

NXP Semiconductors has provided details of their new S32 computing platform that promises to dramatically cut the amount of time automakers and suppliers spend on writing code, greatly enhance vehicle systems security and allow on-the-fly, over-the-air updates to vehicle software.



The new S32 semiconductor platform, said to offer 10 times the computing power of the best current microprocessors, is designed to meet the rapidly escalating onboard computing demands driven by the auto industry's march toward autonomous, electric and connected vehicles, NXP say.

The new modular processor uses an identical software approach across all vehicle domains, such as powertrain, chassis, safety and infotainment. That means more than 40% of software development is reusable from one system to the next, compared with less than 10% today.

Ultimately, NXP see the processor paving the way for an entirely new vehicle-control architecture that is less of a patchwork and much more hierarchical: a "system of systems", as it were. Eight of the top 15 automakers around the world already have committed to using the new microcontrollers on their vehicles even though hardware won't be available for testing until next year. Most automakers likely will make the transition one system at a time, but a few are considering more dramatic leaps that would completely revamp their vehicle-control architectures, including at least two Chinese makers, NXP executives say.