SOLUTION BRIEF

Intel® IoT Technology
Enterprise-Grade IoT Platforms

Flexible New IoT Platform Empowers Enterprise Applications

Infiswift's IoT platform, powered by Intel® technology, enables scalable and secure connections that deliver real-time, actionable insights.

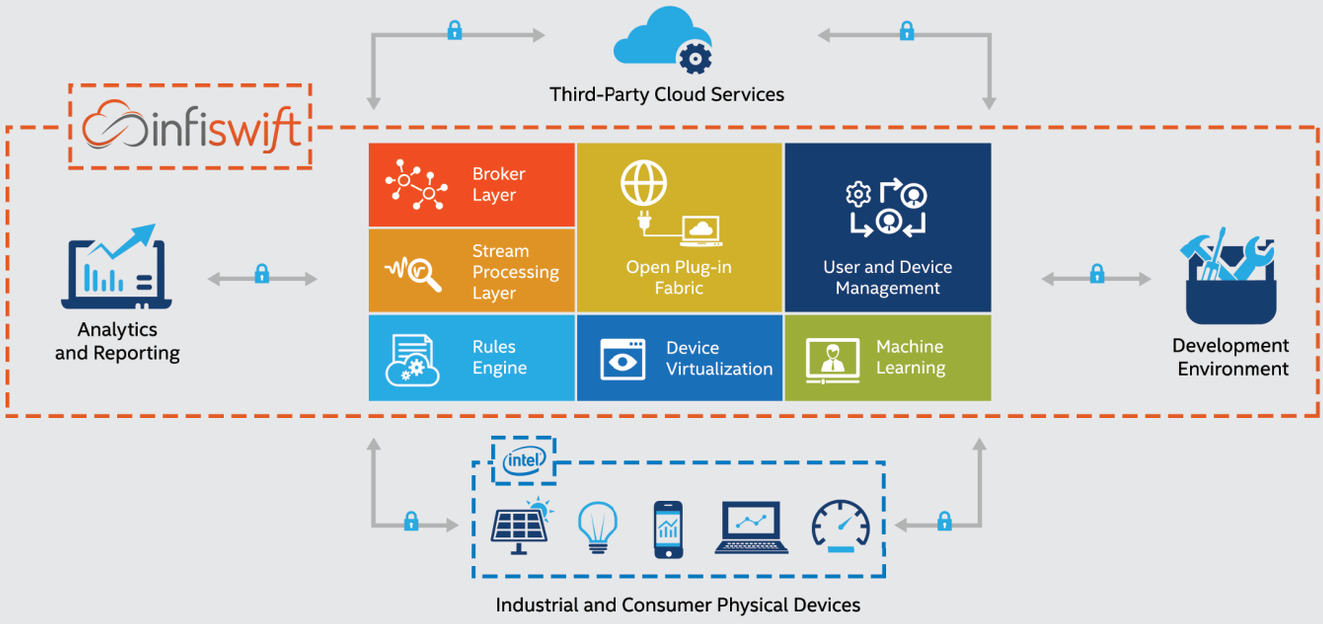
It's no secret that the Internet of Things (IoT) is creating a seismic shift in how businesses think, act, and approach the future. Yet despite the promise of game-changing technology in practically every industry—and the real evidence of measurable gains—IoT developers continue to battle inherent challenges such as intermittent connectivity, low power availability, and the struggle to efficiently capture intelligence at the edge.

With years of experience building large-scale IoT implementations in the energy space, the team at California-based infiswift has thought long and hard about how to tackle such obstacles. That's why the company developed its own innovative, ultra-lightweight IoT platform, designed specifically to help customers seamlessly connect physical products to each other and the cloud. The new platform, which is ideal for intermittently connected and power-deficient environments that require real-time operation, provides easy-to-use dashboards and prebuilt, flexible functionality including rule definition, device templates, and more.

Powered by Intel® technology, infiswift's IoT platform provides world-class security and scalability, a robust development environment, and analytics for custom implementations. This allows infiswift's customers and partners to develop, deploy, and scale IoT solutions to enterprise standards.

The infiswift IoT Platform

Infiswift is a powerful, enterprise-grade IoT platform for connecting and managing your most important devices and cloud services. End points—be they physical devices, cloud databases, or applications—connect to each other using infiswift's unique architecture, enabling ultra-secure, two-way communication that can be scaled to millions or billions of devices with near-zero latency.



Rethinking the Enterprise-Grade IoT Platform

In the IoT world, many innovators focus on what one might call the "big four": real-time performance, scalability, security, and flexibility (see Figure 1). Years of experience and research proved to infiswift's team that a mere aggregation of off-the-shelf products could not provide true real-time communications at scale that many enterprise customers seek. That's why the company took a more comprehensive approach to building its IoT platform, using unique architectural concepts for next-level connectivity.

At its core, infiswift's IoT platform is based on a broker that efficiently routes and manages communications between end points. The platform was designed with flexibility in mind and can support a variety of development environments—any cloud service and any device that can host MQTT-based client code can be connected. Plus, infiswift is dedicated to mitigating interoperability challenges that can often impair communication between stacks and hinder a customer's ability to seamlessly integrate legacy and new technology. The overall result is an efficient broker and client platform with a footprint light enough to operate sensors on the edge via Intel® Curie™ modules with the Intel® Quark™ microcontroller D1000.

Whether sold off the shelf, via a license agreement, or as a more customized solution to enterprise partners, infiswift's software is powered by trusted Intel technology. And moving forward, infiswift—already committed to incorporating state-of-the-art security in its solutions—is excited about additional opportunities to leverage Intel's leadership in IoT security. Pushing the envelope of innovation is integral to infiswift's mission. Indeed, in an industry noted for transformational advances, the company is proud to have numerous patent applications in progress.

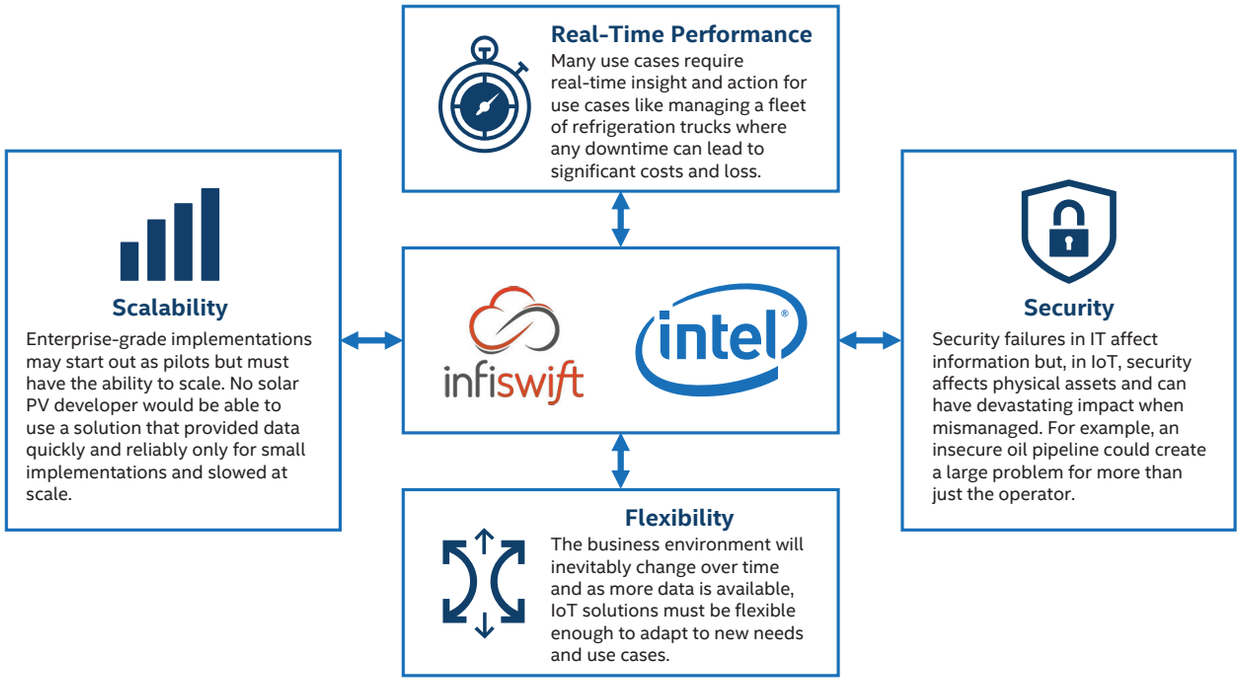


Figure 1. A look at the importance to enterprise of the "big four" factors for IoT solutions

Energizing the Solar Industry

In the solar arena, owners, operators, energy regulators, and financiers all require some level of monitoring and control of their power plants. Companies in the industry have been connecting and managing their assets for years, but solutions to date have been costly, slow to integrate, and inflexible. For example, SCADA systems deployed in solar do not typically allow for real-time, two-way communication control and integrated data for centralized management and analytics, because the cost to do so is impractical. Additional challenges faced when connecting devices on solar PV plants include rough environments, intermittent connectivity, and low power availability for some sensors.

With decades of experience implementing connectivity solutions for some of the largest global solar developers, infiswift understands how to successfully tackle these challenges. Infiswift's IoT platform, which can be integrated into existing systems or new plants, is designed to empower faster decision-making based on more accurate information from a wider set of data sources, such as grid pricing, weather, and ground movement. Asset management, energy forecasting, and maintenance planning become more reliable with better data that is more granular, higher resolution, and centralized to empower data science and automated decision-making in the system.

A typical implementation includes distributed intelligence at the edge, as well as centralized control and analytics that can be customized to the specific PV system needs. With the flexibility to integrate a wide range of data sources at low cost (due to wireless hardware advances), the infiswift platform can provide a great foundation to build a cutting-edge performance monitoring and management solution. The wide range of stakeholders—from owner to operator to field technician—each benefit from different types and amounts of information and can access custom dashboards, available via web and mobile, to visualize important data, analyses, and predictive information.

This type of IoT-based connectivity for solar plants is the next cost-effective advance in operations and management that will maximize levelized cost of energy (LCOE) for many solar developers.

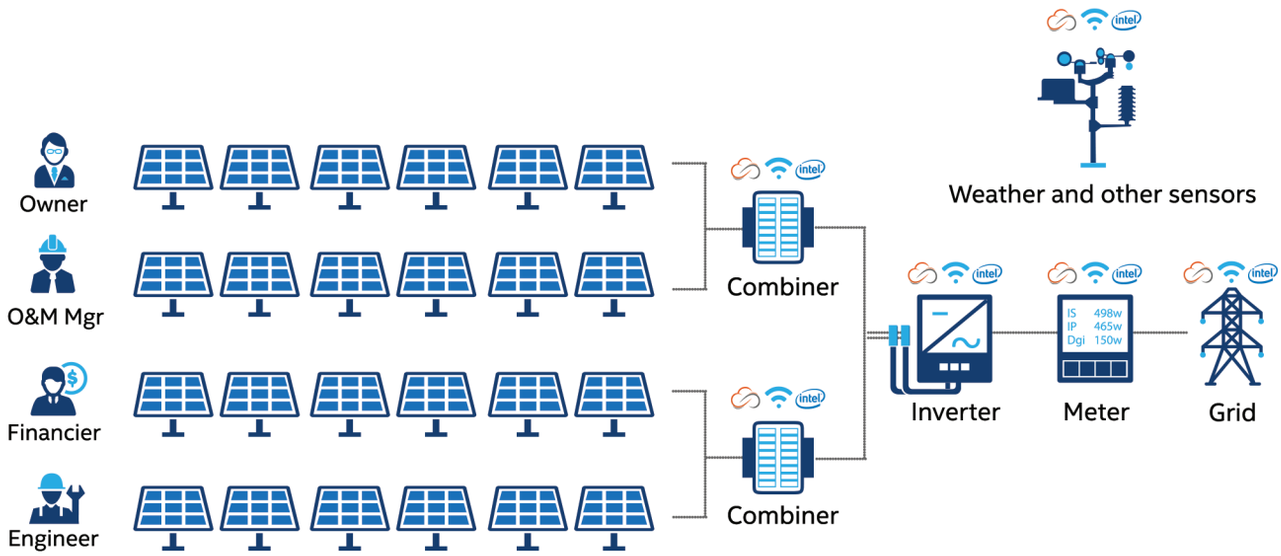


Figure 2. Solar PV plant topology with diverse and flexible data sources

Conclusion

Armed with its unique approach to enterprise-grade IoT solutions, and backed by powerful Intel technology, the team at infiswift is successfully moving forward with flexible implementations that deliver scalable, secure, real-time insights for new and existing partners in solar energy and beyond.

Learn More

Infiswift is a general member of the Intel® IoT Solutions Alliance. From modular components to market-ready systems, Intel and the 400+ global member companies of the Alliance provide scalable, interoperable solutions that accelerate deployment of intelligent devices and end-to-end analytics. Close collaboration with Intel and each other enables Alliance members to innovate with the latest IoT technologies, helping developers deliver first-in-market solutions.

For more information about infiswift, please visit **infiswift.com**.

For more information about Intel® IoT Technology and the Intel IoT Solutions Alliance, please visit **intel.com/iot**.

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