VicOne

PRIMAX

Unleashing Fleet Excellence

Enhancing Efficiency by Mitigating Unknown Cyber Risks on Intelligent Fleet Management IoT Gateway Platform

Securing Fleet Success

According to a survey, in 2023, rising costs, economic instability, and labor shortages became the most pressing concerns for fleet operators. Consequently, fleet operators urgently required intelligent solutions to address these challenges, with the fleet management systems serving as their strategic advisor.

By gathering various data from fleets, operators can achieve data-driven decision-making. It is partly for this reason that the global fleet management market is forecast to grow to US$52.4 billion by 2027, from just US$25.5 billion in 2022.

Primax's QCS6490-based IoT gateway platform is essential for data-driven fleet management. Supporting various sensors, it seamlessly integrates with a vehicle's diagnostics system and 5G/LTE connectivity. With its robust computing power and capabilities, Primax's QCS6490 reference platform enables in-vehicle driver monitoring, enhancing safety. Additionally, it transmits real-time cargo information such as cargo space occupancy, temperature, humidity, and payload back to the fleet operations center (FOC), allowing for optimized route planning and more efficient management.

Despite the many benefits offered by the internet of things (IoT) and fleet management systems, they also come with cybersecurity risks. These systems store sensitive data, including driver information, vehicle locations, routes, detailed cargo information, and customer data. Breaches could lead to theft of valuable cargo and financial losses, not to mention violations of regulations like the General Data Protection Regulation (GDPR). "That's why, even though our customers haven't yet asked for cybersecurity measures, we're taking proactive steps now," said Jason Hsu, Primax's Vice President and Head of Connected Mobility Business Unit. "We recognize that fleet cybersecurity will be critical soon."

ABOUT PRIMAX

Founded: **1984**

Headquarters: **Taipei City, Taiwan**

Industry: **Hardware electronics**

Employees: **15,000**

www.primax.com.tw/en/

Security vs. Reliability: A Product Development Battle

Primax aims to enhance its product security and competitiveness by implementing the principles and processes of ISO/SAE 21434. But its use of source code scanning tools during the software development phase has posed a dilemma: Should it prioritize product schedule or security compliance?

Glynn Kuo, R&D Senior Manager of Primax's Connected Mobility Business Unit, explained: "In the past, source code scanning tools helped us identify vulnerabilities, but they presented challenges by providing lists of vulnerabilities based on individual and separated source codes, lacking the big picture, especially for systemic issues. Additionally, as some suppliers are unable to provide the source code, we have relied on their vulnerability scan reports and SBOMs (software bills of materials). However, we lack the means to verify their accuracy."

This is not the only challenge Primax has faced on its path to embracing cybersecurity. Kuo added: "As an R&D manager, when we assess the severity of vulnerabilities, even if they're labeled as 'medium,' can we really be sure their impact level is only 'medium'? Since we're uncertain about how users will utilize our products, making decisions on vulnerability fixes without the complete context often puts us in a dilemma. Therefore, we require more vulnerability intelligence to support us to prioritize."

Actionable Intelligence: The Core of Continuity

To help tackle its challenges, Primax ultimately chose VicOne's xZETA automotive vulnerability and SBOM management system. As an automotive cybersecurity leader supported by Trend Micro's Zero Day Initiative (ZDI), known for its industry integrity and leadership position in vulnerability discovery since 2007, VicOne has demonstrated its extensive experience and unique threat intelligence in automotive vulnerabilities, especially zero-day vulnerabilities.

Hsu shared: "We chose to partner with VicOne because their xZETA provides quantitative and qualitative actionable intelligence. Its user-friendly interface offers a detailed overview of vulnerabilities, while consulting VicOne helps us make informed decisions. Leveraging xZETA's insights allows us to optimize resource allocation from a management perspective."

xZETA enables binary analysis, empowering Primax to proactively identify vulnerabilities in its products' firmware or binary and overcome challenges posed by suppliers unable to provide source code. Additionally, xZETA facilitates automated scans and notifies of vulnerabilities, ensuring ISO/SAE 21434 compliance and upholding a commitment to continuous monitoring. With its unique technology, the VicOne Vulnerability Impact Rating (VVIR), xZETA combines internal insights and external threat intelligence to assess vulnerabilities' real-world impact, aiding in quick identification and mitigation of high-risk issues. This ensures that Primax can allocate its resources effectively based on factual and actionable intelligence.

Kuo explained: "The essence of ISO/SAE 21434 is 'continuous' vulnerability management. Implementing this concept may increase manpower costs and product development timelines by up to 50%. However, xZETA standardizes processes, ensuring true continuity without adding extra resources. This enables seamless execution moving forward."

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GLYNN KUO
R&D Senior Manager of Primax's Connected Mobility Business Unit

Trust Through Cyber Risk Removal

With VicOne, Primax now utilizes a fully automated vulnerability and SBOM management system to proactively identify potential vulnerabilities, meeting the requirements of ISO/SAE 21434.

Hsu stated: “VicOne xZETA swiftly addresses unknown cybersecurity vulnerabilities, enhancing our proactive management and product security. This demonstrates our commitment to staying ahead in the dynamic automotive landscape, earning trust from customers. Partnering with VicOne empowers us to deliver a resilient and trustworthy cybersecurity solution, solidifying Primax as a reliable leader in the automotive sector.”

Primax benefits from xZETA in other ways. Hsu continued: “Leveraging xZETA’s actionable intelligence and intuitive UI, it becomes a powerful tool in building customer trust. For example, when presenting our products, we conclude by sharing xZETA data, showcasing our expertise in product comprehension and cybersecurity implications. This proves Primax’s professionalism, enhancing our competitiveness even in nonmandatory security scenarios.”

Looking ahead, Primax aims to integrate radio frequency (RF) communication as the fourth pillar into its core technologies, emphasizing the imperative of establishing a cybersecurity mindset early on. By strategically partnering with VicOne, Primax can confidently lay the groundwork for effectively addressing challenges.

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JASON HSU
Primax’s Vice President and Head of Connected Mobility Business Unit

Learn more and request a demo at **VicOne.com**.