



## SOLUTION BRIEF

### The Power of Partnership – ASUS IoT and SKIDATA Transform Access Control and Parking at Brazilian Business Park

Fast touchless entry experience for over 10,000 visitors and guests

Improved parking management for more than 4,500 vehicles

Providing security, scalability, and data insights for business park management

How vehicles and people gain access to places of work or sporting and leisure events can significantly impact the visitor experience. Historically, security and capacity management have meant this process can be slow and frustrating. In the past, entry and exit have depended on manual checking of credentials, which can result in long queues at peak periods. But now, smart mobility and visitor management solutions, powered by digitized platforms and artificial intelligence (AI), can vastly improve end-to-end journeys for visitors and guests alike.

#### The Perini Business Park case in Brazil

The Perini Business Park in Brazil (South America) covers an area of over 2.8 million square meters and is home to more than 250 companies from 14 different countries worldwide. On average, the park has more than 10,000 people on site, half arriving by car. The current standard entry procedure for those who have driven to the site involves each vehicle stopping in front of a security gate. The driver shows their ID to park staff, driver

information is checked, and the vehicle license plate, model and color are logged. The visitor is then given a tag, and the gate is opened. This process currently takes between 60 to 90 seconds per vehicle. At peak times, this activity can result in stoppages at the entry gate – which is frustrating for visitors and the hard-pressed security staff alike. Park management was receiving a lot of negative feedback about the entry experience. It was, therefore, keen to speed up the entry process without losing security.

In this circumstance, security would be in the form of access control and then improving the value of the process by capturing information about each person in every car, which presented an operational challenge.

Also, of interest to the complex, was introducing smarter parking management to improve ease of parking and utilization of parking spaces within individual lots.

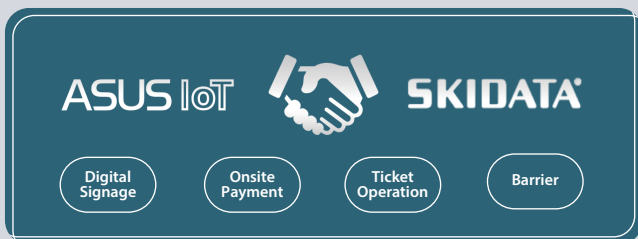
## Personalized support and Technical expertise through the partnership

Finding a solution to the needs of Perini Business Park has resulted in strategic collaboration between ASUS IoT, one of the world's leading embedded solution providers, and SKIDATA, one of the world's top-tier providers of access solutions for vehicles and people. SKIDATA has provided parking management installations worldwide, including at international airports like Amsterdam Schiphol and London Heathrow. The partnership is based on a co-creation, co-development and co-winning approach, which allows both organizations to maximize their core expertise.

The Smart Access Control and Parking Management Solution co-developed by ASUS IoT and SKIDATA enables:

- Fast access to the site, in under 15 seconds, based on vehicle license plate recognition
- Improved parking management of over 4,500 vehicles a day, resulting in better capacity utilization
- Valuable statistical insights for business park management
- Scalable solution to include real-time occupancy detection
- Enhancing the experience of over 10,000 visitors and guests throughout the day

ASUS IoT acted as the project orchestrator, bringing advanced hardware design and software development capabilities, a complete IoT product portfolio and AI solutions, and an IPC-grade platform that would provide longevity for deployment over time. Meanwhile, SKIDATA had exceptional knowledge of secure, flexible, and fast access solutions. ASUS IoT and SKIDATA would provide an end-to-end solution – from project conception and initial design to deployment, commissioning, and future-looking scalability.



Close collaboration between engineering teams at ASUS IoT and SKIDATA resulted in the development of an innovative access control and parking management system for guests arriving at Perini Business Park based on digital technologies, which could speed up entry and exit processes while maintaining security and provide the park operator with valuable data which could be used to enhance future services. The solution offers an entirely touchless entry experience. Vehicles and passengers are registered in advance

for entry via a website, and license plate recognition technology means visitors can quickly pass through the barriers automatically without delay. Interactive and dynamic parking management signage then easily directs visitors around the site to each of the individual parking lots.

The collaboration model saw ASUS IoT develop the hardware and AI, comprising a Tinker system, motherboard, edge computer and license plate recognition toolkit. In more detail, the Tinker Edge R is a small and powerful Single Board Computer that provides ultimate performance for edge devices. It can perform up to 3 tera-operations per second with the built-in Rockchip NPU AI accelerator, using only 1.5 watts at maximum loading. Since Rockchip NPU is optimized for neural network architecture, Tinker Edge R can support multiple frameworks of machine learning models. Tinker Edge R offers high performance and low power consumption compared to desktop-grade x86 CPU and can be used in many usage scenarios. Meanwhile, ASUS IoT's ALPR Edge AI Dev Kit is a comprehensive automatic license-plate recognition solution. Powered by the Tinker Edge R, the ALPR solution is capable of up to 99% accuracy with high-inference performance and can be easily integrated with existing vision-based infrastructure.

SKIDATA oversaw digital signage, onsite payment and ticket operation and barriers. Both partners managed product bundling and integration to ensure the seamless working of all systems and technologies.

"It has been a fantastic project," says Thomas Pühringer. "Not only did ASUS IoT bring powerful hardware and AI know-how, but it also introduced us to an outstanding partnership network that brings together the right people with the right experience. This unique approach helped us focus on what we were excellent at. Working together on the project has been very smooth and a great process so far."

## Business process evolution and new projects coming

The Perini Business Park project in Brazil is now moving towards implementation, and it will spectacularly improve entry and exit at the site and ease of parking. Furthermore, the scalable parking solution can be developed to include real-time occupancy detection, alerts, mobile payment and validation, and wayfinding, further enhancing overall operations within the park and providing the site owner with valuable data to support future operations. "The solution responds perfectly to

the pain points around getting in and out identified by park management at the start of the project," added Thomas Pühringer. "And the system is fully scalable, and there are many other possibilities in the next phase."

Looking to the future, ASUS IoT and SKIDATA will continue to benefit from the co-winning strategy, working together with complementary skills and technologies to transform access control – not just for vehicles but also for people at places like sporting venues and ski resorts. For example, SKIDATA systems handle the sale of more than 70,000 ski tickets per hour at peak time, and its systems manage 80% of worldwide ski resorts annually. Its solutions are used in over 200 stadiums, including the Allianz Arena in Munich and the Estadio da Luz in Lisbon. There is excellent scope for ASUS IoT and SKIDATA to work together to refine and improve these processes, deploying state-of-the-art digitized platforms connected and supported by AI.

"This project showcased the power of partnership, and we are exploring some big opportunities together," adds Silvia Kuo, Director of Business Development and Partnerships for EMEA

Region. "Creating these seamless access experiences with exciting technologies such as facial and number plate license recognition depends on advanced computer devices and AI algorithms. We, therefore, look forward to continuing working with SKIDATA in an integrated way."



*"We were delighted to be onboarded into the ASUS AIoT Partner Alliance Program and to have the possibility to benefit from the expertise of ASUS IoT, while bringing value to this project with our experience of having been responsible for more than 8,500 parking management installations in 100 countries. Together, we are able to create an innovative access control and parking management system."*

**Thomas Pühringer**, Senior Director, SKIDATA

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