

# Technical Specification

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## General

- Native graphical user interface based on Windows XP and Vista
- Tight interface to CST DESIGN STUDIO™ and CST MICROWAVE STUDIO®
- Transmission line modeling method for fast and accurate simulation of TEM propagation modes
- Hybrid method combining the transmission line analysis with the 3D full wave analysis

## Harness Structure Modeling

- Easy definition of complex harness topology from scratch
- Import of harness definition files via NASTRAN or STEP AP212 (KBL) format
- Interactive cable editing dialogs for generic cables like single wires, twisted cables, coaxial cables, and ribbon cables
- Definition of cable groups (any combination of generic cables)
- Consideration of solid or braided shields in combination with any of the above cable types
- Advanced definition and modeling of ground reference structures
- Import of 3D CAD data from SAT, Autodesk Inventor®, IGES, VDA-FS, STEP, ProE®, CATIA 4®, CATIA 5®, CoventorWare®, Mecadtron®, Nastran or STL
- Advanced navigator and selection manager
- Various and powerful graphic views

## Harness Electric Modeling

- Automatic meshing and extraction of 2D transmission line parameters
- Sophisticated modeling and simulation techniques of braided shields
- Consideration of skin-effect and dielectric loss in time and frequency domain
- Consideration of transfer impedance for braided shields in time and frequency domain
- Export of equivalent SPICE circuits
- Export of radiation simulation data for EMI analyses

## Circuit Simulator

- Schematic editor for passive and active device definition

- Fast circuit simulation in time and frequency domain
- Import of SPICE equivalent circuits (Berkley SPICE syntax)
- Support of IBIS models
- Import and export of S-Parameter data via TOUCHSTONE file format
- Parameterization of termination circuitry and parameter sweep

### 3D Full Wave Solver

- Co-simulation with CST MICROWAVE STUDIO®
- Interface to CST MICROSTRIPES™
- Automatic transfer of impressed common mode currents on cable bundles from circuit simulator
- Automatic transfer of induced voltages on cable bundles to circuit simulator
- Advanced solid modelling of the definition of scattering or antenna structures
- Import of 3D CAD data by SAT, Autodesk Inventor®, IGES, VDA-FS, STEP, ProE®, CATIA 4®, CATIA 5®, CoventorWare®, Mecedron®, Nastran or STL files for the definition of scatter and antenna structures.
- Plane wave excitation (linear, circular, elliptical polarization)
- Ideal voltage and current sources for antenna excitation
- Fully automatic meshing of hexahedral grids in combination with the Perfect Boundary Approximation (PBA) ®
- Calculation of various electromagnetic quantities such as electric fields, magnetic fields, surface currents, voltages

### Minimum Hardware Requirements

- Intel® Xeon® based PC, 4GB RAM, DVD-Drive, at least 20 GB of free hard disc space.
- Fully OpenGL compliant graphic card
- Windows XP Professional, Windows Vista, Windows 7
- All solvers support RedHat Enterprise Linux (RHEL) 4.x und 5.x.
- Hardware recommendation depends on your application. If in doubt, please contact your local sales office for further information.