



VicOne
Driving Automotive Cybersecurity Forward



Connected Mobility Built for Tomorrow

Empowering Secure Vehicle Connections
for Safer, Smarter Journeys



Catalyzing Car-City Connections

According to a report by the World Health Organization, [over 1.2 million people](#) are killed in road crashes each year around the world. Imagine if vehicles could communicate with one another and even process information regarding pedestrians, traffic lights, weather conditions, and traffic data. This scenario has the potential to significantly reduce accidents caused by factors such as poor nighttime visibility, blind spots during turns, or the sudden appearance of pedestrians or vehicles due to human error. This is where the value of V2X (vehicle-to-everything) technology like V2V (vehicle-to-vehicle) communication lies. According to a report by the US National Highway Traffic Safety Administration (NHTSA), V2V communication could prevent [up to 80%](#) of non-impaired crashes, potentially saving thousands of lives annually.

Askey, a digital visionary, has evolved from the traditional custom-order approach to empower the digital mobility era, drawing upon its over 30 years of proven expertise in vehicle network and communication technology.

Askey is now proactively shaping robust 5G-V2X networks, aiming to build a strong digital foundation for a more convenient, safer, and efficient future of mobility.

One notable example involves the past challenges faced by emergency responders who often jeopardize their safety by racing against time on hazardous roads. Addressing this concern, Askey has developed its own 5G C-V2X (cellular V2X) on-board unit (OBU) and roadside unit (RSU) system. This innovative system enables real-time and precise transmission of vehicle position, road conditions, and signal information to the traffic control system. By exchanging real-time info, it smartly adjusts priority signals, proactively clearing traffic and cutting accidents. This has boosted ambulance dispatch efficiency by 38%. Askey has supplied over a million OBUs to top global automakers, cementing its role as a key provider of telematics solutions. Askey's collaborations span Europe, the US, Japan, Taiwan, and China, with leading automakers and Tier 1 suppliers.

ABOUT ASKEY

FOUNDED: 1989

HEADQUARTERS:
NEW TAIPEI CITY, TAIWAN

INDUSTRY:
COMPUTER NETWORKING

EMPLOYEES: 6,000

www.askey.com

Running in Circles for Vulnerability Management

To bring the envisioned future to life, connected cars are essential, and Askey's 5G C-V2X OBU and RSU system is a key player in making it happen. It's like the heart of the connected car — not only handling external communication, but also backing up critical vehicle telematic data and user identity. If it gets hit by cyberthreats, the impact could be significant for both the company and users; attackers could remotely disable vehicle functions, crash the system, or take unauthorized control to slip in backdoors and swipe the car owner's personal information.

YC Chang, Senior Director at Askey's Automotive Product Unit, shares: "For Askey, with our strong network communication background, we've always maintained strict security standards. So, when car manufacturers asked for proof of our product's security, we were confident. But surprisingly, our first review from automotive clients raised concerns. This happened because testing protocols for vehicles are different from those for consumer IoT products. That's why we quickly decided to adopt [ISO/SAE 21434](#). It's a big step, especially the part about managing vulnerabilities."

In the past, Askey used a consultant company to help with product vulnerability scanning. However, this proved time-consuming because of a third-party company's involvement in the scanning process. After the third-party company scanned for vulnerabilities and sent the report to the consultant company, it was then passed on to Askey. This led to prolonged issue resolution times when Askey faced problems and needed confirmation. The communication process followed this chain, causing delays. This back-and-forth communication approach not only extended the problem-solving time but also brought in gaps or misunderstandings in communication, increasing complexity and difficulty of addressing issues.

In addition, the consultant company mainly focused on guiding procedures, ensuring companies followed established processes, but not necessarily confirming the accuracy of the solution. Chang shares an instance where this situation posed challenges: "We dedicated a lot of effort to creating documents, only to realize that they didn't align with customer requirements. This led to multiple rounds of revisions, making our entire development process highly inefficient. For us, who needed to race against time, this effectively extended our product's time to market, significantly affecting our team's morale."



Fueling Effective Development Through Actionable Intelligence

When it comes to thorough vulnerability scanning and management, VicOne's vulnerability management platform, **xZETA**, has it covered. xZETA handles tasks like generating **software bills of materials (SBOMs)** and conducting extensive vulnerability scans automatically. It seamlessly integrates into the continuous integration and continuous delivery or deployment (CI/CD) process, boosting efficiency. With VicOne's patent-pending technology, the VicOne Vulnerability Impact Rating (VVIR), it combines internal insights, such as Askey's system environment and product usage scenarios, with external information from VicOne's exclusive automotive threat intelligence. This helps Askey assess the real-world impact of vulnerabilities, including scope, affected users, CVSS rating, and more. By considering all these factors, xZETA prioritizes addressing the most critical vulnerabilities for Askey.

Chang shares his experience: "The xZETA system delivers almost immediate results.

After scanning for vulnerabilities, it offers actionable intelligence, like where to find patches or related information. This helps us swiftly pinpoint high-risk issues and plan mitigation, accelerating our product development efficiency. Furthermore, VicOne's expertise in cybersecurity makes the dashboard easy to understand, reducing communication time. In a recent case, we went from vulnerability scan to patch deployment in just two weeks, a major improvement from the previous six-month time frame."

Patrick Lu, Senior Manager at Askey's Automotive Product Unit, also shares: "xZETA adds value to our quality management, allowing us to avoid human biases in choosing between 'fix' or 'no fix.' Now, with xZETA's VVIR, we can assess the severity of vulnerabilities from a more neutral angle, not just our subjective viewpoint."

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PATRICK LU
*Senior Manager at
Askey's Automotive
Product Unit*



Trust on the Road: Ensuring Secure Vehicle Connections

With VicOne, Askey can now use a fully automated vulnerability management platform and proactively identify potential exploitable vulnerabilities. Through xZETA's patent-pending VVIR technology, external and internal insights are integrated to prioritize high-risk vulnerabilities. This empowers Askey to swiftly identify and address high-risk issues and formulate corresponding strategies. All of this information feeds back into Askey's Threat Analysis and Risk Assessment (TARA) results, ensuring alignment with the ISO/SAE 21434 process while maintaining a continuous monitoring spirit.

Chang shares: "VicOne's expertise in automotive cybersecurity has validated my initial decision. Whenever we need technical advice related to cybersecurity, VicOne consistently offers practical real-world examples. The VicOne team's specialized knowledge has been crucial in swiftly implementing solutions."

Now, Askey can continue to drive innovation, reshaping the future of intelligent transportation for safer, smarter mobility.

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**YC CHANG**

Senior Director at
Askey's Automotive
Product Unit