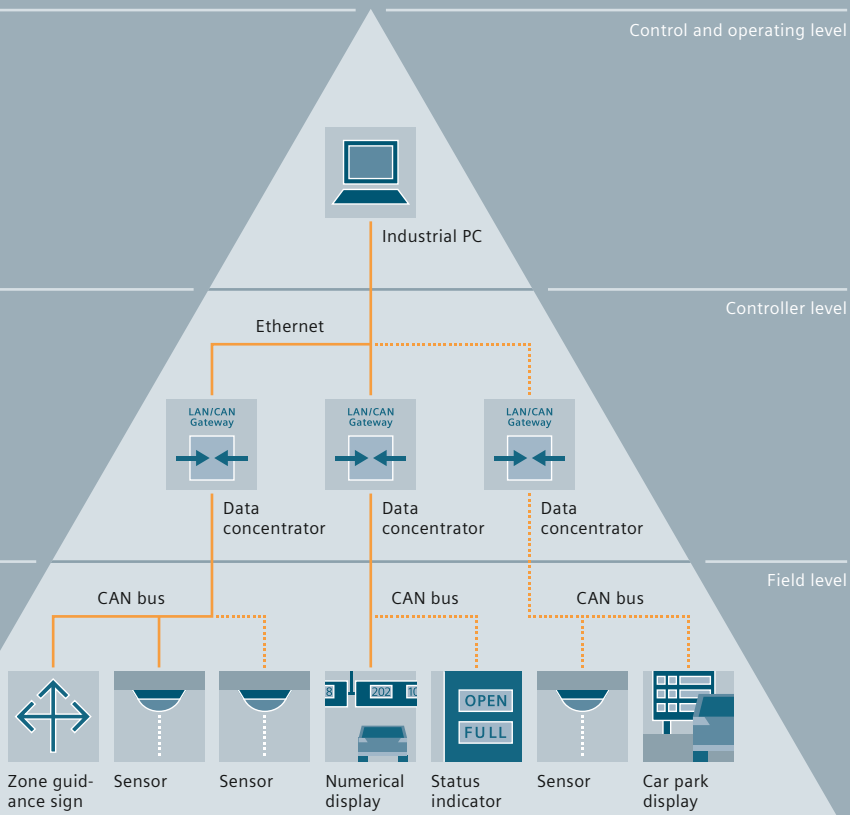
Well prepared for integration into higher-level systems

Wherever standardized components and software systems are used, integration into higher-level systems becomes smooth and easy. Sipark SSD can be linked up effortlessly to your overall car park management system or to a building automation control room. And you can combine it with external parking guidance systems or reservation systems at any time.



“Which way to turn for a free parking space?”
A question that’s clearly answered by the dynamic LED direction signs

Sipark SSD:
clear, hierarchical system structure according to industrial standard



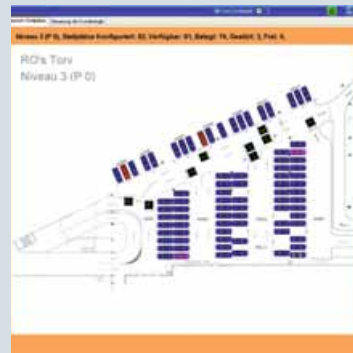
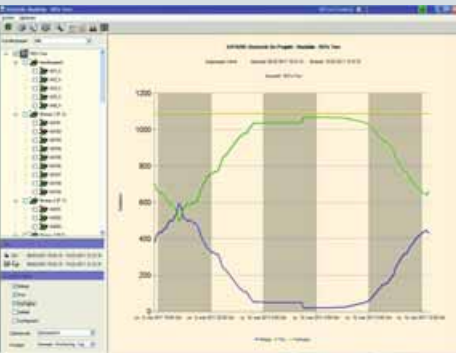
The new multi-color ultrasound sensors display the current occupancy status of each parking space. The colors can be used to reserve certain parking spaces for specific user groups. For example:

- Red: occupied
- Green: free/open to everybody
- Yellow: VIP parking
- Blue: handicapped parking
- Pink: parents-with-children parking
- Neutral: assignment to any operator-defined user group

At a glance: clear overview of the number of occupied or free parking spaces – for the entire car park ...

... and for each individual car park level

General overview display for an entire complex of several integrated car parks (pictured: Munich Airport)



Nearly unlimited options for car park management. And every single one is easy to implement

Thanks to its hierarchical system structure, Sipark SSD offers a truly extensive array of possibilities for customizing and intervention. For example, car park operators can use the dynamic direction signs to guide certain groups of users to specific zones or to accelerate car park evacuation after major events, to name just a few possibilities. What is more, thanks to the system's intuitive user interface all these options are extremely easy to implement. Manual intervention is possible at any time.

Reserving parking spaces? Certainly!

The precise monitoring of every single parking space makes it possible to reserve or assign specific parking spaces to certain groups of users (for example: parents with small children, Lufthansa Senator Card owners, patients of a doctor's office, or customers of a specific shop). This means that businesses residing in neighboring buildings can offer their clients a very convenient service: specially coded customer cards make sure that clients are directly guided to the parking spaces reserved for that particular business. And as a special courtesy, businesses can even specify in the system that they will directly pay the parking fees for these clients.

It goes without saying that Sipark SSD also offers convenient tools for realizing advanced telematics applications, such as paying parking fees per mobile phone, reserving a parking space via the Internet or the mobile phone, and so on.

Visualization and statistics tailored to your needs

Exact and complete information on all essential operational parameters allows targeted measures for occupancy optimization. To this effect, the Sipark control center provides a wide array of useful data and statistical analyses, for example information on current overall car park occupancy, or the occupancy of each zone or car park level at certain times of day, or even occupancy patterns of individual parking spaces. The system even records parking times so that a click of the mouse suffices to find out the average occupancy time of specific parking zones or areas.

Our control center offers advice and support around the clock. Via the Internet, our control center personnel can even log into your system for online support. Of course only if and when you wish them to do so



Identifying the most suitable financing facility is not always easy. But our expert teams will find a solution for any project requirements



With Siemens, on-site service is always carried out by highly qualified specialists



What do cars, buildings, yachts and our Sipark SSD car park guidance system have in common? Easy leasing facilities!

With its workforce of around 450,000, Siemens is one of the largest international companies and active in 190 countries around the world. This means that customers deciding in favor of a parking solution based on our car park guidance system are provided "automatically" with a wealth of services and customized financing facilities far beyond what is usual in the market.

Wherever your car park is located – expert advice is not far. And free of charge to boot

Our sales engineers for car park systems are experts in all areas of parking technology. That is to say, they are not only familiar with every detail of our Sipark technology and products, but they also understand our competitors' systems as well as the requirements and problems of owners and operators. All through the planning stage of a car park guidance system, our first-rate experts support the customers with sound advice – free of charge and without obligation.

Exactly as much service and maintenance as you wish

With our customized service and maintenance contracts you can have your car park guidance system serviced to exactly the extent that you deem necessary. Of course, it always makes sense to conclude a preventive maintenance contract, too, because then no necessary measures will be accidentally forgotten, and potential causes of malfunctions can be remedied before they present a risk. By the way, our service portfolio includes an attractive electronics insurance that, on your request, we will arrange directly with the insurer.

A control center at your disposal 24 hours a day. And 365 days a year

As part of a service agreement, our "24/7" technical control center will be available to you around the clock on every day of the year. In cooperation with our worldwide spare parts logistics services, this control center guarantees immediate and efficient help in any emergency.

Individual financing solutions offered by Siemens Financial Services

We will be glad to help you define and arrange the optimum financing facility for your project, for instance an attractive leasing contract; or a financing solution in which the revenue generated by the newly installed system will pay for the investment; or even an operator model in which Siemens becomes your long-term partner.

Sipark SSD – an added-value system proven in daily operation. For over 100,000 parking spaces all around the globe

Example Munich Airport: The world's largest car park guidance system

In 2007 we equipped the car parks at Terminal 1 of "Franz Josef Strauss" Airport in Munich with Sipark SSD. Added to the existing Sipark SSD system used at the Terminal 2 car parks, this created the largest car park guidance system in the world. A total of over 15,000 parking spaces equipped with individual occupancy sensors are monitored and controlled from a single control center, ensuring highly convenient parking for passengers and guests since drivers are guided to the next available parking space on the shortest route. No more valuable time lost!

Example Migros in Lausanne: better service for long-term car park users

In Lausanne/Switzerland, the installation of Sipark SSD has helped solve a problem that used to frustrate the long-term users of the Migros car park. This car park provides 27 parking spaces for customers of the Migros supermarket; the remaining spaces are reserved for long-term car park users. However, it happened quite often that, when all 27 Migros spaces were already occupied, Migros customers parked on the spaces rented out to the long-term users – who were quite annoyed, of course. Our individual parking space monitoring system, installed for the 27 Migros parking spaces, provides the perfect solution: When all spaces reserved for the supermarket are occupied, the barrier opens only for the long-term users.

Example Playmobil, Zirndorf: no additional waiting time for impatient children

The Playmobil FunPark in the small Franconian town of Zirndorf is an attraction for children from all over Germany. No wonder that the Playmobil car park is usually very busy. However, since Sipark SSD helps every visitor find a free parking space quickly, the children's patience is not put to the test any longer than absolutely necessary. The individual parking space monitoring system covering 853 spaces is combined with lane counting units and a total of 30 zone occupancy displays in order to prevent mutual obstruction of the incoming and outgoing visitor flows. Thus the system guides new arrivals around any zones that are currently especially busy.



A few examples out of more than 200 projects all over the world

Customer/Project	City/Country	Parking spaces
Olma Messen fairgrounds	St. Gallen/Switzerland	142
River Park	Bratislava/Slovakia	224
IKEA shopping center in Webling	Graz/Austria	550
Capital Tower	Singapore	600
Concert Hall	Athens/Greece	736
Ro's Torv shopping center	Roskilde/Denmark	904
GTC Avenue Mall	Zagreb/Croatia	1,070
"USCE" multi-purpose center	Belgrade/Serbia	1,236
Leppävaara department store	Espoo/Finland	1,620
CITTI-PARK shopping center	Kiel/Germany	2,180
National Convention Center	Doha/Qatar	2,932
Düsseldorf Airport	Düsseldorf/Germany	9,200



At the Carrefour Hypermarket in Istanbul/Turkey, our Sipark SSD system monitors a total of 2,400 parking spaces



Munich Airport operates the world's largest car park guidance system with over 15,000 parking spaces



At Shanghai Twenty-First Century Information Technology Co., Ltd. 358 parking spaces are individually monitored and controlled

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The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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