PERSEUS

HIGH PERFORMANCE

HYPERVISOR & SECURITY SOLUTIONS

FOR CONNECTED CARS

With over a decade pioneering Hypervisor and Hypervisor-based security as Xen ARM open source commmunity project founder (since 2007), Perseus guarantees that the automotive industry's top brands capture opportunities for enhanced security & performance in a connected world.

cyberperseus.com

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OUR SOLUTIONS:

Hypervisor

reduces SoC requirements (HW & SW) by ~75%

Hypervisor-based Security

delivers industry-leading protection for connected cars

Linux Fast Boot

reduces boot time for Linux powered rear-view cameras to 2 seconds

UNIQUE CHALLENGES FOR CONNECTED CARS

1. Linux Boot up Woes

Linux has become the de facto operating system for in-car services like rear-view cameras. However, boot up speeds of up to fifteen seconds result in sub-par performance and safety concerns.

2. Security Risk

Existing security solutions fall short of safeguarding in-car connected services and data transfer with third-party entities. Soon, the connected car industry is at risk of becoming a battleground for malicious hackers.
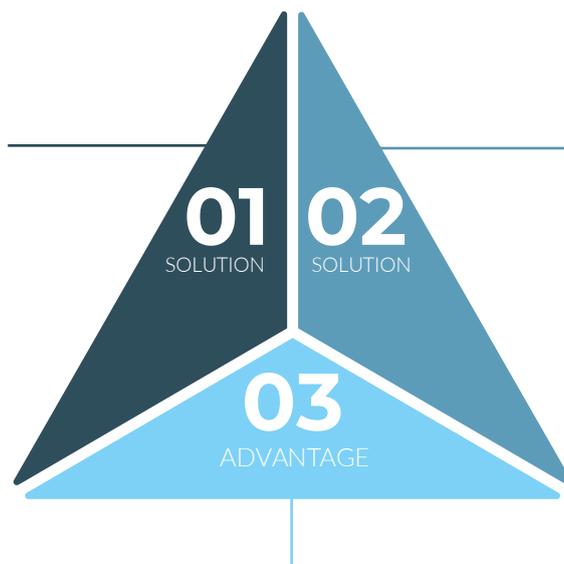
3. Complexity

Rapid progress in automotive technology means that in-car systems are becoming ever more complex. Connected cars already carry up to 120 SoCs. Autonomous vehicles will carry more than 2,000 SoCs.

PERSEUS SOLUTION

LINUX FAST BOOT

Optimizes Linux boot speed

- Rear-view camera boot time reduced to 2 seconds

01 SOLUTION
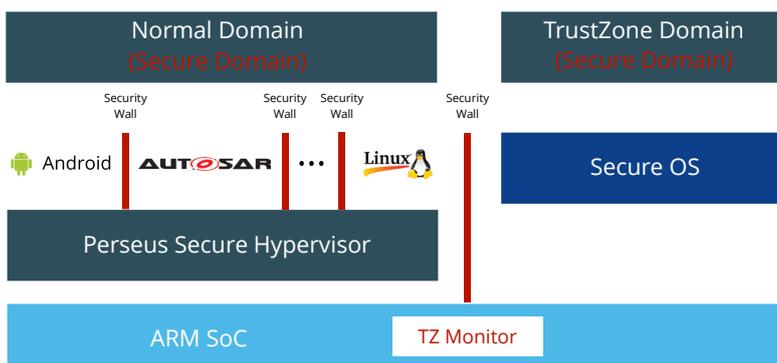
02 SOLUTION

03 ADVANTAGE

SECURE CONTAINER

Protects in-car systems and services from malicious attack

- Flexible, real-time Hypervisor-based security

HYPERVISOR

Reduces in-car HW & SW SoC requirements by ~75%

- Maximises efficiency and performance

Normal Domain (Secure Domain)	TrustZone Domain (Secure Domain)

Security Wall · Security Wall · Security Wall · Security Wall

Android · **AUTOSAR** · ··· · Linux

Perseus Secure Hypervisor	Secure OS

ARM SoC	TZ Monitor

PERSEUS SYSTEM ARCHITECTURE

Perseus delivers multiple secure containers in 'Normal Domain'

CONNECTED CAR SOLUTIONS FROM PERSEUS

PERSEUS

HW / SW Consolidation

Hypervisor optimizes implementation and management of in-car systems, reducing cost, increasing efficiency and boosting performance.

Connected Car Security

Hypervisor-based security provides constant, real-time protection, keeping vehicle fleets and the roads safe.

Enhanced Performance

World's first performance enhancement for Linux-powered in-car devices, reducing boot up from 15 seconds to just 2.

Ultimate Protection with Perseus Hypervisor-Based Security

Hypervisor optimizes implementation and management of in-car systems, reducing cost, increasing efficiency and boosting performance.

- Access control and device isolation sand-boxes threats as they occur
- Physical & virtual solution management for efficient integration
- Algorithmic, real-time parameter controls eliminate malicious attack

PERSEUS: KEY BENEFITS

Real-time Security
- Monitor in-car system data traffic
- Pinpoint abnormal activity
- Algorithmic threat response

Ultimate Flexibility
- Use existing HW & SW infrastructure
- Per-solution parameters
- Adjust on the fly

Improved Performance
- Improved boot up of in-car devices
- Reduce system overload
- Manage data transfer and CPU usage

Reduce Costs / Increase Revenue
- Optimize SoC usage
- Simplify HW & SW architecture
- Remote upgrades and maintenance

IoT Security
- Optimize system integration
- Improve system-wide security
- Store and transmit data securely

Complete Solution
- Total OS isolation
- Fine-grained I/O rate control
- Isolate threats to protect critical systems

Industry-Wide Support
- Connected/Smart Cars
- Autonomous vehicles
- Electric vehicles

Endless Opportunities
- IoT / Smart Homes / Smart Cities
- Factory Systems
- Robotics and Aerospace

PERSEUS

BACKGROUND & ACHIEVEMENTS

Our executives pioneered Hypervisor technology for over a decade at Cambridge University, through the Xen ARM open source community project (founded 2007) and in previous roles at Samsung Electronics. Since founding in 2016, we have developed a range of proprietary solutions and bespoke offerings for specific clients. Our solutions are certified through industry accredited white papers and successful PoCs.

Industry Recognition

Perseus operates as the leader in Hypervisor API standardization projects at Genivi and is collaborating with Renesas on a number of R&D projects.

GENIVI®   **RENESAS**

Investor Support

Perseus has raised a number of strategic investments from the likes of Kakao, one of Korea's top technology companies, Wells Investment as well as R&D grants from the Korean government.

kakao

CONTACT US

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