

### **What is the Encore Wireless GPS Device?**

The collaborative project between Giesecke+Devrient (G+D), PassTime, and Sony marks a groundbreaking advancement in IoT connectivity with the launch of the iSIM, a pivotal step in SIM technology. This pioneering deployment heralds the first large-scale commercial implementation of iSIM, revolutionizing the landscape of IoT solutions.



PassTime sought to develop an energy-efficient, feature-rich compact GPS locator for diverse market verticals. Traditional SIM and eSIM technologies posed challenges in space and power consumption, which were addressed by the iSIM solution. G+D and Sony were pivotal partners in the development of the next-generation Encore product design.

The collaborative effort resulted in the PassTime Encore locator, built on Sony's Altair ALT1250 chipset and G+D's proven SIM operating system. Central to this solution is the iSIM (integrated Universal Integrated Circuit Card), an isolated tamper-resistant element within a System-on-a-Chip (SoC), revolutionizing connectivity modules.

The iSIM's immediate applications lie in secure IoT connectivity within LTE-M and LPWAN networks, catering to sectors like energy and healthcare. It offers substantial advantages such as smaller hardware requirements for cost-effective production, optimized energy consumption enhancing IoT device efficiency, and streamlining manufacturing processes.

The iSIM's introduction also champions trusted security, sustainability by eliminating additional components, and marked advancements in IoT technology. This milestone project not only signals the commercial debut of iSIM in scale but also opens doors to the widespread adoption of IoT solutions.

The completion of testing for PassTime's fourth-generation Encore signals its commercial availability, slated to begin in November 2023, representing a tangible culmination of this groundbreaking collaboration.

### **What are the key benefits of your project for the mobile industry?**

The iSIM technology enables a number of key benefits. Firstly, it optimizes hardware real estate, facilitating cost savings through compact designs. This space efficiency not only produces smaller and lighter devices but also ensures cost-effectiveness in their manufacture.

Additionally, iSIM revolutionizes the manufacturing process, streamlining production for faster and more efficient device creation. This optimization not only benefits manufacturing and operational processes but also enables late-stage SIM personalization, expanding the device's applicability across further diverse market verticals.

The technology's hallmark lies in its trusted security, combining isolated hardware with G+D's SIM operating system. This synergy establishes a high level of security, fostering trust among major connectivity operators and end users alike.

Furthermore, iSIM champions reliability and sustainability by eliminating slots, additional housings, plastic, and associated transport routes, ensuring both dependable operation and a reduced environmental footprint.

Ultimately, iSIM's integration paves the way for extensive cellular IoT deployments, offering seamless out-of-the-box connectivity for end users. Its integrated connectivity heralds a new era of scalable and hassle-free IoT operations, setting a benchmark for connectivity solutions in the industry.

### **In what demonstrable ways does your new technology enhance the end-user experience?**

The deployment of iSIM technology in the collaboration between G+D, Sony, and PassTime significantly impacts the end-user experience. The integration of iSIM technology ensures increased efficiency in IoT devices like the PassTime Encore locator. With optimized energy consumption and compact design, end users benefit from prolonged battery life, reducing the need for frequent recharging or replacements. This translates to extended operational use and enhanced reliability for tracking mobile assets.

iSIM also adds an out-of-the-box connectivity experience for end users. By seamlessly integrating with a cellular network, the PassTime Encore locator offers hassle-free connectivity, eliminating complexities in setup and ensuring smooth operations from the moment it's activated. This simplicity enhances user convenience and usability.

The iSIM's isolated hardware component, combined with G+D's SIM operating system, ensures a high level of security. This robust security infrastructure provides end users with peace of mind, knowing that their data and assets are protected against potential threats or breaches, especially in critical applications like automotive, logistics, and healthcare.

Additionally, the iSIM also contributes to sustainability by eliminating additional components, reducing plastic usage, and streamlining manufacturing processes. This environmentally conscious approach aligns with consumer preferences for eco-friendly solutions, offering end users a product that's not only efficient but also environmentally responsible.

### **What impact have you seen to date?**

The PassTime Encore tracker's integration of iSIM deployment has notably driven measurable improvements in cost reduction and operational efficiency. Quantitatively, the elimination of a physical eSIM component has led to significant savings in manufacturing costs and streamlined operations. This transition has substantially lowered the environmental footprint by reducing the number of physical components shipped, aligning with sustainability goals.

Qualitatively, this advancement positions the PassTime tracker as a more eco-friendly solution compared to its previous generation design with legacy SIM components. Its reduced environmental impact reflects a commitment to greener practices, contributing positively to the company's environmental responsibility narrative. This shift not only enhances the product's efficiency but also underscores its environmental consciousness, catering to the growing demand for sustainable technology solutions.