

THE FACTS AT A GLANCE



SUMMARY DATA SHEET

WHAT IS fe.screen-sim?

fe.screen-sim is a software solution for virtual commissioning and system simulation. You can use it to create a digital model of your systems and machines – a so-called “digital twin” that behaves in exactly the same way as the real-life system/machine.

Its **impressive performance** capabilities will enable you to implement large and complex projects. For example, more than **100,000 elements, 16 controllers, 700 drives and approx. 150,000 inputs and outputs** can be deployed in a single simulation.

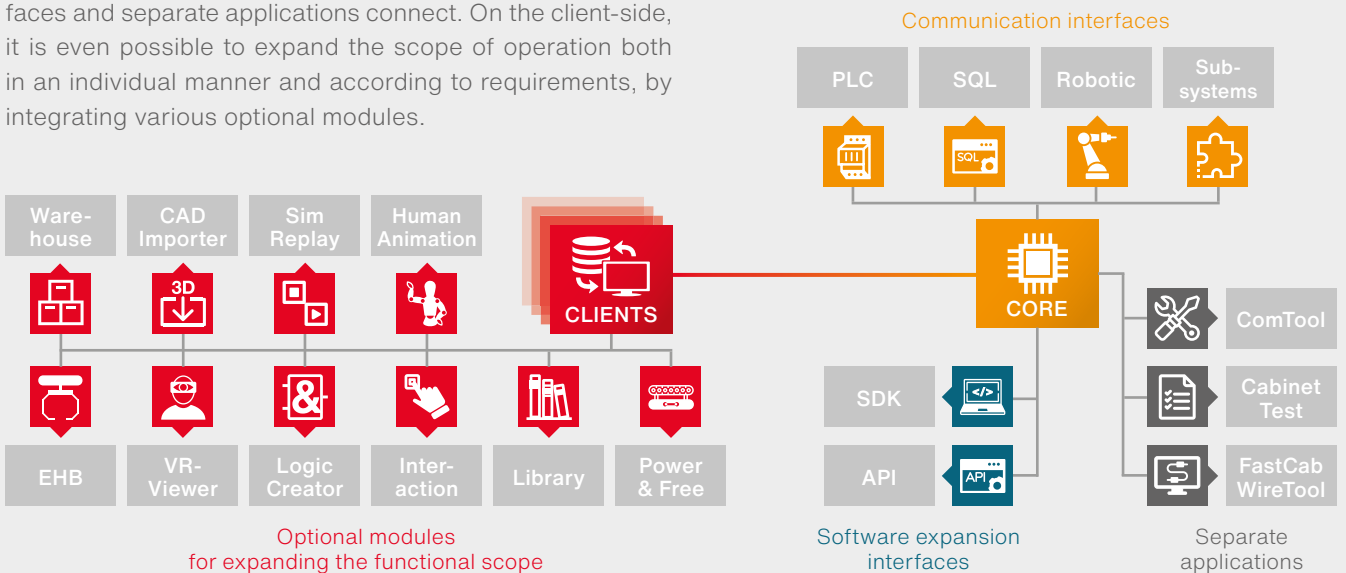
SCOPE OF APPLICATION AND SCENARIOS

fe.screen-sim can be used in its entirety for applications **in any industry**. Currently the software is used in the plant and mechanical engineering sector, in logistics, in the materials handling technology sector and also in the automation and robotics sector with great success.

Typical **application scenarios** are:
 Virtual commissioning | Process optimisation | Collision checks | Functional inspections | Training scenarios | Feasibility analyses | HMI operating concept testing | Ergonomics assessments.

THE STRUCTURE OF THE SOFTWARE

From the outset, it was deemed very important that fe.screen-sim have a **modular structure** so as to ensure **maximum flexibility**. The beating heart of this is the so-called “Core”, to which all clients, communication and extension interfaces and separate applications connect. On the client-side, it is even possible to expand the scope of operation both in an individual manner and according to requirements, by integrating various optional modules.



SYSTEM REQUIREMENTS

The ideal system configuration when using fe.screen-sim is as follows:

CPU: Intel I7-, 7700 or AMD 2700X
Graphics card: Geforce RTX 2080 | **RAM:** 16 GB

Of course the software can be used in connection with other hardware components that may already be in place. We are happy to advise you in this regard.

THE LICENSED VERSION

The fe.screen-sim licensing concept has a **modular structure** based on **floating licenses**. While communication interfaces are licensed once at the “Core”, clients have the opportunity to acquire optional modules, software extension interfaces and separate applications. This licensing model creates maximum transparency and means that our customers are not faced with unnecessary costs.

CONNECTION OF THIRD-PARTY SYSTEMS AND DATA IMPORTS

Our software solution provides interfaces for virtually all systems and data sources commonly found on the market, such as

- **Controllers:** Siemens S7 (series: 200, 300, 400, 1200, 1500) and compatible controllers (e. g. VIPA), Allen Bradley, Rockwell, Beckhoff (TwinCAT 3), Fanuc, WAGO, PLCSIM Advanced, Simulation Unit.
- **Robotics:** KUKA, ABB, Fanuc (others on request).
- **Subsystems:** E. g. MATLAB®/Simulink®, WinMOD® etc.
- **CAD import:** SolidWorks, Step, JT, OBJ, FBX and many more.
- **SQL, XML and Excel.**

HOW YOU WILL BENEFIT FROM USING OUR 3D SIMULATION SOFTWARE

You and your company will benefit from using fe.screen-sim in a number of different ways.

These include:

- Comprehensive **testing in advance.**
- **Error control.**
- Straightforward **optimisation options.**
- **Improvement in software quality.**
- **Efficient use of resources.**
- **Increase in customer satisfaction.**
- **Shortening of innovation cycles.**
- **Minimisation of risk.**
- Increase in **employee satisfaction.**

OTHER FUNCTIONS AT A GLANCE

- **Multi-user capability:** Several users work together on a simulation project.
- **Integrated user and group management.**
- **Comprehensive element catalogue** that enables you to configure your own models and library objects.
- **Ability to create logic** in FUP and C#.
- **Graphic Assign:** Straightforward, automated assignment of connections, e. g. between the variable and simulation element.
- **Innovative editors** that allow you to subsequently edit materials, models and physical properties.
- **MeshEditor** for defining specific collision ranges.
- **Automated signal assignment** of I/Os from the PLC.
- **Integrated signal recorder.**
- **Bi-directional exchange** from CAD to simulation.
- **Programming interface API and Software Development Kit (SDK)** for implementing your own functions and interfaces.
- **Integrated physical calculation** of friction, speed etc.
- **Coupling of various communication partners** in a simulation project (e. g. controllers and robots).
- **Full testing licence** for evaluation purposes.
- **Comprehensive range of services provided by F.EE:** e. g. creation of behavioural models and development of customer-specific modules and additional functions.

TRIED, TESTED AND TRUSTED ON THE MARKET - REFERENCES FROM SATISFIED USERS OF fe.screen-sim



fe.screen-sim is used in many **universities** and **vocational training institutions** - e. g. the Technical University of Deggendorf (Technology Campus Cham). In addition, the software is used in the "BayernLabs" for digital knowledge creation and in the **Innovation Hub Bergisches RheinLand** for research purposes.

F.EE GmbH | Business division Software + Systems

Industriestraße 6e | 92431 Neunburg vorm Wald | Germany

phone: +49 9672 506-0 | e-mail: fescreen-sim@fee.de | www.fescreen-sim.com

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