Software platform complying on the AUTOSAR Adaptive Platform specification for the next-generation high-performance computing era. It uses a POSIX-compliant real-time OS that can support from single to multi-core/many-core, and supports a variety of SoCs. We support system development by providing various functions such as communication, file system, security and diagnosis.

What is AUTOSAR Adaptive Platform?

AUTOSAR Adaptive Platform is the next-generation vehicle software platform for advanced driver assistance, connectivity, autonomous driving technology and the high-performance computing that supports it. Adaptive Platform is a platform for next-generation central computers that collectively process information output from each ECU in an in-vehicle network, enabling dynamic functional expansion and cooperation between different domains required for autonomous driving.

- **C++**
  Can be developed in C++.
  While making use of past assets developed in C language such as Classic Platform, by utilizing object orientation, it is possible to design with reduced coupling between modules while clarifying the role of each module.

- **Safety and Security**
  SOA based distributed computing architecture that increases the independence of each module and prevents unintended interference
  Providing unique C++ coding guidelines ensures the security and reliability required at the implementation level

- **Planned Dynamics**
  Update for continuous updates by dynamically managing application resources and communications
  →Enables localizing the impact of updates and reducing the effort required to validate and integrate software
  Appropriate scheduling and resource management with the Execution Manifest* to reduce the risk of safety hazards  
  *Created in units of Adaptive Application (AA) and contains information to automate the configuration required to operate AA
01 Features

- Compliant to AUTOSAR Adaptive Platform
- Supports various OS (AUBIST OS POSIX/Ubuntu/Other RTOS)
- AP environment optimized for POSIX OS
- Supports various SoCs and H/W (including Simulator)
- Virtualization solution with AUBIST Hypervisor for integrated ECUs
- AUBIST Tool AP facilitates the maintenance of development environments that tend to be complicated.

02 Product Structure

AUBIST Adaptive Platform
AUBIST Hypervisor
AUBIST Tool AP

03 Applicable Fields

- Integrated control of autonomous driving ECU and other ECUs
- Cooperation between different domains
- Multiprocessor system for load balance and functional decomposition
- Dynamics in software platform, service-oriented application control

TOPICS AUBIST Adaptive Platform

Efficient development environment

The AUBIST AP also runs on Ubuntu, so applications can be developed on PCs. Applications developed on PCs can be easily operated on actual machines.
Optimized for target OS

Supporting multiple POSIX OSes is generally realized by absorbing OS differences at the OSAL layer. But, it is worried about low performance when the implementation emphasize the portability. The AUBIST AP provides OSAL tuning for the target OS and an optimized AP environment for the target OS on a per-FC (Functional Cluster) basis.

The AUBIST Tool AP toolchain makes building a development environment Easy

The AUBIST Designer AP, AUBSIT Configurator AP, and AUBSIT Configurator AP CLI are available. In response to the complexity of the development environment in the ECU software development flow, each tool plays a wide range of roles to support efficient development.

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