

PREEvision

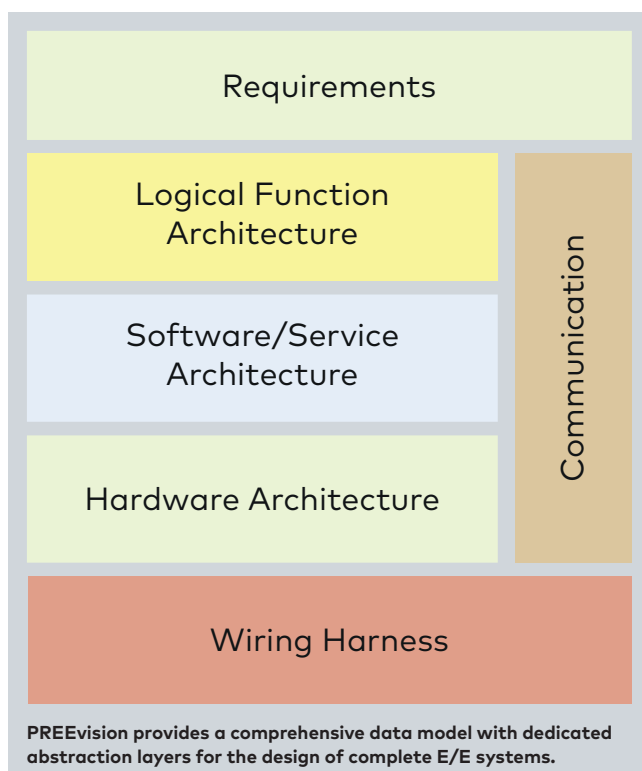
Model-Based E/E Development from Architecture Design to Series Production

What is PREEvision?

PREEvision is the premier tool for model-based development of distributed, embedded systems in the automotive industry and related fields. This engineering environment supports the entire technical development process in a single integrated application. PREEvision offers comprehensive functions for both classic and service-oriented architecture development, requirements management, communication design, safety-related system design, AUTOSAR system and software design as well as wiring harness development.

Benefits at a Glance

- > Design, management and documentation of complete E/E systems in one tool
- > Integrated traceability
- > Graphical modeling in diagrams
- > Full support of AUTOSAR methodology
- > Design of safety-relevant systems acc. to ISO 26262
- > Variant and product line management
- > Complete development from architecture to wiring harness based on one source



Highlights of Version 8.5

Support for ReqIF

- > Import and export of requirements, customer features, and test specifications via ReqIF
- > Support for ReqIF versions 1.2, 1.1 and 1.0.1
- > Export of any model parts via ReqIF
- > Import and export of single files or directories
- > Support of files including pictures, tables and OLE objects

Support for KBL 2.4

- > Import and export of wiring harness data via KBL 2.4
- > New concepts like fuse values, slots, cavities and installation and processing instructions

Ethernet and Service-oriented Architectures

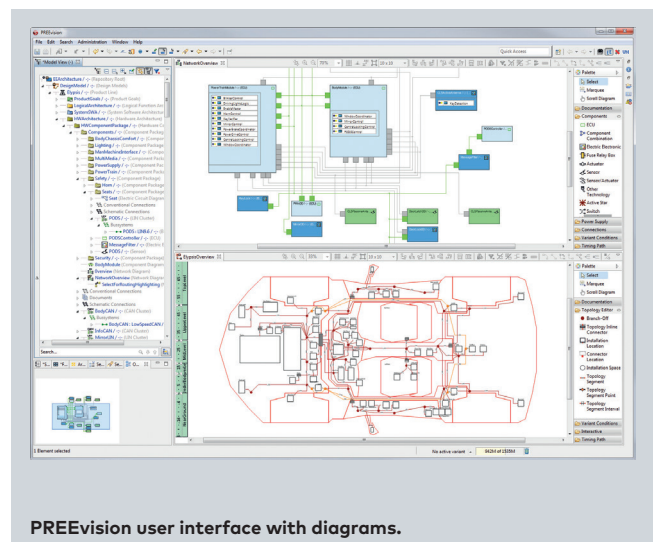
- > New editors for Ethernet design
- > Package diagrams
- > Switch diagrams

Diagram Improvements

- > New line router
- > Help lines and improved snap to grid
- > Air lines indicating possible targets for connections

Centralized Administration

- > Single interface to manage licenses, installations, roles and rights
- > Definition and assignment of model scopes by project manager
- > Reporting according to internal compliance management



Application Areas

Architecture Design

PREEvision supports the design and evaluation of E/E architectures and enables the fast evaluation of design alternatives. Wire length, weight, package requirements, power consumption, and bus-load: the success factors and cost functions of an E/E architecture can be specified by the architects themselves. Through consistent, integrated modeling, a multidimensional decision network can be created for evaluation of multiple alternatives.

Requirements Engineering

The integrated requirements management of PREEvision enables seamless interworking of requirements with all development artifacts in the model. Development artifacts or even individual values may be used as requirements and exported into documents for dissemination or review.

AUTOSAR System Design

PREEvision is a component of the AUTOSAR tool chain from Vector. PREEvision supports development of software and hardware architectures and communication design while incorporating many AUTOSAR concepts. The integrated approach of PREEvision also establishes a direct link to other design activities, such as the management of requirements, variants and tests.

Design of Safety-Relevant Systems

PREEvision reduces the effort required when designing safety-relevant systems according to ISO 26262. The integrated approach ranges from the definition of the vehicle system, the hazard analysis and risk assessment, using FMEA and FTA, to compilation of the safety case. It enables full transparency and traceability for all stakeholders. Editors and templates for the safety case, safety plan, and development interface agreement minimize the effort for document creation.

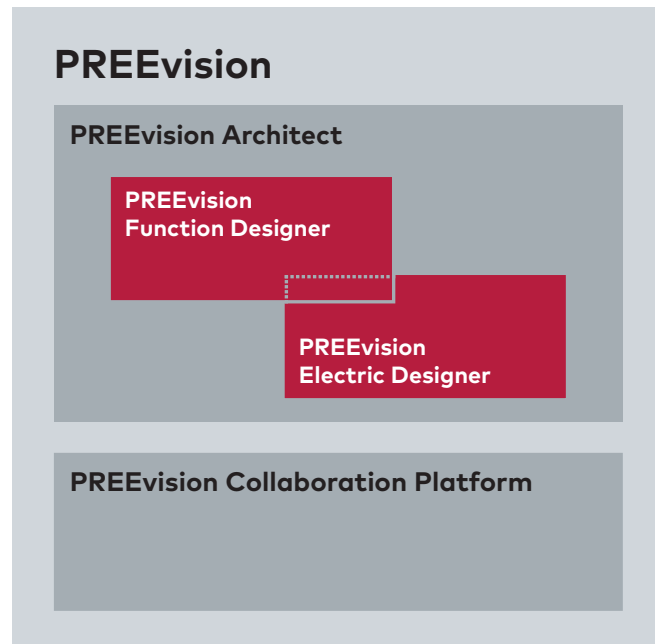
Wiring Harness Design

PREEvision supports wiring harness engineers to develop cost-effective wire and cable assembly designs. To evaluate different alternatives, to optimize designs and to define the final wiring harnesses in detail, the model-based tool provides powerful functions: diagrams for electric circuit and wiring harness and special features like the wiring harness router, an automated electric current calculation as well as import and export functions.

Test Engineering and Management

PREEvision provides integrated tools for test engineering and test management across the whole development process of E/E systems and offers full traceability from requirements through to test report.

Product Options



PREEvision Architect

PREEvision Architect provides the integrated scope of functions for designing an E/E architecture, ranging from requirements management, logical architecture, and software and hardware architecture, AUTOSAR system design, to wiring harness and vehicle geometry. Model evaluation, optimization and documentation round-out the design process. Also, development to series production readiness is supported in the following areas: consistent description of requirements, specification of functions, components, networks, and definition and maintenance of logical and physical interfaces.

PREEvision Function Designer

PREEvision Function Designer fully supports the AUTOSAR system design process alongside the description of requirements, design of logical functions, software and hardware components, network architecture and communication design.

PREEvision Electric Designer

PREEvision Electric Designer supports requirements management, hardware architecture design, circuit diagrams, wiring harness design, and vehicle geometry.

PREEvision Collaboration Platform

The server-based PREEvision Collaboration Platform enables team operation of PREEvision and includes product and release management as well as change and configuration management.

More Information: www.vector.com/PREEvision