entervo product world.
The ground-breaking spectrum of integrated parking solutions
Parking systems
Maintaining values to create a sustainable future:
**Tradition and innovation** – trademarks of being a global market leader

A company with heritage and character

- Founded in 1872.
- Number of employees: > 1,950.
- Developed from a mechanical engineering company to a global systems provider.
- Global market leader with future-proof system designs.
- Continuous investment in innovative production technologies.
- Continuous investment in highly qualified employees.

From the beginning, Scheidt & Bachmann has held high the standard of being a reliable partner to its customers based on continuity and farsighted vision.
Since its founding in 1872, Scheidt & Bachmann has become a global solutions provider. The company’s worldwide success is due to its innovative vision and customer-oriented approach.

We take development one step further
At Scheidt & Bachmann, it is our tradition to plan our company’s development so that it is both consistent and long term. Since our early beginnings as a mechanical engineering company, we have made significant targeted investments in the continuous training of our employees and in highly developed state-of-the-art production technology. From manufacturing of level crossings, signal boxes and signalling systems for railways, the company expanded in the 1930s to the construction of fuel pumps. Since the 1960s the company has been developing and delivering access control systems for multi-storey car parks, swimming pools and leisure facilities. The trend towards automated fare collection systems at the end of the 1970s led to the forming of the company’s fourth division, of Fare collection systems. Systematic driving forward of innovative processes has enabled Scheidt & Bachmann to continuously evolve into a global leader in its chosen fields. The result is that our system solutions meet all international standards. Also by adopting a modular systems architecture the Scheidt & Bachmann customer has piece of mind that their investment is future-proof to meet the standards of the future.

Giving our best, together
A pioneering spirit and the continuous improvement of our products have transformed us from what was once a mechanical engineering company to an international system integrator. This success is not just possible thanks to state-of-the-art technology, but our highly qualified employees also contribute to this effective concept. The result: For five generations, the company has been run by the founding family and many of our employees have been connected to the company for generations.
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entervo – The world of integrated parking solutions.
System generation 2.0 – The new sustainability.
With its perfectly harmonised hardware and software, entervo offers a technological product world of consistently integrated parking solutions. The innovative strength of the new system generation entervo.com 2 transforms the growing demands of our age into a source of growth potential for parking operators.

entervo stands for a broader vision and philosophy which brings together all the key aspects of modern parking management. An approach determined by global responsibility, the establishment of trend-setting standards and integrated systems, the realisation of maximum security, service and convenience... All these are the essential components of our integrated solutions. With their wide range of positive effects, they essentially consist of intelligently networked functionalities for globally scalable applications.

With the global brand entervo and its new system generation, Scheidt & Bachmann takes a deliberate stand for sustainably successful development, working in partnership towards a secure future.
The new software system generation: entervo.com 2.  
Sustainably efficient – comprehensively integrated.

In addition to sound and reliable equipment technology, control software is the real technological heart of any progressive parking management system today. This is why Scheidt & Bachmann’s new system generation entervo.com 2 combines all the functions and application features required for sustainable parking management: web-capable Java technology, a highly ergonomic user interface and fully integrated modules which permit real time data flow between levels and units. With this architecture Scheidt & Bachmann is able to offer free scalability – from a regional to a global format.

Thanks to web technology: seamless and intelligent networking everywhere
Web technology and Java have become established worldwide as standards for the networked control of future-oriented IT systems. This is why Scheidt & Bachmann consistently applies this highly open-system, versatile technology. Java-based applications can be installed on all operating systems established on the market. Unlike classic client/server architectures, entervo’s web technology does away with the time-consuming and high-maintenance installation of software applications on workplace computers. Logging on to the entervo server via internet instantly transforms every workstation and notebook into a fully functional parking management workplace.

Multifunctional and with modular extension capacity as required
If necessary users can start their browser more than once, enabling them to run a different application in each window and work in parallel (multi-window function). This means that a user can monitor the status of various parking facilities in the “Device Control” application while at the same time monitoring all incoming reports in the “Event Ticker” which can be configured for a specific user. In another window – on a second screen, for example – CCTV images from live cameras can be viewed and the data of long-term parking customers can be managed. Providing they offer sufficiently high resolution, large monitors can display all the main applications on a single screen. And it goes without saying that entervo has multi-user and multi-car-park capability.

Alarm management – the appropriate response to short term events
A key function of modern parking management software is that of monitoring. entervo.com 2 users have at their disposal a highly flexible, centrally controllable and locally effective alarm management system. Not only are all routine operations recorded but also any exceptional situations deviating from the norm. If parking-related occurrences are classified as alarm-worthy based on a comparison with specified parameters, the system forwards them to the relevant staff member – optionally by e-mail, too. To ensure the user always has a clear overview, entervo clusters recurring alarms into so-called “summary alarms”.
entervo also allows information on alarm processing to be actively passed on to staff coming onto a new shift – always clearly structured and documented for permanent reference. entervo-based alarm management thus enables operative business processes to be handled more directly and efficiently in the future.

**Reporting tools: making company figures look good**

With the integration of a flexible reporting module, entervo offers the user a diverse range of analysis options. It also comprises many useful presentation tools which help convey even complex material such as statistical analyses in a plausible and transparent manner. When creating a report, you can either start from scratch with a digital blank sheet or you can choose from a wide range of professionally pre-formatted templates.

The so-called drill-down function is especially useful for detailed factual research. It can be used to zoom in deep at any given point in the data, “drilling” right down to the concrete transaction level. In order to ensure sound compatibility, entervo reporting has an open IT format, so convenient data exchange from and to MS Excel is possible at any time. In concrete terms, this means web access through entervo and direct access from Excel. So it is simple for the customer to share data for further processing as required. For long-term, broad-based analyses entervo also enables high-performance handling of extensive historical data pools. In short, entervo offers all the functions required for professional reporting in parking management today.

**Green Efficiency – sustainability which is worthwhile in every way**

As part of the Green Efficiency concept initiated by Scheidt & Bachmann, entervo.com 2 contributes to sustainable economic development. By means of intelligent software control, parking facility equipment can be scheduled to switch to an energy-saving standby mode during overnight closure periods, for example. Remote control of equipment and alarm functions remain fully functional and networked sensor technology immediately “wakes the system up” if the situation requires. This enables energy cost savings of up to 70%, as well as reducing exhaust emissions so as to protect the environment. All in all this means top performance and optimum efficiency in all aspects of the parking world.

**Key Features of entervo.com 2:**

- Investment security and long-term feasibility due to the use of recognised IT industry standards.
- Worldwide connectivity due to web technology.
- Extensive process control with integrated functions.
- Flexibly expandable as needed due to modular architecture.
- Scalable from regional to global.
- High level of saving potential.
- Accelerated payback on investment.
The entervo parking management system is designed to offer ideal solutions for all areas of progressive parking management – whether the applications are to address the issues of efficiency, monitoring, service or security. Our technological development strategy is geared towards making all operators a consistent, precisely tailored offer – both for one-off, regional set-ups and at the fully networked global level. To this end, the basic software entervo-com 2 incorporates the essential core applications of a modern parking management system.

A high-performance module family
Each of the components of the entervo building block system can be incorporated in the software portfolio as part of the basic system – either individually, as a complete package or else in stages as successively added supplements. If necessary individual modules can even be used on a stand-alone basis, i.e. without the basic system, just as required by the specific car park and corporate strategy.

The entervo suite of products comprises a number of modules, sub-systems and add-on functions. These are partially industry specific as, for example, License Plate Inventory at airports or the ‘hotel solution’, partially country specific. LPR, eCommerce and GMD are denominations of three module options spanning across all parking missions.

entervo LPR – seamlessly integrated license plate recognition
LPR works in principle as follows: At entrances, exits and if necessary on transit passages, infrared cameras take photographs of all vehicles passing through. The software automatically records those sections of the image files which contain license plate information; this is then analysed by an OCR engine and added to the relevant transaction data set.

Outstanding features: secure, efficient, convenient.
Automated license plate recognition is an area of technology with remarkable potential. With its latest system generation entervo.com 2, Scheidt & Bachmann therefore offers a License Plate Recognition (LPR) System as a fully integrated add-on module. This system and its functionalities have been developed especially for the parking industry, making a virtually “barrier-free” parking facility an essentially feasible prospect.

entervo eCommerce – Opening up new marketing worlds
The parking business is able to interact much more closely with the online world. The consistent use of the entervo eCommerce platform opens up remarkable growth opportunities and communication possibilities. Future-oriented players in parking management understand that parking has long ceased to be a banal process. With a professional set-up and the appropriate interior design, parking is an attractive service product. For this reason it is important to
sound out market potential and tap into the opportunities available for maximum benefit.

“e” – for eCommerce – “e” for effective operations
Buzzwords such as “pre-booking”, “print-at-home ticketing” and “self-service” represent the initial core functions of a range of possible application which is sure to expand. The entervo extension module eCommerce offers the ideal basis on which to set course for sustainable future success, in terms of both technology and strategy.

entervo GMD – global control of parking operations
Fact-based assessments and decisions, centralised control and monitoring – these are crucial to successful parking management. Scheidt & Bachmann has developed a centralised management tool especially for this purpose called “Global Management Dashboard”, or GMD for short. GMD overcomes the existing boundaries and limitations of parking management. For the first time, operators can approach parking management holistically – going beyond the limitations of varying system manufacturers and bringing together the two areas of on-street and off-street parking, which were previously separate.

entervo GMD offers comprehensive management functions in a total of four areas: Business Performance Management (BPM), Financial Control Management (FCM), Operational Control Management (OCM), eCommerce.

Key Features of entervo lPR:
• Secures profits by ruling out fraud.
• Extended customer service – especially in cases of lost or unreadable tickets, as well as for VIPs and pre-booking customers.
• General increase in security.
• Extended capabilities in terms of alarm management, search functions and statistical analyses.
• Effective control instrument for target-oriented geo-marketing.
• Adherence to legal provisions with license plate number print.

Key Features of entervo eCommerce:
• Optimisation of parking facility capacity usage by means of yield management.
• Extended customer targeting and intensified offer branding.
• Basis for developing and promoting new parking products.
• Increased turnover due to reservation fees.
• Cost reduction – customers update contract data themselves.
• Scalable eCommerce platform with multi-site and multi-car-park capabilities.

Key Features of entervo GMD:
• Central data handling and control for top management decisions and monitoring.
• Consolidation and overview due to the integration of parking systems of any manufacturer.
• Integrated parking management – business, finance, operations.
• Portal solution for location-independent access, maximum flexibility and easily comprehensible cockpit visualisations.
• GMD as “Software as a Service” – minimum start-up costs, maximum security and functionality.
Between entry and exit.
Procedures to efficient perfection.

Even though the process of driving in and parking then collecting the car and driving out might appear to standard, from a technological and organisational point of view the entries and exits of parking management facilities can vary considerably, depending on actual conditions and operating structures – whether in terms of geographical, constructional, operative, legal or other circumstances. As a market and innovation leader in the parking sector, Scheidt & Bachmann offers highly progressive entervo technology so as to be able to handle every scenario to meet all needs and ensure long-term feasibility.

A wide range of parking options – one system: entervo
Depending on system technology, the entries and exit devices of the PGL series are fitted with the relevant functional components. These perform functions such as issuing tickets with bar codes or magnetic stripes or else ChipCoins which can be reused at will, recording parking data on these such as time stamp, fee etc., reading, validating and collecting the medium. According to the design of the facility, entervo components are also capable of performing dual functions. For example, the magnetic stripe terminal can also be used to process credit cards, debit cards, money cards or customer cards. In order to be able to process non-contact access media for long-term parking, control devices are fitted with the relevant RFID systems.

In cases where operating concepts, local custom or regulations require, entervo devices can also enable short-term parkers to pay their fee directly in the exit lane. In some countries it is common for the guest to be able to pay for a parking ticket at a manned cashier terminal – either solely or optionally. Here the components for manual handling of payment transactions are fully available to the check-out assistant but the operator still retains complete audit-proof control of all actions. Any fraud attempts on the part of check-out personnel can be conclusively exposed. As an additional payment option in the exit lane, Scheidt & Bachmann offers an exit device with integrated acceptance of credit cards, debit cards and small change. So-called “lost ticket” procedures – at both fixed and variable rates – can also be handled directly at the exit with the customer: here the customer makes contact with personnel by means of an intercom connection integrated in the control device.
Device extensions – technology with activation capability

Instead of the entrys and exit devices, other technologies can also be used which initiate the opening of a barrier or roller shutter. Control solutions are thus available for every system type – whether online or offline. Generally speaking, parking facilities are not used solely by cars but by buses and lorries, too. Scheidt & Bachmann also offers devices with special dimensions for convenient use by this target group, too.

From the beginning: a sense of quality parking

For professional parking facility operators, the entry area acts as a “calling card” to customers. With its entervo technology, Scheidt & Bachmann offers an extensive portfolio of software and hardware to achieve this important look and feel.

Highlights for top-quality fittings

A real eye-catcher is of course an illuminated barrier with ticker text and a news feed function. This means that information can be communicated to the customer immediately on entry, e.g. welcome messages, special opening times, information on special campaigns or commercial advertising placed at a cost by one or more marketing partners ... there is no end to the possibilities. When combined with audio files played at entries and exits, this guarantees that every single customer gets the message.

Control devices and barriers are not only available in the characteristic yellow Scheidt & Bachmann system colours but also on request in every other colouring. The design can be individually selected – including operator logo, of course. Many parking companies already take the opportunity to convey their corporate identity through the individual look of their equipment. In order to generate additional sales, it is also a good idea to place effective advertising at entrance and exit devices and on barriers.

Key Features:

- Adequate control devices for all uses.
- Creation of a high-quality parking experience by addressing customers at entries and exits.
- Multiple options to communicate corporate identity.
- Additional revenues by designing entry and exits as advertising space.
- Bespoke solutions for operators by integrating specific readers.
The system: media variety.
The pass which provides access to the parking world.

In order to calculate fees for parking services in an appropriate manner, all non-contract customers are issued with a so-called medium on entry. This medium contains all the main transaction data such as facility, entry lane, time stamp and fee etc. With entervo, Scheidt & Bachmann provides parking facility operators and their customers with various parking media for short-term parking – depending on preference, experience, operational requirements or regionally established customs.

Tried and tested media according to preference – combinations possible, too

The media can either be tickets with a bar code or magnetic stripe or else ChipCoins. ChipCoin technology is based on a coin-shaped data storage element on which data can be recorded, read and deleted without contact, making it reusable to a virtually unlimited extent. In addition to short-term parking technology, devices can also be fitted to handle other media which are also readable by the system. These include such items as credit cards, debit cards, money cards or company cards – using non-contact RFID technologies for short range or long range use.

Media used in hotels, hospitals, stadiums, companies etc are in usage in entervo. Scheidt & Bachmann naturally has the necessary readers and interfaces integrated in its systems. If necessary, such media as hotel cards, congress cards and association cards can be used as long-term parking tickets.

Automatic license plate recognition with entervo LPR

The virtually “barrier-free” parking facility – one which can be entered without requiring a separate access medium – is now an efficient reality thanks to entervo. Scheidt & Bachmann has already implemented numerous projects worldwide in which access to a multi-storey car park is handled by means of license plate recognition as standard.

The technical principle is as follows: several license plate numbers can be allocated to each long-term parking customer as part of entervo customer administration. When a regular customer enters the parking facility, the LPR camera “read” the license plate number. The system then checks the entry data. If the license plate number in question is identified as being authorized to access, the barrier opens automatically. LPR can also be used to authorize access for short-term parking customers in connection with an online pre-booking system as well as accelerating the exit process for all parking customers where exit barrier opening is based entirely on LPR – both for contract customers and for short-term parkers who have previously paid the relevant fee at the pay station and exit the facility while the ticket is still valid.

As an unambiguous form of ID, the license plate number offers a wide range of benefits. This starts with the prevention of fraud attempts and includes the possibility of determining correct parking fees when a ticket is lost, or professional customer data analysis of short-term and long-term parking customers on which to base reliable company decisions.
Car-2-Infrastructure communication (C2I)

High traffic volumes, the increasing need for parking space and the resulting increase in parking search traffic offer considerable innovation potential in the field of parking space management. Nowadays, modern infotainment systems are an integral part of many vehicles.

Scheidt & Bachmann sees the development potential of this Car-2-Infrastructure communication and implements it in collaboration with well-known automobile manufacturers. A new technological leap forward to more efficient parking: a WLAN module inside the vehicle communicates automatically and intelligently with the operator’s system. This enables free parking spaces to be displayed in the car, no parking ticket is required for entry and exit of course, and even payment is handled by means of direct data exchange with the vehicle. The results are very positive across the board: satisfied customers, an enhanced image for the operator and a reduction in CO₂ emission levels.

New areas and systems: everything can be integrated

Understandably, more and more identification and payment systems from the world of toll systems are moving into the world of parking space management. Scheidt & Bachmann has fitted several projects with electronic toll payment systems. The e-plate – the license plate with integrated transponders – opens up a whole new dimension of contact-free vehicle identification in parking facilities.

So whether a parking operation is run with physically moving control media or using a non-contact system: with entervo, Scheidt & Bachmann always provides solutions which can be appropriately configured and combined. All over the world and on any scale.

Key Features:

- Biggest choice of media in the parking industry.
- Recyclable ChipCoin as ‘green technology’ alternative with lowest Total Cost of Ownership (TCO).
- Seamlessly integrated LPR as introduction to ‘barrier-free’ parking.
- Increase of automation and convenience via Car-2-Infrastructure communication.
- Project- and country-specific integration of toll systems.
Highly practical parking guidance – outstanding within the parking sector.
entervo parking guidance systems.

From a fundamental perspective, the entire business model of parking space management derives from the limited space available for parking motor vehicles. The logic is simple and compelling: if there are more vehicles in search of a parking space than there is space available at any given time, there is a shortage. A driver searching for a space is under greater pressure to find one in spite of this shortage.

Interactive communication for guidance purposes
Guidance to parking areas – starting on motorways and access roads – is often provided by elaborate traffic guidance systems set up by municipalities and local authorities. For parking operators it is of utmost importance that the information exchange with these broad-based traffic guidance systems is reliable in terms of the actual parking space available as such systems provide an essential “sales channel” for the parking business. The activation of signs and banners on the outside of parking facilities is important here, too. Scheidt & Bachmann supports this function with a range of intelligent and extensive data interfaces – including the proactive display of free parking spaces on the internet.

Large facilities – short distances
There is an even greater need to provide clear and appropriate parking space guidance in the case of large-scale, segmented or multi-storey parking facilities – not just outside the facility but inside the actual parking management space itself. This helps maintain the flow of traffic within the various parking areas and buildings by guiding customers as quickly as possible to a vacant space, and thus also helping reduce exhaust emissions and ventilation costs.

Find the space – intelligent systems get you there faster
The task is a complex one, but thanks to the entervo the solution is simple: with the appropriate internal parking guidance system, parking customers are guided as quickly as possible to the nearest areas with vacant spaces. To this end, increasingly frequent use is made of individual space sensors and LED status displays with traffic light function. The core benefit here is that this highly efficient space allocation system guides customers quickly, reliably and with great precision to the vacant spaces. The effect is unmistakable: customers save time and are relaxed. This is what groundbreaking parking technology is all about.

Target-oriented: from entry to exit
A modern internal parking guidance system logically starts in the entry area. Here vehicles are counted as they drive in. Induction loops in the road, motion sensors or light barriers are used to register and analyse the movements of vehicles as they pass back and forward in all lanes. An intelligent software displays guidance symbols in graphic form, according to the specific requirements of the project.
Special indication of parking spaces reserved for women or for the disabled can of course be incorporated in the guidance system if desired.

**Flexible in practice and scalable to an unlimited extent**

The guidance system realised with entervo offers parking companies a wide range of interactive options for ensuring optimum use of capacity and control of traffic flow. For example, the system can be configured so that VIP contract customers are guided to the more attractive areas. What is more, displays or internal barriers can be used to separate off special reserved areas. Or parking search traffic can be directed to adjacent areas in off-peak periods so as to save operating costs (e.g. lighting) by closing off certain spaces. In any case, parking search traffic is minimised by means of intelligent technological support and capacity usage increased. Where operators also have LPR integrated in their parking space management system, this extended information spectrum is of course also included, for example in the graphic display of VIP spaces.

**Benefits with a broader perspective**

The space occupancy and movement data gathered by the entervo parking guidance system can be used in conjunction with individual space registration data to generate highly informative statistic analyses. Broad and in-depth analyses and reports can be generated to provide strategists and managers with a more solid basis for decision-making so as to successfully optimise facilities, sites and the company performance as a whole. And all this is due to open IT architecture and Java technology with extensive link-up and integration options for existing software systems and programs.

**Key Features:**

- High-quality parking experience through effective parking guidance.
- Reduction of traffic searching for available parking space for the benefit of customers and the environment.
- Capacity and utilisation management down to each individual parking space.
- Reduction of operating costs by temporarily and systematically closing down not needed parking space.
First-class payment handling.
Innovative pay technology.

In order to ensure that the services provided by the parking operator are duly recompensed, the parking customer is generally required to pay before leaving the parking facility. It is up to the operator which means of payment the customer is to use or select. Whether “cash is king” or whether alternative electronic means of payment are preferred: Scheidt & Bachmann guarantees maximum security in handling monetary data as well as cash reserves.

Top-level security pays off
With its progressive entervo technology, Scheidt & Bachmann meets the very same stringent security requirements for coin and banknote processing as are applied to international transportation companies for ticket vending machines. In terms of cash reserves in particular, Scheidt & Bachmann offers practically oriented product options to reduce operational risks. When it comes to invoice data for cashless payment, Scheidt & Bachmann naturally fulfils security requirements equivalent to those applying to the bank and credit trade, which stipulate a precisely defined procedure in handling this sensitive data. The generation, safekeeping, transfer, migration and documentation of data are all handled with seamless reliability.

Scheidt & Bachmann’s remuneration and invoicing system is PABP certified and fulfils the requirements of the PCI-DSS (Payment Card Industry – Data Security Standard). In many countries there are also special fiscal requirements for cash register systems. Here again, the entervo parking management system holds all the necessary certificates. Scheidt & Bachmann goes a significant step further: the software certificate (independent accountants’ report) of an international auditing company confirms seamless documentation and traceability of all accounting data. This renders fraud by internal staff virtually impossible, thereby significantly minimising operational risk and increasing competitiveness.

The language of money: always understood
Any potential international language barriers in menu guidance and payment instructions do not pose a problem: in order to ensure that foreign parking customers are provided with pay station instructions in a language they can understand, Scheidt & Bachmann offers a wide selection of menu and operating languages which can be provided in diverse combinations. entervo’s impressive operating concept with ergonomic user interface and screen animations makes for easily comprehensible automated payment. And if a customer happens to forget to request a receipt, this can be done fully automatically by re-inserting the paid parking ticket. This increases not only the efficiency of parking operations but also customer satisfaction.

Automatic Pay Stations – excellently equipped
Automated payment is essential to modern parking management. The fully automatic calculation of parking fees for short-term parking tickets (bar code, magnetic stripe) and ChipCoins and customer self-service payment of parking fees is just the beginning. The main efficiency-increasing factor is shifting the complex job of invoicing and renewing
long-term parking tickets to the automatic pay station: the fact that long-term parking tickets can be renewed at automatic pay stations means there is no longer any need to send out monthly invoices for rental fees or for individual parking transactions. This facilitates administration – and advance payment on the part of the customer also benefits cash flow.

Payment itself can be made using coins, banknotes or cashless payment media. Coin payment modules are available for simple and highly secure interim payment. Coin capacity can be increased to a virtually unlimited extent by means of so-called add-on hoppers. Scheidt & Bachmann offers all the commonly available banknote inspection and dispensing units, fully integrated in the system – from simple banknote acceptance through to modern “banknote recycling”. Several currencies can be accepted – even for a single payment – and entervo offers flexible conversion functions in line with current exchange rates.

Scheidt & Bachmann also provides automatic pay stations purely for cashless payment as a sensible alternative to fully equipped pay stations (PAY series). The integration of different pay terminals for payment systems which are specific to a project or a particular country can also be taken care of subsequently of course.

POS (Point of Sale) – the all-rounder
The POS (Point Of Sale) is a multifunctional operating and control device: with its centralised function including payment, it acts as an operating, monitoring and administration station for all connected devices and for all device-networking functions. The pay function includes all accounting transactions including the generation and dispensing of long-term parking tickets, vouchers and replacement tickets as well as the evaluation and payment of all tickets accepted by the system. If the POS is used as an exit payment terminal, it also controls the exit barrier.

Last payment option: pay on exit
According to needs and the project-specific situation, the technical option can also be provided for parking customers to pay by cashless media and coins directly on exit. So-called “exceptional transactions” such as issuing and paying for lost tickets can also be handled efficiently at the exit.

Key Features:
• Adequate payment solutions for all operation purposes.
• ‘Single Slot’ solutions for accepting electronic payment cards in barcode and magstripe systems.
• Certified solutions for greatest possible security.
• Comprehensive product offering for effective payment at exit.
Automatic: a good entrance.
Systems for extended access scenarios.

Giving long-term parking customers access to sealed off areas or outside parking facility opening hours, attracting high-frequency users or new customers with discount rates, reserving convenient or even free parking spaces for shopping customers – all these are parking situations which can be efficiently handled using entervo technology by Scheidt & Bachmann, tried and tested worldwide. The offer spectrum of flexible system units provides excellent customer service which literally makes for a perfect entry.

Transit passage monitoring / door reader
Depending on the geometry of the facility, certain zones within a parking area can be reserved for particular user groups or situations. This includes reserved or reservable areas for long-term parkers as well as security areas, for example. Since the parking customer generally already has a control medium (ticket, ChipCoin, long-term parking ID), it is not necessary to issue another access medium at this point. Instead, this type of area makes use of compact monitoring devices which check access authorisation prior to entry to the restricted area and open the barrier, roller shutter or door on correct identification in the same way as a remote control device.

Transit passage and long-term parker control devices (PXU series)
These devices are used as transit passage scanners and control a connected barrier. They can also be used as control devices for long-term parking spaces or as online door readers. No additional media (parking tickets, ChipCoins etc.) are issued or collected. The device module is available in different versions and sizes.

Entry and exit devices for offline use (PCXi series)
These compact offline control devices are used to operate roller shutters and barriers. The identification medium here is the transponder, which long-term parking customers and VIP customers generally keep with them.

Door reader (PTL series)
These universal access control devices check the access medium inserted and initiate the control command to open doors, roller shutters or other shut-off devices on positive identification. Here again, various versions are available. In spite of its frequently compact size, Scheidt & Bachmann also offers flexible integration of RFID readers (e.g. Mifare) and the fitting of modern intercom systems for improved customer communication. Another optional feature is a key pad for convenient entry of an access authorisation code.

Solutions for reduced rate systems (PVT series)
In the parking sector, too, bonus systems are regarded as excellent instruments to enhance customer loyalty.
Where individual shops or malls are located close to each other, proprietors often join forces to offer their customers convenient parking facilities. This synergy with time-limited free or reduced-rate parking significantly increases and maintains use of parking capacity. Scheidt & Bachmann offers technically feasible bonus systems to meet all conceivable requirements.

The possibility of multiple validations by several partner companies increases parking customer satisfaction.

**Effective customer parking concept with shop parking**

In inner city areas in particular, parking spaces are especially rare and much in demand. Parking spaces reserved for shop customers are often taken by non-customers – much to the annoyance of the shop-owner, since the service provided no longer benefits customers and is therefore likely to put them off. For this very scenario Scheidt & Bachmann offers the Shop Parking System, a special low-cost concept aimed particularly at smaller shops and the entrance areas of supermarkets. The system efficiently and effectively ensures that the parking space provided by the shop proprietor can only be used by the relevant customers.

The principle is simple: a coupler module converts the time of entry into an EAN code on the entry ticket. The key feature here is that this special Shop Parking Ticket can be scanned in and charged at a regular cash desk as commonly used in shops. The parking ticket is thus integrated as a “normal” sales item available at the shop – so no extra work is created for staff in charging for the parking ticket. And depending on the shop-owner’s customer loyalty enhancement strategy, the rate allocation function in the coupler module can be set so that the customer parks free of charge while shopping, with all other parking transactions charged for. This is an ideal combination of efficient handling, convenient service and additional source of income.

**Key Features:**

- Comprehensive validation options for successful bonus programs with partner businesses.
- Flexible devices and cabinets to create adequate solutions for contract parkers and non-standard areas.
- Integration of intercom and operator-specific readers also in devices with small form factors.
- Unique ‘ShopParking System’ for retail.
The entervo service world.
What goes on to make sure everything goes well.

The planning and sale of a parking space management system marks the start of the support phase which lasts for the lifetime of that system. Since regular wear and tear, faulty operation and vandalism can never entirely be ruled out in the parking business, entervo facilities require regular service even though they are well known to be high quality. Initial and further training programs ensure that all staff involved in parking operations on both sides – both service providers and customers – act cooperatively to ensure maximum facility availability.

Presence and availability
Scheidt & Bachmann has parking space management systems and service teams on hand locally all over the world: some 200 of our own service specialists provide support for over 20,000 systems in more than 70 countries. In Germany alone the service division has spare parts stored in some 70 vehicles. All this is aimed at being able to provide immediate and effective help if the worst comes to the worst.

Reachable worldwide round the clock by hotline and online
With three of its own hotline switchboards, the entervo service team ensures that every Scheidt & Bachmann system can be serviced by experts as quickly as possible and round the clock. In addition to direct service calls, there is also a special online service portal (initially available throughout Germany). Personal log-in via internet is all that is required to be able to send messages to the service centre or order spare parts directly. The current processing status of help requests or orders can of course be tracked round the clock, too – including generation of a final report.

Service contract options – to suit individual needs
In the area of service and maintenance, various service products can be combined in an individualised contract to precisely meet specific needs on site. Contractual options in this area include the following:

- Preventive maintenance:
  Every technical system requires regular service. The manufacturer’s own service specialists will of course be glad to take on this job. The recommended or necessary maintenance cycles are agreed on individually with the parking facility operator depending on usage and operational demands.

- Hotline:
  Permanent reachability and swift assistance are the key to optimum system availability and its restoration when necessary. In order to be able to obtain expert information and assistance at all times via hotline, a flat-rate contract is recommended which covers all calls to the hotline centre. Another worthwhile service measure is
to pre-define system alarms which are routed directly to the help desk. This allows service staff to take action even before a fault occurs in the system.

- Full service:
  This contract model includes preventive maintenance, hotline and all service visits. In this way the operator has exact cost items available for budget planning each financial year.

- Software maintenance:
  In addition to regular entervo software updates by Scheidt & Bachmann, this also includes compatibility system updates which ensure that OEM products used with entervo (Windows, Oracle) are kept up-to-date and secure.

**After-sales – after the purchase is before the purchase**

Dynamic developments in the area of parking technology mean that it makes good sense to regularly transfer expertise and obtain consultation on expansion issues. The experts in the entervo project department are available to investment decision-makers and their technical staff at all times for this purpose. Whether or not there is an existing hardware and software status, individually tailored expansion strategies can be jointly developed to meet the current situation and provide promising options for the future.

**Initial and further training for competent staff**

In order to operate a system successfully, operative staff require training which is as realistic as possible. Scheidt & Bachmann training personnel offer well-established, compact seminars for this purpose. Depending on the skill areas required, these initial and further training programs can be delivered in the company’s training centre in Mönchengladbach or else at the operator’s own sites.

Depending on the skill level of training participants, specific basic knowledge is provided, supplemented or refreshed as required. In order to ensure a realistic practice scenario, operating staff are trained specifically for the relevant system and situation which applies in their parking facility. Programs also include different work areas such as administration, technical support and self-help and even individual training sessions on topics such as invoicing and accounting. In short: every training program is designed to ensure that parking staff can work competently and reliably in subsequent practical operations – using equipment, in customer contact and as a staff member on site.

**Key Features:**

- Local service worldwide.
- Highly differentiated maintenance offerings.
- Effective supply and long-term secured availability of spare parts.
- 24/7 Hotline out of three international locations.
- Comprehensive options for remote support.
- Function-specific trainings and ‘train-the-trainer’ classes.
Core business: excellent solutions.
In every part of the parking world.

Even though essentially everything revolves the same question – “Where will people park?” – the answers are very diverse. As a sector provider operating throughout the world, Scheidt & Bachmann aspires to the implementation of optimum technical solutions at all times. The aim is to develop standardised systems which are sufficiently flexible and modular to be able to perfectly match the local needs profile. Precise knowledge of sector-specific needs profiles is not just helpful here – it is indispensable. After all, the various use scenarios have to be precisely reflected in the technical facilities and control systems.

The solution: entervo
Regardless of how extensive or complex the project, whether on a regional or a global scale – with entervo, Scheidt & Bachmann supplies perfectly conceived solutions of optimum dimensions.

Listening – the way to achieving satisfaction, the way to the future.
The core assignments of our project teams include always being open to an operator’s wishes and being up-to-date with the latest developments. As a market and innovation leader, the aim is not just to service current market demands but to anticipate, shape and advance future developments. It is precisely in this regard that we are proud of our constructive collaboration with customers – or rather, our partners. For us, this creative and at the same time challenging exchange is the greatest source of conceptual stimuli and technical innovation.

Cosmopolitan thought and action – for solutions which are right for the sector
Our customers – our partners – come from very diverse areas of industry and of public life. By necessity, parking space management has to be guided by the rules and customs of the culture, philosophy, strategy, structures and aims of the operators within their local setting. Rather than seeing this diversity as a burden, we take it on board as an opportunity and an enrichment.

With every successful project implemented somewhere in the world and in some particular professional field, our understanding of this region and of this field grows. This holistically accumulated expertise benefits every new project and its contractors, since the relevant experience and knowledge is consistently fed back into our product developments and concept realisations. This is why entervo parking management solutions by Scheidt & Bachmann are constantly at the cutting edge, always retaining long-term sustainability not least due to the flexible, open standards used.

entervo technologies implements successful solutions worldwide for:
- International and local operators
- Municipalities and local authorities
- Airports
- Shopping centres
- Property companies
- Hospitals
- Hotels
- Universities
- Banks
- Retailers
- And many others
entervo – in the modern world of parking.
The perfect formula for success “beyond barriers”.

SOFTWARE

HARDWARE

EVERYWHERE