Expanded to Deliver
Unsurpassed Performance
Intelligence
Reliability

Boost Accuracy & Productivity

- Detailed Dynamic Simulation
- Rule-Based Time-Saving Capabilities
- Improved Performance
- 64-Bit Architecture
Modeling to Operation

Generation, Transmission, Distribution, Industrial, Transportation, & Low Voltage Power Systems

Model
- One-Line Diagram
- Intelligent Geospatial Diagram
- Protection & Coordination
- Control Circuit Schematics
- Logic Diagram
- Underground Cable Raceway
- Cable Pulling
- Substation Grounding

Optimize
- Energy & Power Management
- Distribution Management
- Outage Management
- Intelligent Load Shedding
- Generation Management
- Smart Grid & Microgrid

Analyze
- AC & DC Network Analysis
- Arc Flash & Safety Systems
- Protection & Coordination
- Dynamics & Transients
- Renewable Energy
- Equipment Sizing & Capacity
- System Grounding
- Power Quality
- Transmission & Distribution Analysis
- Rail Traction Systems

Operate
- Predictive Simulation
- Event Playback
- Switching Management
- Load Management
- Intelligent Substation Automation

Monitor
- eSCADA
- Power Management System
- State Estimation & Load Allocation
- Energy Accounting
- Native Communication Protocols
- Desktop, Web & Mobile Platforms

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Take Advantage of Latest Technologies

- Entire CPU Memory
- Video Card Memory
- Multi-CPU Cores
- View & Analyze Millions of Components
Power at your Fingertips®

- **Intelligent Time-Saving Capabilities** - Streamline Project Execution
- **Enterprise Solution** - Thinking Power at Your Fingertips
- **Scalable Modules** - Offline Analysis to Real-Time Applications
- **Verified & Validated Solutions** - High-Impact Quality Assurance Program
- **Unlimited Technical Support** - Unparalleled Expertise to Help You
Key Features & Capabilities

- New User-Defined Dynamic Modeling & Simulation Capabilities
- IEC 60092 - Cable Capacity Sizing for Ships & Marine Vessels
- Datablock for Protective Device Settings
- One-Line Diagram Enhancements
- Transient Stability Module
- Enhanced Short Circuit Module
- Expanded Protective Device Libraries
- Multi-Language Edition
Enhanced UDM Libraries

New UDM Models

- IEEE 421.5 Exciters
- IEEE 421.5 PSS/UEL/OEL
- WECC Approved Exciters
- WECC Approved Governors
- Energy Storage Models
- Enhanced Initialization
New IEEE 421.5 - AC Rotating Excitation Systems

- AC1C – 2016
- AC2C – 2016
- AC3C – 2016
- AC4C – 2016
- AC5C – 2016
- AC6C – 2016
- AC7C – 2016
- AC8B – 2005
- AC8C – 2016
- AC9C – 2016
New IEEE 421.5 - Static Excitation Systems

- ST3A – 421.5-2005
- ST5B – 421.5-2005
- ST5C – 421.5-2016
- ST6B – 421.5-2005
- ST6C – 421.5-2016
- ST7B – 421.5-2005
- ST7C – 421.5-2016
New IEEE 421.5 - DC Excitation Systems

- DC1A – 2005
- DC1C – 2016
- DC2A – 2005
- DC2C – 2016
- DC3A – 2005
- DC3C – 2016
- DC4C – 2016
New WECC Approved UDM Exciter Models

- BBSEX1
- EXAC1A
- EXELI
- IEEET1
- REXS
- SCRX

- UEL1 – 2005
- UEL2C – 2016
New Approved UDM Governor Models

- DEGOV1
- DT
- GAST
- GGOV1
- HYGOV
- HYGOVDD
- HYGOVLL
- HYGOVPID
- HYGOVSPH
- TGOV1
- ST
- UG8
New 421.5 UDM PSS Models

- PSS2B – 2005
- PSS2C – 2016
- PSS3B – 2005
- PSS3C – 2016
- PSS4B – 2005
- PSS4C – 2016
New UDM Energy Storage Models

New Reactive Power & Frequency Control ESS Models

- Energy Storage – ESS1
- Energy Storage – ESS2
Blazing Performance – Up to 50 x Faster

- Enhanced Result Visualization with Multi-Scope Support
- Enhanced Test Routines with Customizable Test Events
- Enhanced Timer Integration
- Go-To Blocks for Internal or External UDM Communication
- MIMO User-Defined Function Blocks with C# Support
Wind Turbine Generator

- Complex Terminal Voltage Input Blocks
- Complex Terminal Current Output Blocks
- New Wind Turbine Generator Load Tests
- Math Functions with Multiple Inputs
✓ Intelligent Protective Device Settings
✓ Adapt DataBlock Based on Device Model & Functions
✓ Export to AutoCAD™ DXF Drawing Files
IEC Standard 60092

Electrical Installation for Ships & Marine Vessels

✓ Line Conductor Sizing
✓ Short-Time Duty Consideration
✓ Enhanced Reports & Cable Manager
✓ Selectable Annex B for Installations Pre 2003
Localized Releases

- English
- Chinese
- Japanese
- Korean
- Russian
- Spanish
- Portuguese
- Italian
- Turkish

* Output reports

Arc Flash Labels are available in all Localized Releases including French and German
Enhanced Generator Excitation Systems
Dynamic Modeling for Motor Operated Valve

✓ Voltage & Frequency Dependent Modeling
✓ Dynamic Modeling with Voltage Limit Curves
✓ Voltage Alerts
View & Export Results of Multiple Studies in One Glance

✓ Compare & Analyze Study Results
✓ User-Defined Base-Line / Reference
✓ Easily Identify Over Duty Devices
✓ Worst-Case Fault Scenarios
Transient Short-Circuit Behavior

- 3-Phase Transient Fault
  IEC-61363

- User-Defined Fuse Test PF & X/R

- Thermal Withstand Trip, Break & Close Times
Customizable Universal Mapping & Interface

✓ Excel®

✓ ESRI ArcGIS®

✓ Intergraph SmartPlant® Electrical

✓ AVEVA® Electrical

✓ EMTP-RV®

✓ PSCAD® / EMTDC®
Improved Legacy Software Import

Built-in Data Conversion

- SKM PowerTools®
- PSA EasyPower®
- PSS/E® (RAW, SEQ, DYR)
Newly Added Verified & Validated Libraries

More than 200 new models / sizes

- Low Voltage Breakers
- Trip Devices
- Multi-Function Relays
- Fuses
- Reclosers
- Cables
Graphical User Interface

Toolbar Auto-Layout & Reset

✓ Automatic Toolbar Layout & Best-Fit Based on Screen Resolution
✓ Customize & Save Analysis Mode Toolbar Buttons
✓ Reset Toolbar Location Based on Defaults
Analysis Module & Capabilities Enhancements

✓ Underground Raceway Cable Thermal Analysis
✓ Dynamic Parameter Estimation & Tuning
✓ Hexagon SmartPlant Electrical™ - Data Exchange
✓ Project Merge
✓ Print Compatibility
PC Configuration Requirements

- Microsoft Windows® 10 Pro
- Microsoft Windows® 8 & 8.1 (Standard, Professional)
- Microsoft Windows 7 (Home Premium, Professional, Ultimate) (SP1)
- Microsoft® Server 2012 & 2012 R2 (Standard)
- Microsoft Server 2008 R2 (Standard) (SP1)

PC Configuration Requirements

- 64-bit hardware
- USB port
- Ethernet port w/ network access (if network licensing required)
- DVD Drive 10 to 80 GB hard disk space (based on project size, number of buses)
- Min. Monitor display resolution - 1920 X 1080

Software Requirements

- Internet Explorer® 10 or higher (or minimum version level specified by the Operating System)
- Microsoft .NET Framework v3.5 (SP1)
- Microsoft .NET Framework v4.0
- Microsoft .NET Framework v4.5
- Microsoft SQL Server Compact 3.5 (SP2)
- Microsoft Windows Update (KB2670838)
- Microsoft SQL Server 2012 Express LocalDB (x64)
- Microsoft SQL Server 2012 Native Client (x64)
- Microsoft SQL Management Studio 2012 (x64)