



# Driving Automotive Cybersecurity Forward

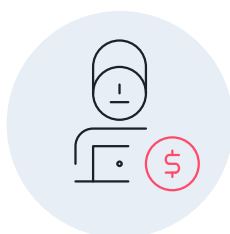
Future-ready vehicle protection reinforced with proven automotive and cyberthreat intelligence, fueled by Trend Micro's 30+ years of expertise

Automotive cybercrime is on the cusp of evolution.



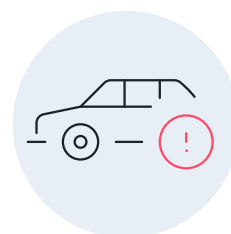
## Increasing number of vulnerabilities

Risks from a massive supply chain are on the rise. As connected cars adopt more and more software from third-party vendors and open-source codes, vulnerabilities also surge. In a mere span of three years, the number of vulnerabilities has increased by almost nine times.



## More motivation for attackers

Connected cars collect enormous amounts of valuable data, such as personal information, vehicle numbers, geolocation, and driving history. Malicious actors could steal this data for financial gain and even leverage it for cyberattacks that could endanger vehicles and their drivers.

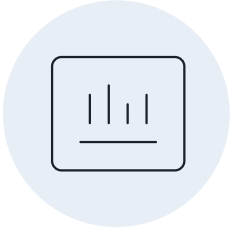


## Lower barrier for successful attacks

Using open-source information like blogs, amateurs could easily hack today's electric vehicles (EVs), which are essentially data centers on wheels. In January 2022, for example, news reports emerged about a teen hacker who exploited a bug to control 25 Tesla cars remotely.

# Security Challenges

New challenges specific to the automotive industry are arising alongside its constant evolution.



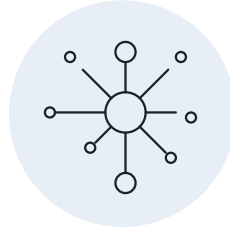
## Lack of centralized risk management

Monitoring electronic control units (ECUs) and verifying software updates can be daunting tasks for automotive manufacturers (OEMs) to manage.



## A highly tiered supply chain

It is a must for all manufacturing tiers to check their systems for vulnerabilities and fixes, but this is a tedious effort that can delay deployment.



## A massive and complex ecosystem

The complexity of the ever-expanding connected car ecosystem, with its vast array of endpoints, makes for a large and volatile attack surface.

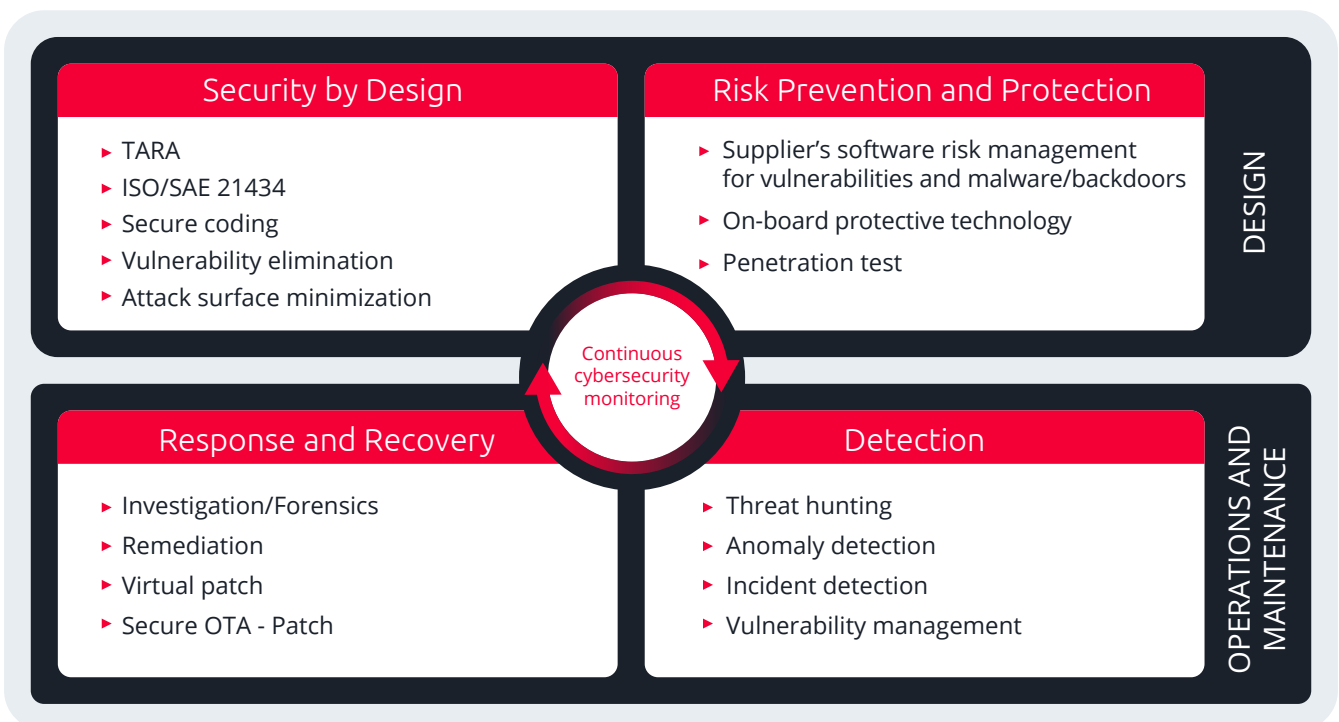


## New standards and regulations

For OEMs and suppliers, creating and implementing a cybersecurity compliance strategy from scratch can be costly and burdensome.

# Security Approach

The automotive industry has a massive supply chain and a long life cycle, both of which set high standards for automotive cybersecurity. To meet these, OEMs must rely on a security approach that covers an entire vehicle's life cycle, offers centralized visibility over the supply chain for timely response, and continuously monitors threats.

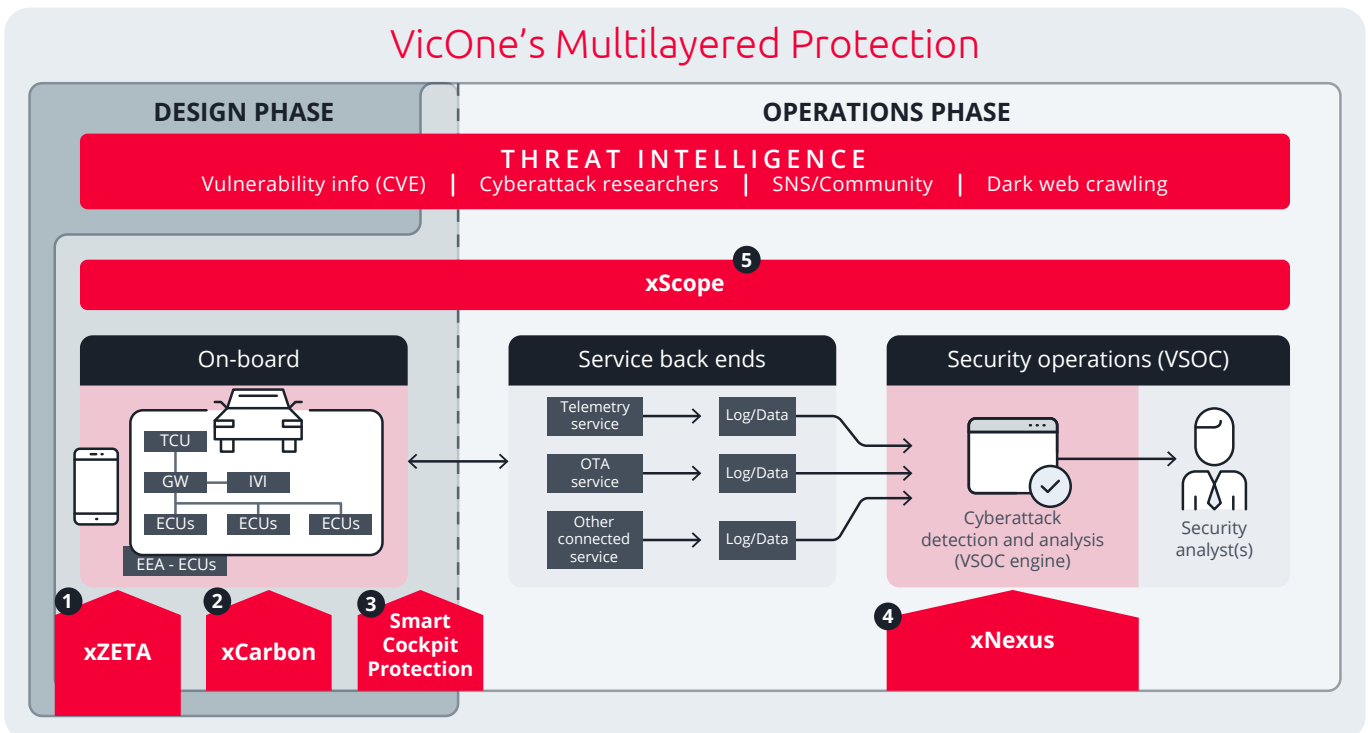


# VicOne Solutions

VicOne is purpose-built to address the rigorous needs of OEMs with solutions designed to secure and scale with the specialized demands of the modern vehicle. VicOne's solutions provide exceptional automotive protection for the entire supply chain and throughout a vehicle's life cycle. This enables OEMs to choose high-priority security measures and upgrade these as the threat landscape evolves. As VicOne products are designed to communicate with one another, the resources required for integration when upgrading are then also reduced.

VicOne as a provider of solutions that enable remote cybersecurity monitoring of connected vehicles was mentioned in the Gartner® report "Market Trend: Connected and Autonomous Vehicle Data Enhances Software Life Cycle Management Transformation."

## VicOne's Multilayered Protection



**1**  
**xZETA**  
*Vulnerability and SBOM management*

Uncover zero-day and undisclosed vulnerabilities, ransomware, and advanced persistent threats in software



**2**  
**xCarbon**  
*In-vehicle IDS/IPS*

Protect multiple ECUs with our frictionless and lightweight intrusion detection or prevention system (IDS/IPS)



**3**  
**Smart Cockpit Protection**  
*Security app*

Safeguard every aspect of the smart cockpit: from personal data and privacy to outside connections



**4**  
**xNexus**  
*VSOC platform*

See threats better with our precise and actionable next-gen vehicle security operations center (VSOC) platform



**5**  
**xScope**  
*Penetration test*

Comprehensive yet flexible penetration-testing service specialized for the automotive industry

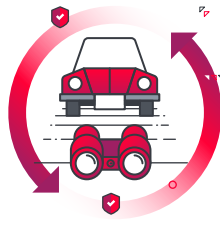
# Why VicOne?

## Cybersecurity Solutions Driven by Automotive Foresight



### Decades of threat intelligence

VicOne leverages Trend Micro's 30 years of research, expertise, and innovation as a trusted global leader in cybersecurity.



### Proven automotive foresight

VicOne provides top-of-the-line solutions that organizations can trust for robust and future-ready cybersecurity coverage tailored for the automotive industry.



### A partner in security

VicOne's partnership program supports OEMs and Tier 1 suppliers in rolling out a cybersecurity strategy, and helps ease their burden in complying with new standards and regulations.

## Built-in by Integrating Cyberthreat Intelligence and Automotive Threat Intelligence

### IT – Trend Micro

- 250 million+ sensors, 3 trillion queries received per year
- Market leader in the public disclosure market for the past 14 years, discovering and reporting 64% of the vulnerabilities in 2021\*
- 450 internal threat researchers

Automotive threat matrix

### AUTOMOTIVE – VicOne

- Automotive information crawler collects information from the dark web, SNS, and community news, among others.
- Automotive threat database stores vulnerabilities, car vendors, and third-party source data, and offers protection against automotive attacks.
- VicOne has a dedicated automotive threat and vulnerability research team.

\* Source: Quantifying the Public Vulnerability Market, Omdia, May 2022

## Fast Facts

### VicOne

- Founded in May 2022 as a 100%-owned subsidiary of Trend Micro
- Dedicated to automotive cybersecurity solutions
- Backed by a global presence, with offices in the US, Germany, Taiwan, and Japan (HQ)

### Trend Micro

- US\$2B in sales and proven profitable every quarter since going public in 1998, with 500,000+ commercial customers in 200+ countries, including 9 of the top 10 automotive companies in the Fortune Global 500
- Has been conducting continuous research on automotive threats since 2015

### Leadership

#### Max Cheng

CEO

#### Edward Tsai

VP of Strategic Partnership

#### Ziv Chang

VP of Automotive Cyberthreat Research Lab

#### Pender Chang

VP of Research and Development



Learn more about VicOne  
by visiting <https://www.vicone.com>  
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