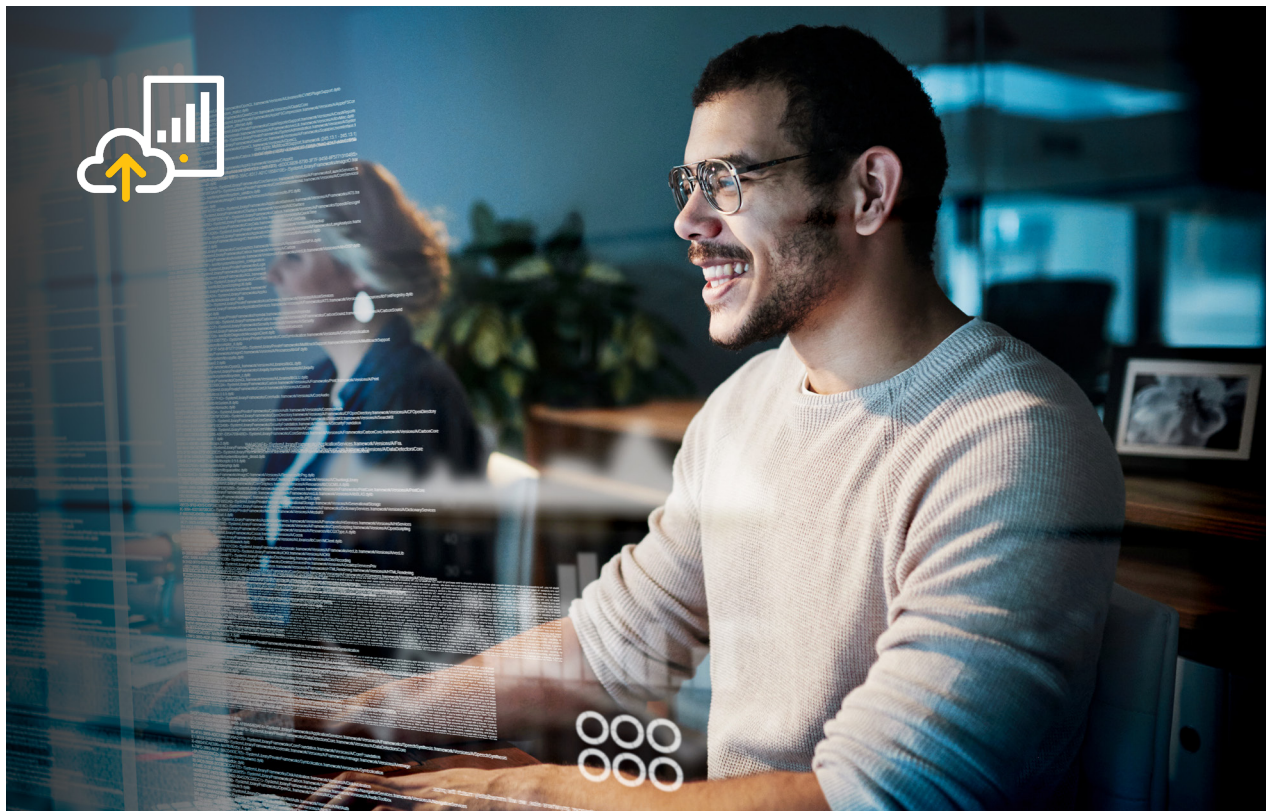# Gain Confidence with an Agile and Secure IoT Platform

INTRODUCTION

Smash the IoT Deployment Hurdle with the Right Platform

Finding the right platform to enable your Internet of Things (IoT) network is as essential as it is confusing. Most platforms are designed for unique aspects of the IoT such as device enablement; application development; and network, data, or subscriber management. With all of these choices, how can you find a platform that precisely meets your needs without abandoning existing investments?

As the Internet of Things (IoT) emerges as a mainstream necessity, businesses are fighting to stay ahead of their competition. Most CIOs and IT leaders are moving beyond evangelizing and selling the IoT to the boardroom executives and line-of-business managers to implementing a well-defined IoT strategy. They are evaluating a wide assortment of enabling platforms ranging from open source and turnkey platforms to cloud-based platform as a service.

But ultimately, winning this digital transformation battleground for IoT-driven market leadership comes down to two factors: agility and security. According to IDC, all the IoT security product market segments are expected to experience healthy, double-digit growth through 2021.[1]

When devices and data are managed and supported correctly, businesses can set themselves up for success. Scaling operations by adding devices and applications or making deployment updates without the hassle of technical disruptions can enable quick response to changes in customer behavior and market demand. Meanwhile, securing IoT systems can help keep devices, applications, and data out of the wrong hands to avoid millions in lost revenue and customer trust.

In this white paper, you'll learn about fundamental IoT capabilities that the Telit IoT Platform enables to help your business simplify its IoT landscape, accelerate data-driven response, and protect the deployment from internal or external threats.

Contents

1. "Worldwide Internet of Things Security Products Forecast, 2017–2021: Emerging Security Segments," IDC, May 2017.

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Onboard Your Devices with Scale, Flexibility, and Speed

One of the biggest hurdles in realizing the full promise of the IoT is mapping devices directly to data management systems and applications. As long as setting up devices is time-intensive, prone to error, and difficult to update, businesses will hesitate to extend the IoT throughout their operations.

Take, for example, a city park that decided to replace 1,000 lightbulbs with smart lightbulbs. After workers install the smart lighting devices by hand, an IT specialist programs each bulb individually to enable analytics-driven, automated capabilities such as better energy use, time-controlled on/off, and sensor-enabled brightness modification.

Let's think about it: 1,000 smart bulbs require the manual onboarding of 1,000 separate serial numbers. One bulb could take five minutes to program, which means that 84 hours will be used just to set up the entire network. If one digit is entered incorrectly, network errors will emerge and lead to widespread failure that may require intensive rework.

Accelerate the device onboarding process to optimize resource agility

The Telit IoT Platform is designed to break through these limitations. This data-centric platform integrates legacy and modern devices regardless of communication protocol and provides a central data pipeline to all devices and applications associated with the network.

With the Telit IoT platform, you can:

- Access a library of every driver you need
- Run device and application drivers on one platform
- Enable legacy and next-generation programmable logic controllers to directly talk to each other
- Move data bidirectionally

With an easy drag-and-drop visual flow chart, subject-matter experts can build any kind of logic without IT intervention. Device identification tags can appear instantly upon device connection, which can be formatted to reflect universal naming preference or a more human-friendly naming structure. This process not only accelerates device setup, but also prevents errors in serial number entry and mismatching of tags to the programmed action.

> Telit's platform enables smooth asset integration, which **helps manufacturing IIoT environments get ready in only one day for what typically takes three months.**
>
> — Best IIoT Practices Research from Frost & Sullivan
> http://info.telit.com/iiot-platform-customer-leadership-award-report

Integrate Any Enterprise Application with Ease – Now and Later

Many businesses are taking part in the trillion-dollar economic opportunity of the IoT by building new applications. However, the real value of their efforts is realized not just by pulling data from a device in the field, but also combining that information with other business systems and devices.

Building an IoT ecosystem that adds business value requires the elimination of three fundamental obstacles:

- **Data latency:** The increasing number of real-time IoT apps, devices, and protocols creates a level of complexity that bogs down data performance across internal services, IT systems, and edge devices.

- **Information accuracy:** The larger the IoT network grows, the more difficult it becomes to locate a broken connection and troubleshoot the source of the issue.

- **Disconnected legacy and modern devices:** Since the latest applications or devices are not designed with the same requirements used by legacy devices, custom coding is required to help aging components work well with new IoT investments.

Plug in, pipe in, and operate your IoT network with ease

The Telit IoT Platform provides instant access to all the tools and resources you need to develop, deploy, manage, and extend your IoT solutions. A single, intuitive interface is supported by a public or private cloud, or a hybrid of on-premise and cloud environments.

Prewritten APIs helps side-step the need to hard-code devices to applications or to other devices. Plus, a comprehensive portfolio of native device drivers transmits data to any business application on demand and supports solicited and unsolicited interface mechanisms without the use of open process control protocols.

The Telit IoT Platform optimizes and accelerates business decision-making, automation, and efficiency, and can be easily integrated with advanced predictive algorithms and machine learning technologies through SAP HANA® , IBM Watson and other vendors. Your business can also access native connectors to pipe data automatically from one database to a range of on-premise applications, as well as cloud services such as those hosted on Microsoft Azure and Amazon Web Services.

"The partnership with Telit has enabled us to accelerate time to market for the Konect service because **the integration of the Telit IoT Platform took less than two weeks.**"

— Robert Bedicks, Chief Executive, Kronos Medidores

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Protect Your IoT System Across All Three Levels of Security

Remotely connected devices at the edge of the IoT network opens the door to new business models by allowing asset owners, operators, and decision-makers to obtain up-to-the-minute information such as equipment health, operational efficiency, and product quality. Each piece of data captured could potentially deliver insights that lead to transformational economic and societal advantages.

However, businesses should also consider a variety of security risks as they integrate devices into mainstream enterprise processes and cloud solutions. Traditional measures such as firewalls, VPNs, and private networks are not enough to satisfy the impending threats of today's cybercriminals. Also, businesses need to understand and address fundamental legal and ethical considerations such as data privacy, confidentiality, authentication, access, and trust.

Secure your systems from the edge to the cloud

The most valuable element of your IoT network is its data, which is why Telit designed a platform that gives give you tighter control of your data. The Telit IoT Platform offers solutions that cover all three domains of IoT security – from devices in the field to servers and applications in the cloud.

Thing-level security

In all of Telit's IoT platforms, devices, and gateways, security is of the utmost importance wherever data is acquired and exchanged. The Telit IoT Platform has agents embedded in its modules to ensure the security of data before it is transmitted and allows developers to send data to the cloud with specialized application and automatic transmission commands.

Network-level security

The Telit IoT Platform is equipped to detect threats on cellular networks in real time while ensuring your connection is segregated from any other companies and remains secure. It can block and report the nature of the attack as well as the module identity and its location. In turn, these events are analyzed, and relevant information is displayed as an alert.

Cloud-level security

Partnering with SaaS providers such as Google and Amazon, Telit offers advanced, flexible, and easy-to-use IoT solutions and development platforms. The application enablement platform allows users to stitch together their Telit and third-party solutions together and consolidate valuable data into an ultra-secure source. With the addition of an application token, thing key, and application identification, Telit customers can rest-assured that their data is protected – even in shared environments – through capabilities such as fine-grain authorization mechanisms, encryption of data in transit, and decryption of received information.

Tap into Proven IoT Expertise to Boost Agility and Security

While many IoT platforms focus either on device management, connectivity management, or application enablement, Telit rolls all of these capabilities into a single platform that is easy to use, scale, and extend. With the Telit IoT Platform, you can access the prebuilt device drivers, connectivity management tools, and application connectors necessary to deploy functionalities that are resilient to any internal or external threat, regardless of the size and complexity of your IoT network.

To increase business agility and data security, the Telit IoT Platform simplifies IoT administration through:

- **Encryption:** Ensure the integrity and confidentiality of your intellectual property with advanced data encryption technology.

- **Secure networking:** Transfer your data over highly secure SSL and TLS communication frameworks.

- **Session management:** Control how and when your staff accesses data and the network with smart-session ID and expiration timeout management.

- **Permissions and authentication:** Authorize access to the right resources based on role-based permissions for a variety of user types and real-time authentication, authorization, and accounting.

- **Auditing and validation:** Leverage comprehensive auditing, monitoring, and reporting, as well as built-in data validation frameworks.

By combining the Telit IoT Platform with our innovative spirit and over 20 years of experience, deep industry insights, and unmatched IoT technology expertise, your business can integrate your entire IoT network. You can gain the flexibility and security you expect when accessing and transmitting data and responding to changing conditions – no matter if your deployment is in the cloud, on premise, or at the edge.

Learn more:

FOR MORE INFORMATION ABOUT THE TELIT IoT PLATFORM, VISIT
www.telit.com/products/iot-platforms/iot-platform overview

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