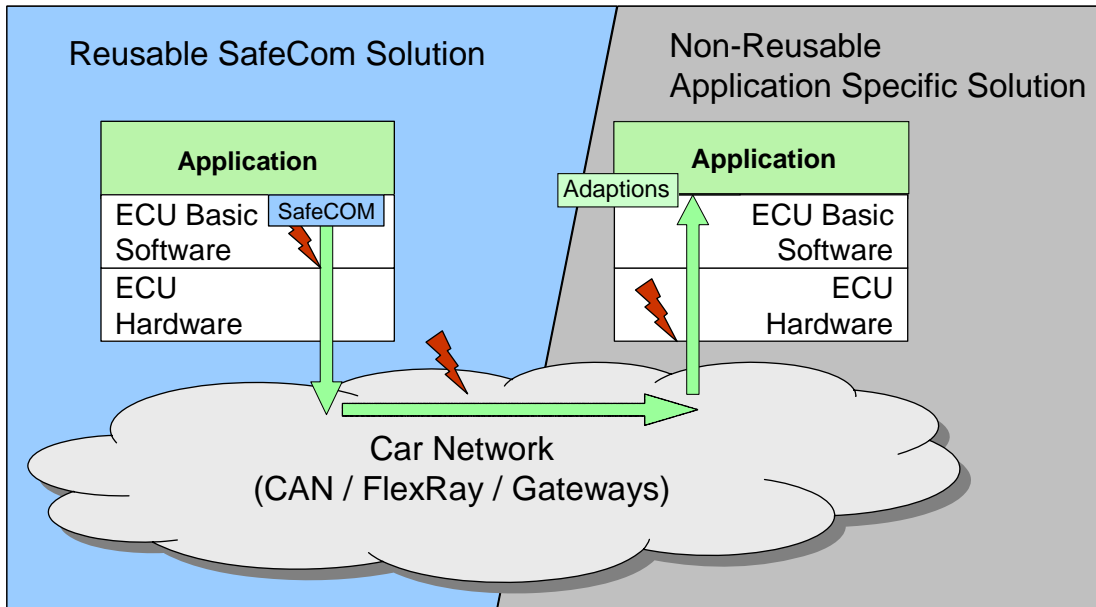


**Preliminary Product Flyer**

**Safe Communication for Critical Systems**



**TTX SafeCOM – Ensuring Communication Integrity for Safety-Related Systems**

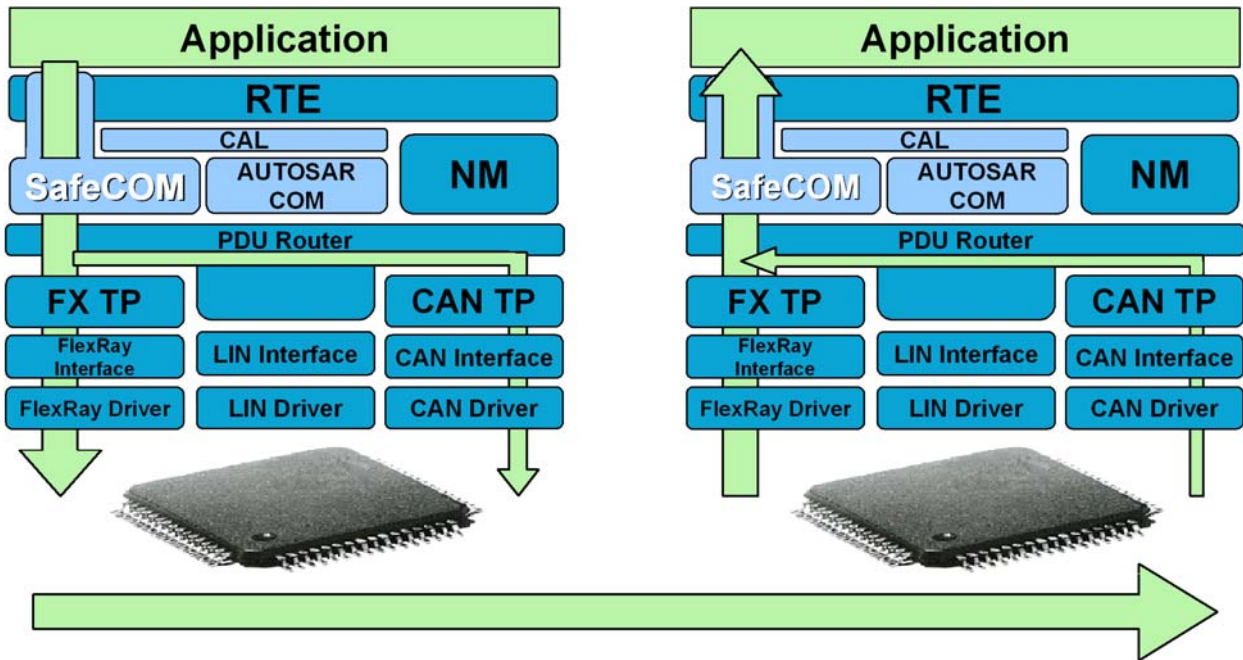
Automotive electronic control units (ECUs) increasingly have safety-related functions. These ECUs are linked using bus systems such as CAN and, more recently, also FlexRay. Safety of the whole system depends more and more on the integrity of the communication between ECUs. Ensuring this integrity is a huge effort and involves application-specific implementation of software safety functions. The common approach is that the automotive OEM prescribes application-specific safety measures to system suppliers and checks for correct implementation. More than 50% of the development effort is dedicated to specific safety and certification activities.

TTX SafeCOM follows a different approach to achieving system safety. It is a reusable and modular safety layer that guarantees “end-to-end communication integrity” by checking correctness of messages between applications. TTX SafeCOM reduces costs for application integration by using standardization and re-use. It also reduces costs for application development by offering the integration of a generic standard solution to the automotive industry instead of an application-specific solution. It can be used in different ECUs for powertrain on chassis applications to provide a coherent solution for one OEM with less integration effort. It is also possible for Tier 1s to use the TTX SafeCOM across families of ECUs which are used at different OEMs with its flexible end-to-end library of functions.

Main Features	
✓	End-to-end communication protection
✓	TÜV-approved solution
✓	Integrates with AUTOSAR standard software
✓	Application-independent, universally useable
✓	Developed according to IEC61508 for SIL-3 applications (equivalent ASIL D)
✓	Available for series production

**Preliminary Product Flyer**

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<sup>TTX</sup>SafeCOM seamlessly integrates into the AUTOSAR communication stack, and provides duplicate data paths starting at the place where CRC protection can no longer be applied – that is, after the data is unpacked from the network data packets. The application receives the data over two paths: via the AUTOSAR-API (the same path that is used for non-critical data) and additionally via the <sup>TTX</sup>SafeCOM-API. The application can easily ascertain whether an error occurred after the data was unpacked by comparing the data received on each path. Since there is not yet a norm for algorithms that guarantee data validity (CRCs and message counters), these algorithms are not part of <sup>TTX</sup>SafeCOM, but rather are added as library functions.

For further information, including price and availability, contact [products@tttech-automotive.com](mailto:products@tttech-automotive.com).