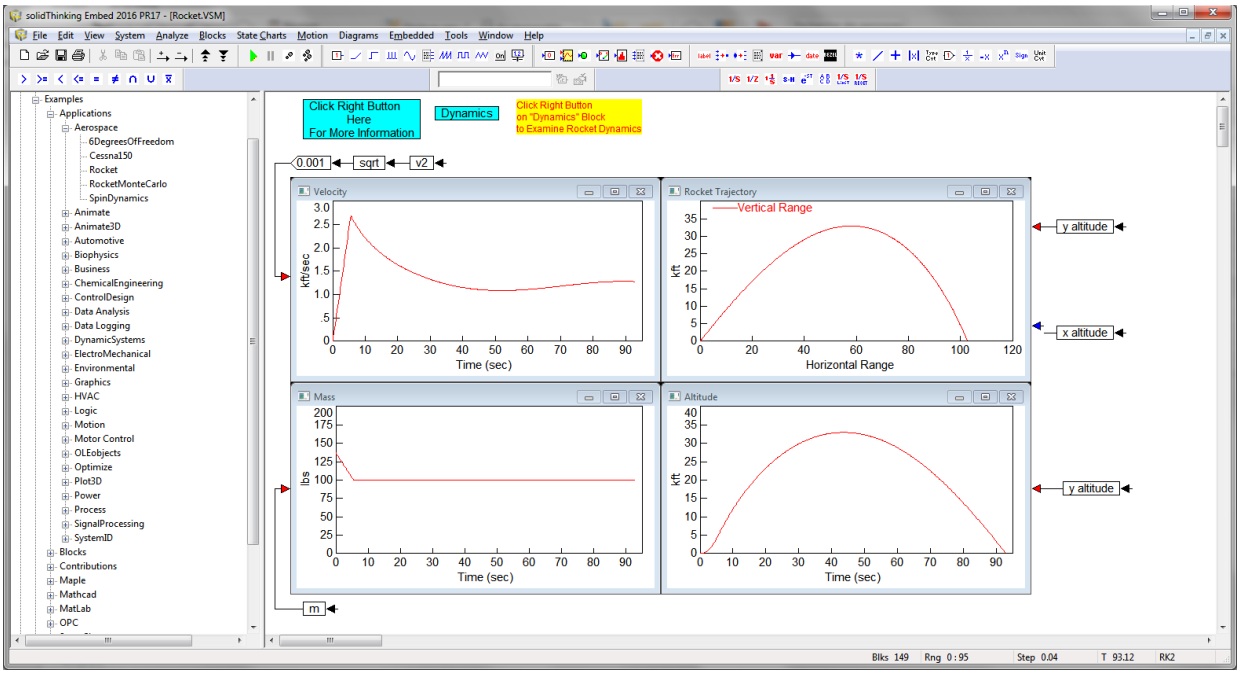
INTRODUCTION

solidThinking Embed SE (Simulation Edition), formerly known as VisSim Professional, is a visual environment for model-based development and dynamic simulation of complex systems. It combines an intuitive graphical interface with a powerful simulation engine to accurately represent linear and nonlinear systems, and simulate their behavior in continuous time, sampled time, or a combination of both.

solidThinking Embed SE provides a tightly integrated development environment, making it easy to pass freely among the stages of model construction, simulation, optimization, and validation, allowing you to create, verify, and validate prototypes before committing to the design.



PLATFORM SUPPORT

Platform		
OS	**Version**	**Architecture**
Windows	8.1/7	x86_64

The following features and enhancements have been added for **solidThinking Embed SE 2016**:

INTEGRATION

Altair Licensing	With version 2016, Altair Licensing mechanism (either through units-based or feature-based licenses) is used for **solidThinking Embed SE** giving flexibility to accommodate all licensing needs.

Integration of VisSim add-ons	**solidThinking Embed SE** is built upon **Professional VisSim** and includes, in a single package and installation the following add-on modules: Analyze, CAN, Motion, OPC, RealtimePro, OptimizePro, Serial, StateCharts and UDP. They provide these additional capabilities: analysis and linearization, generalized reduced gradient method of parameter optimization, electric motor and controller block set (floating point), UML 2 state transition diagram editor to simulate event-driven systems, and real-time data monitoring with CAN, OPC, real-time data acquisition boards, serial, and UDP.
Support for solidThinking Compose Math Language	This represents a major upgrade in supported functionality for math computation, adding function calls, for loops and conditional statements among many other features.

The following issues have been resolved for **solidThinking Embed SE 2016**:

GENERAL, SIMULATION

Fixed issue where 2D .csv map files could give zero based dimension error
Plot Marker count could vary from value set in dialog or if enabled plot
In rare cases the application could hang on file/open or file/new
Find/replace could cause memory leak
Matrix multiplied by scalar 0 could give "unknown matrix size" error
Find of block under another block failed to raise found block to top
Undo/redo of compound creation could result in extra compound pins
Fixed issue with plot cropped after zoom out
Fixed problem with 3D animation WRL files
Added warning for non-constant gain expression
Fixed erroneous matrix section error on file save
Some diagrams with IC expressions had needless iterations at startup
Matrix section set via matrix index int const matrix gave wrong warning on first run
Fixed issue where copy of dialog table omitted path table data
Suppress error messages (for example division by zero) from disabled compounds
Fixed issue with undeclared matrix in case of matrix operand use in nested compound that connected to unused branch of merge
Fixed issue where 2D .csv map files could give zero based dimension error

BLOCK SET

Fixed issue where sawtooth block of same period as simulation time step caused division by zero errors

Fixed issue where use of constant in single quotes in const block could cause hang
Transfer functions in local bounds compound gave wrong results
Transfer function coefficient with undefined variable in denominator of fraction could hang
ABCD state space block could give erroneous matrix shape warnings
Using "1/a^2" in denominator of transfer function could hang after warning
Handle warn of feedback around reset and limited integrals
Fix erroneous warning for ABCD state space in case of dimensionality mismatch
Fixed issues in Matrix section and merge
The Ramp block behavior from VisSim v7 or less differs from v8 or v9. Added autoconvert to new offset vs. time delay based.
Fix case where disconnected matrixMerge block could cause issue on file save
Changed ramp "delay" parameter to "offset" to reflect numeric usage

OTHER MODULES and ADD-ONS

Fixed issue on Comm WaveRead block which faulted on load
Improved State chart execution which was slowed down on entry of Composite state
State chart dialog was missing help button
Analyze gave erroneous small gain margin if phase plot never got below -180
CAN Rx/Tx of longer messages with more than one data item could give bad results