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 9.5
> High-Performance Computers
Due to the computing demands, high-performance computers (HPCs) complement conventional ECUs in vehicles. PREEvision 9.5 provides a dedicated diagram to model HPCs including microcontrollers, microprocessors, and internal buses.
> AUTOSAR Adaptive
PREEvision 9.5 supports AUTOSAR Adaptive version 19-03 and facilitates the modeling of mixed systems of AUTOSAR Classic and Adaptive. A dedicated adapter translates between the software interfaces of both platforms.
> Platform and Product Line Management
The platform approach supports E/E development in levels or stages. Starting from a basic architecture for a vehicle platform, you can refine and detail the design downstream for single variants in an efficient way.
> Server API
The REST API allows web services and applications to read and write artifacts and their properties.
Product Options

**PREEvision**

- **PREEvision Architect**
- **PREEvision Function Designer**
- **PREEvision Electric Designer**
- **PREEvision Collaboration Platform**
- **PREEvision Server API**

**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. Dedicated features facilitate the modeling of combined systems of AUTOSAR Classic and Adaptive. And the integrated approach of PREEvision 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.

More Information: [www.vector.com/PREEvision](http://www.vector.com/PREEvision)