SECURITY

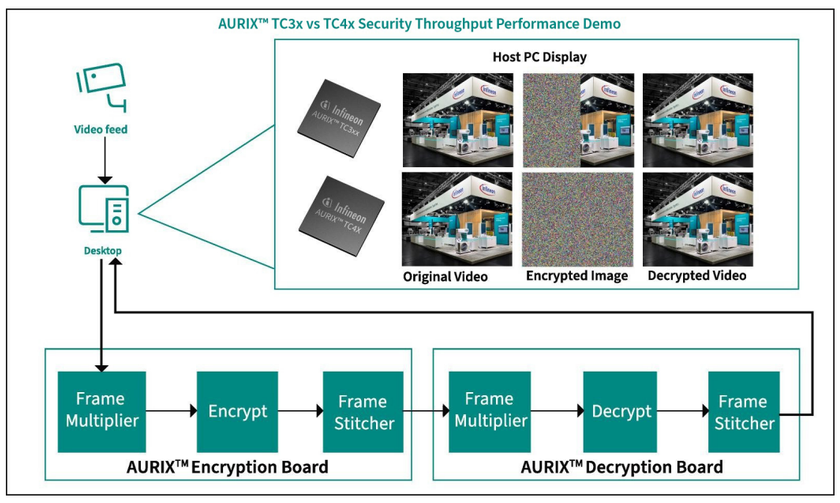
Post-quantum resilience and scalability in SDVs

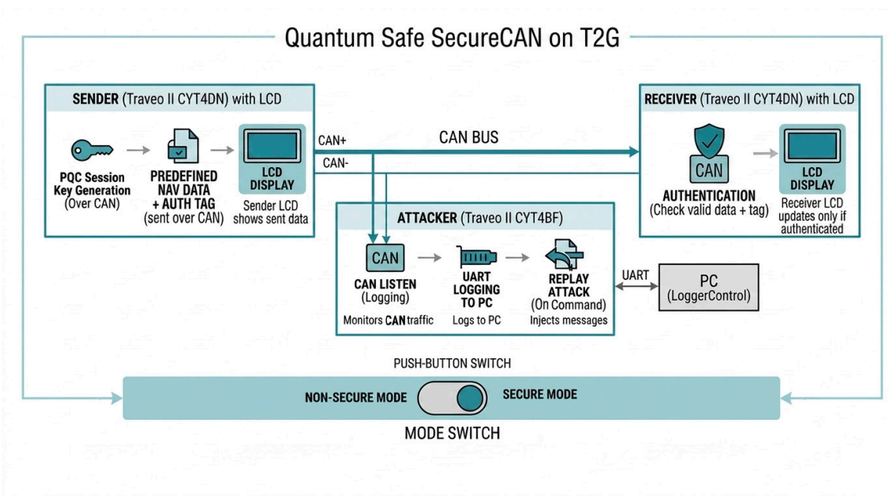
Software-defined vehicles (SDVs) rely on long-lived cryptographic trust: secured boot, authenticated OTA updates, ECU-to-ECU communication, diagnostics, and cloud backends. With the emerging prospect of quantum computers, crypto-agility in SDVs is becoming essential to mitigate 'harvest now, decrypt later' risks and enable seamless PQC algorithm migration.

Benefits
- Future-proof security for evolving standards and long lifetimes in vehicles
- Reduced redesign risk through crypto-agility and software-upgradable security
- Real-time readiness for safety-critical domains without sacrificing security posture

Highlight products
- AURIX™ TC377TX MCU
- AURIX™ TC4D9 MCU
- TRAVEO™ CYT4DN MCU

Applications
- Secured boot and firmware authenticity
- OTA updates and ECU reflashing
- In-vehicle networks (zonal architectures)
- Diagnostics and manufacturing





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