Knowledge Brief

Quadrant Knowledge Solutions

Eurotech is a Leader in SPARK Matrix: Industrial IoT (IIoT) Platforms, 2021

An Excerpt from Quadrant Knowledge Solutions
"SPARK Matrix: Industrial IoT (IIoT) Platforms, 2021"

Eurotech is a Leader in SPARK Matrix: Industrial IoT (IIoT) Platforms, 2021

Quadrant Knowledge Solutions' "SPARK Matrix: Industrial IoT (IIoT) Platforms" research includes a detailed analysis of the global market regarding short-term and long-term growth opportunities, emerging technology trends, market trends, and future outlook. This research provides strategic information for technology vendors to better understand the existing market, supporting their growth strategies; and for users to evaluate different vendors' capabilities, competitive differentiation, and market position.

The research includes detailed competition analysis and vendor evaluation with the proprietary SPARK Matrix analysis. SPARK Matrix includes ranking and positioning of leading IIoT platform vendors with a global impact. The SPARK Matrix includes analysis of vendors, including Actility, Altizon, Electric Imp, Eurotech, Exosite, Flutura, GE Digital, Hitachi, IBM, Litmus, Microsoft, Oracle, Particle, PTC, SAP, Siemens, and Software AG.

COVID-19 continues to disrupt various industrial digitalization projects across geographical regions. With continued uncertainties, especially in the European Union region, several industrial organizations are slowing down their industrial digitalization projects. However, most IIoT platform vendors continue to gain significant growth momentum and market traction across multiple industry sectors. Quadrant Knowledge Solutions 2021 SPARK Matrix of IIoT platforms offers a comprehensive evaluation of the vendor landscape and positioning considering a variety of performance parameters.

Competitive Factor Assessment and Technology Differentiators

According to the research findings, most of the vendors offer core functionalities for device connectivity, management, application enablement, IoT analytics, and security solutions. However, the breadth and depth of the capabilities may differ significantly by different vendors' offerings. Industrial companies are advised to conduct a thorough evaluation of the IIoT vendors' platform's functional capabilities and a comprehensive analysis of the overall customer value proposition. Users should look for IIoT platforms with modern technology architecture based on open source and industry standards. Users should also evaluate IIoT platform capabilities based on their unique

organization-specific and industry-specific requirements in line with their digital transformation initiatives.

Some of the primary differentiators include:

- **Comprehensive Industrial Connectivity**: IIoT platform's ability to connect, manage and control a wide variety and volumes of devices is amongst the most important differentiators. The platform should support a wide range of IoT standards, data protocols, and network protocols. It should support connection over wired, wireless, cellular, or IoT-specific low-power WAN (LP-WAN) networks. Vendors should also offer well-documented RESTful APIs, SDKs, and integration tools to support connectivity to various proprietary protocols and standards. Users should audit their existing industrial infrastructure and look for IIoT platforms that offer seamless connection, integration, and interoperability between devices and applications. Additionally, ease of connectivity may also add an advantage in ensuring the onboarding of a huge volume of connected assets into the platform at scale quickly at one go.

- **Focus on Usability and User Experience**: Industrial companies are increasingly looking at low-code no-code functionalities for building various applications without coding requirements. Leading IIoT platforms vendors are increasingly supporting these requirements by offering/improving no-code and low-code functionalities, offering a wide range of out-of-the-box solutions for major applications, and offering pre-built building blocks to support industry-specific and organization-specific solutions. Leading vendors are also investing in building an in-house team of data scientists and developer expertise to support industrial companies in accelerating their IoT or digitalization initiatives through robust professional services. Users should evaluate leading IIoT platforms beyond features and functionalities to ensure improved usability, ease of use, and overall user experience.

- **Configurability vs. Customization**: A majority of the industrial companies have their unique requirements with industrial IoT applications, connectivity requirements, and KPIs. Therefore, these companies often end up requiring significant customization, resulting in a long implementation cycle, increased costs, and reduced agility to cope up with the ongoing and future digital transformation trends. The modern IIoT platforms must offer GUI-based configuration tools and

robust no-code/low-code functionalities to provide necessary flexibility enabling users to build their organization-specific and use-case-specific solutions. While evaluating IIoT platforms and solutions, users should look for out-of-the-box solutions along with a demonstration of how they can configure/customize solutions to suit their unique requirements.

- **Edge-to-Cloud Connectivity**: IIoT platforms market consists of vendors with an exclusive focus on cloud connectivity along with vendors with a greater experience in offering edge management platforms. Users should evaluate various IIoT platforms vendors with experts from edge computing platforms, IoT cloud platforms, and edge-to-cloud IoT platforms. Leading IoT cloud platforms offer a significant advantage in data management and advanced analytics driven by machine learning and AI. However, the edge-to-cloud platform provides a unique advantage in terms of providing edge-to-cloud connectivity to ensure scalable device provisioning for edge devices, remote configuration, IoT deployment, and edge analytics. Driven by the growing popularity of edge devices, leading vendors are increasingly investing in improving their edge computing capabilities.

- **Ecosystem Development and Partnership Strategy**: A successful digital transformation initiative requires a partner-led and ecosystem-driven strategy. Users should carefully evaluate the IIoT platform vendor's ecosystem strategy and how these vendors have developed their technology and service partnership over the years. Leading IIoT platform vendors are expected to have a comprehensive partnership with a variety of partners, including the providers of industrial automation, industrial control systems, IoT gateways, OEMs and device manufacturing firms, ICS security, IT security, analytics, industrial connectivity providers, system integrators, service providers, and such others. Industrial companies often prefer to work with vendors with a robust ecosystem of partners to ensure long-term success and technology ownership experience.

- **Open Standards and Interoperability**: industrial companies often look for solutions based on open source and industry standards with no vendor lock-ins to ensure a seamless user experience and interoperability. Users should evaluate how each IIoT platform's vendors are leveraging open standards and the presence of proprietary technology and standards.

- **Data Management and Analytics Capabilities**: Driven by the growing competitive, leading IIoT platform vendors are significantly investing in improving their data management and advanced analytics capabilities. Additionally, vendors are also supporting integration with a wide variety of popular analytics tools to improve data analytics capabilities. Users should evaluate the vendor's capabilities to offer native analytics capabilities and their partnership strategies to support best-of-breed analytics tools. While native analytics is a plus, several industrial companies prefer utilizing their preferred analytics tools. Users should also look at vendors' ability to integrate (and transform) data across a wide variety of devices and applications in a secure manner. Additionally, users may also evaluate how IIoT platform vendors are leveraging AI and machine learning to provide real-time operational insights, predictions, prescriptive insights, and AI-powered contextual recommendations to further augment IoT intelligence.

- **IoT Security Framework**: A robust security strategy is among the most important factors for successfully executing IoT and digital transformation strategies. Almost all leading IIoT platforms invest in building a robust partner ecosystem to ensure end-to-end IoT security, data security, and compliance automation solutions. Industrial companies should look for partnering with IIoT platforms vendors that offer a robust IoT security framework that provides the solution for protection against emerging and evolving threat landscape, proactive identification and monitoring of various risks and vulnerabilities, embedded device security, end-to-end data encryption and security, built-in trust and security certificates, user authentication and authorization security, policy-based access control, and such others. Users should also review the vendor's roadmap towards integrating additional security measures and partnerships to further enhance IoT security capabilities.

- **Industry Experience and Domain Knowledge**: Users should look for IIoT solutions with a history of successful large-scale deployments and carefully analyze the existing case studies of those deployments. Users should also look for their industry-specific, use-case-specific, and organization-specific requirements to shortlist and evaluate different providers of IIoT platforms and solutions. Several leading vendors also offer an out-of-the-box solution portfolio for several industry-specific use cases. Additionally, users should also look for specific domain expertise of vendors. This should form the basis to prepare best-

practice for IIoT platform deployments. While vendors may offer IIoT solutions for process, batch, and discrete industries, their domain expertise, industry experience, and partnership ecosystem may vary to support use cases across different industry segments.

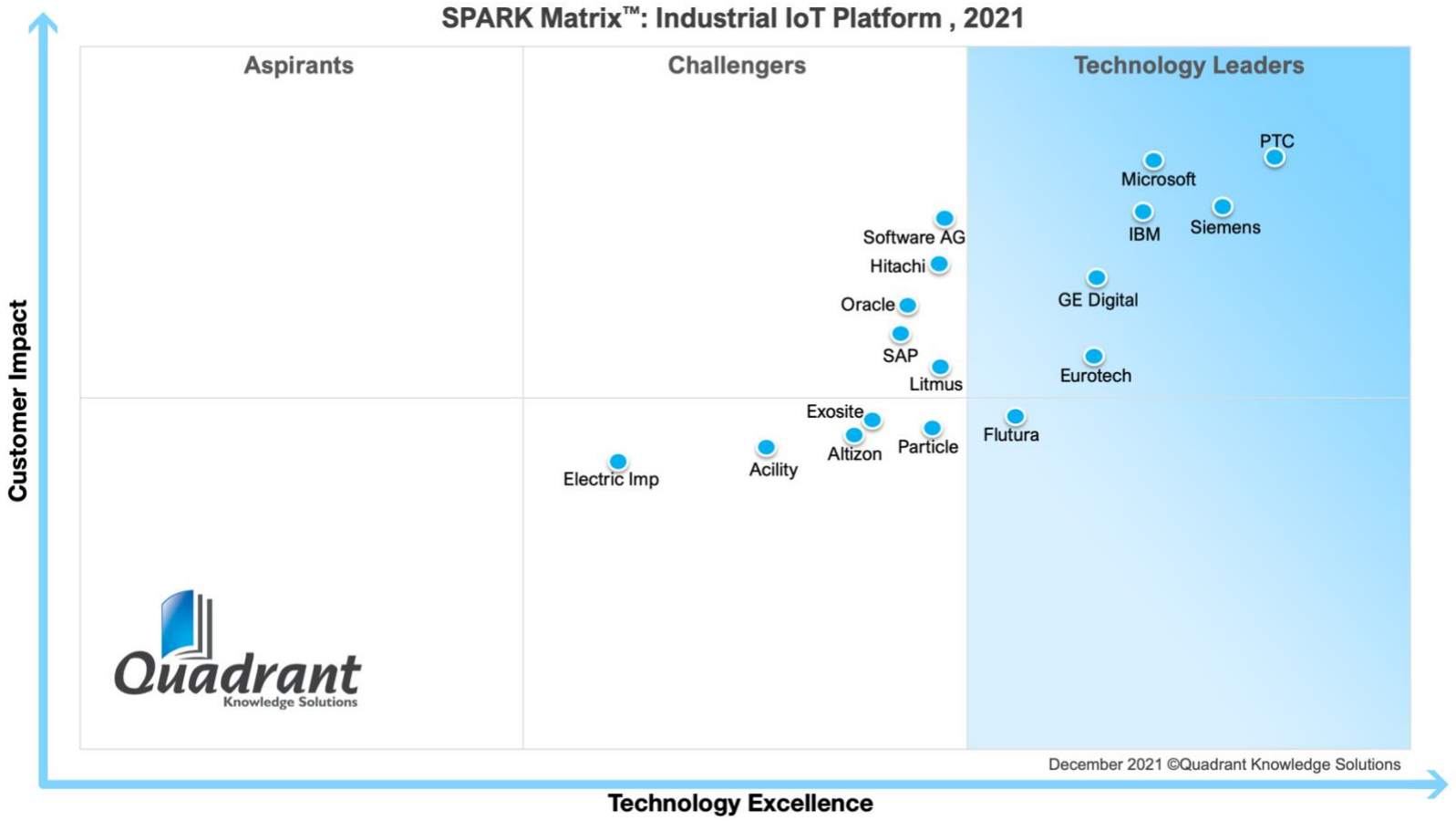
SPARK Matrix Analysis of the IIoT Platforms Market

Quadrant Knowledge Solutions conducted an in-depth analysis of the major B2B Digital Commerce Platforms vendors by evaluating their product portfolio, market presence, and customer value proposition. The IIoT platform research provides competitive analysis and a ranking of the leading vendors in the form of a proprietary SPARK Matrix™. SPARK Matrix analysis offers a snapshot of key market participants and a visual representation of market participants. It provides strategic insights on how each vendor ranks related to their competitors based on their respective technology excellence and customer impact parameters. The evaluation is based on primary research, including expert interviews, analysis of use cases, and Quadrant's internal analysis of the overall IIoT platforms market.

Technology Excellence	Weightage
Sophistication of Technology	20%
Competitive Differentiation Strategy	20%
Application Diversity	15%
Scalability	15%
Integration & Interoperability	15%
Vision & Roadmap	15%

Customer Impact	Weightage
Product Strategy & Performance	20%
Market Presence	20%
Proven Record	15%
Ease of Deployment & Use	15%
Customer Service Excellence	15%
Unique Value Proposition	15%

Figure: 2021 SPARK Matrix
(Strategic Performance Assessment and Ranking)
Industrial IoT (IIoT) Platforms Market



Eurotech Capabilities in the Global IIoT Platforms Market

Established in 1992 and headquartered in Amaro, UD, Italy, Eurotech is amongst the leading provider of embedded systems and IoT enablement. Eurotech IoT solutions are based on Everyware IoT, the company's integrated edge-to-cloud IoT architecture. Eurotech offers Everyware Software Framework (ESF) for edge computing and Everyware Cloud (EC) as an IoT integration platform at the data center level.

ESF offers a flexible app development environment to develop and deploy IoT edge computing applications. ESF provides hardware abstraction, modular software development (including Wires for low code / no-code development) and includes ready-to-use field protocols, such as Modbus, OPC-UA, S7, CAN, MVB, BACnet and others to connect with field devices. ESF provides built-in digital twin modeling and provides remote device management capability. ESF offers easy connection to IoT cloud services with pre-built integration with Eurotech's Everyware Cloud, Eclipse Kapua, Microsoft Azure, AWS, SAP, Software AG, and other platforms. ESF solution supports building a wide range of IoT edge computing applications, including remote monitoring, maintenance, and control of field devices.

EC IoT integration platform includes comprehensive capabilities for device management, data management, application enablement, and integration with an enterprise application. Eurotech enables secure connectivity with IoT devices, such as sensors, actuators, control systems (PLCs, SCADA, & others), IoT gateways, and others through ISO-certified standard MQTT protocol, optimized for IoT applications. Eurotech's Everyware IoT Architecture includes standards-based interfaces that help in reducing integration costs.

EC IoT Integration Platform provides functionalities for secure device connectivity management, device registry, provisioning, remote configuration, OTA software updates, application lifecycle management, remote monitoring, diagnostics, and maintenance through MQTT protocol. It helps to improve operational efficiency and extend the device lifecycle to ensure devices are up-to-date and secure. It also creates a digital twin for field devices and IoT gateways and integrates OT devices with enterprise IT applications. EC's data management function provides advanced data collection, storage, and functions to derive business insights and actionable intelligence. The platform provides access to real-time aggregated data streams to enable real-time

analytics or provides access to historical data for data aggregation and advanced queries.

For application integration, EC IoT platform uses a variety of methods to enable seamless integration with existing BI, analytics and dashboard tools, mobile and enterprise applications, alerts & notifications, cellular connectivity, and SIM management platforms. Besides REST APIs, integrations are provided on a database level, message routing, pre-configured Kafka routes, and ready to use integrations provided through Red Hat JBoss Fuse.

The Everyware Cloud platform supports modular and flexible deployment options. The platform supports on-premises and private cloud deployment in a modular offering or as a complete IoT integration package on the public cloud SaaS-based offering.

Analyst Perspective

Followings are the analysis of Eurotech's capabilities in the IIoT Platforms market:

- Eurotech continues to stand out amongst the larger competitors due to its OT-centric approach and edge-to-cloud IoT architecture. The company offers robust domain knowledge and industry experience, especially for complex industrial IoT applications and use cases. The company is also a pioneer in open source IoT software with major contributions to developing Eclipse Paho, Eclipse Kura, and Eclipse Kapua. Additionally, the Eurotech solution is supported by a vast ecosystem of partners to accelerate deployments of multiple IoT solutions.

- The company's primary differentiators include its integrated, edge-to-cloud Everyware IoT architecture based on open sources and industry standards. The company focuses on OT-centric IoT solutions and offers a complete stack of OT-centric technology for a broader IoT solution portfolio, including IoT gateways, edge computers, IoT middleware, and IoT integration platforms. Eurotech platform also seamlessly integrates various IT and analytics tools to further enhance the overall technology ownership experience.

- Eurotech offers a robust security framework to ensure end-to-end OT security and seamless integration with best-of-breed IT security

solutions. The company supports managed X.509 certificates for authentication and secure communication in addition to supporting software lifecycle management, integration with edge devices, and root of trust for robust device security.

- Eurotech continues to face challenges from well-established automation vendors with strong OT-centric capabilities along with emerging vendors with innovative technology offerings. However, with its differentiated technology offering and deep domain experience, Eurotech is successfully gaining significant market traction and growth across a range of industry verticals.

- While a lack of pre-packaged analytics capability is often perceived as a challenge, as part of the product strategy, Eurotech offers easy integration with best-of-breed analytics platforms. The analytics platforms that, in this case, are selected according to the specific needs and requirements of the application can leverage historical and real-time streaming data to provide real-time insights and operational intelligence.

- Eurotech has a strong presence in North America, followed by the EU region, and APAC is mainly driven by Japan and China from a geographical presence perspective. From a vertical industry perspective, the company has a presence across a wide range of industry verticals. However, the top verticals include process manufacturing, logistics & transportation, automotive, electric power, and healthcare & life sciences.

- Eurotech continues to invest in providing further integration in the areas of application integration, improved support for AI and advanced analytics at the edge, improving software management function beyond IoT gateway, and security enhancements and certifications.

- Eurotech continues to receive strong ratings across the performance parameters of the technology excellence and customer impact and has been positioned amongst the technology leaders in the 2021 SPARK Matrix of the industrial IoT platforms market.