

Digicom

Building smart cities with smart connections

Founded 40 years ago as part of the B810 group, Italy's Digicom has grown into a major player in the smart IoT arena and has recently developed the world's smallest NB-IoT parking sensor – PAC (parking area control). We talked to Digicom CEO Riccardo Pedroni and Business Line Manager (Export) Fabian Schaefer about this ground-breaking product, Huawei's OceanConnect platform, and the new vista of smart cities in Europe.

By Gary Maidment



Making the right connections

// My company's committed to not only technically making connections in the best way, but to making life safer and easier, and creating sustainable solutions," says Pedroni. In the context of Digicom's smart city parking solution PAC, this means two things: NB-IoT technology and Huawei's OceanConnect platform.

Home to nearly 40 million cars, Italy is the birthplace to some of the most iconic and beautiful sport cars ever created, with Lamborghini, Ferrari, Maserati, and Alfa Romeo featuring high on the dream car list of millions of people the world over. The nation of 59 million also enjoys a reputation for its "enthusiastic" approach to driving and parking, especially in Rome – the Italian capital recently came in last in a Greenpeace survey of 13 European capitals on how safe, easy, and sustainable they are when it comes to getting around.

And as an unavoidable part of driving, parking is a major contributor to both congestion and pollution. In fact, it's estimated that 30 percent of all urban congestion is caused by people looking for somewhere to park. For Digicom, smart parking is a crucial part of the connected smart city ecosystem. "PAC's main objective is to guarantee efficient parking management by reducing operating costs and bringing users the benefits of easy parking and saved time," says Pedroni.

In Britain, for example, the average driver spends a cumulative four days per year searching for a parking space, with 44 percent of drivers reporting searching for parking to be a stressful experience. While London fairs marginally better

than Rome in many traffic metrics according to the Greenpeace report, it also has a lower percentage of people using cars.

Low-cost, long life

The NB-IoT market is a subset of the IoT market, which in turn is an integral part of the fully connected, intelligent world. Given its rich NB-IoT's application potential in business, Pedroni believes NB-IoT is the best LPWA (low power, wide area) technology for Digicom's smart parking project, "Its advantages include low power consumption and high data transmission," he says. "We can embed a battery into our device and charge it for its lifetime."

With a battery life of 10 years, NB-IoT incurs minimal OPEX, boosts asset utilization, and enables features like predictive maintenance.

Putting the PAC in parking

"Depending on the model and specific scenario," explains Pedroni, "PAC can be placed partially or completely underground to identify whether a parking space is occupied." Deployed underground through a 60-mm hole in an IP68-waterproofed container, each PAC unit, he says, is "completely autonomous. It doesn't need concentrators or maintenance, and connects directly to the Digicom Cloud." Moreover, it can be applied to an unlimited number of parking spaces and is completely vandal-proof.

An ocean of efficiency

Digicom's PAC solution is integrated into Huawei's OceanConnect platform, which streamlines the business and integration challenges associated with IoT projects.

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These include the complex decision-making processes facing customers, high costs, and long project cycles. On the deployment side, IoT devices have rigid demands on power-saving and security, and integrating devices and networks is a long, tough process for southbound device manufacturers.

Data management and security

Pedroni believes that OceanConnect does much of the heavy lifting when it comes to huge amounts of data, “Huawei’s OceanConnect is very important for data collection and managing big data,” he says, referring to the high efficiency of the platform. Business Line Manager Fabian Schaefer mentions another key benefit, “Of particular importance is that in this ecosystem, all stakeholders are somehow connected. And Huawei makes it possible that there are interactions between all stakeholders.”

Underpinned by a strict data privacy policy to ensure tenant data isolation for enterprise customers, OceanConnect enables unique and secure transmission and optimized transmission encryption using NB-IoT technologies. This ensures full security using 50 percent less

power, with the solution rapidly detecting and isolating anomalies on smart devices.

Full device-management capabilities include device status visibility, remote configuration, remote fault location, device firmware and software upgrades, and maintenance. OceanConnect’s NB-IoT integration capabilities enable the mass connectivity, high concurrency, and minimal power use that are so vital to operating large-scale NB-IoT networks. Given that Digicom’s PAC solution supports application in unlimited parking spaces, this is a must.

Smart cities step by step

Digicom is committed to advancing the evolution of smart cities in Italy, with its solutions and technologies covering various domains, including travel, vehicles, elevators, smart homes, and more. The development of smart cities requires a holistic approach with the right solutions and partners, and both Pedroni and Schaefer agree on what they define a smart city as, “A city from our perspective is smart when you create benefits for all stakeholders in the ecosystem. Then, you make life easier and safer for everyone.” And PAC is a decisive step in the right direction. [www.digicom.it](#)