

# Paladin® DesignBase

## Power Systems Design and Simulation Platform

Paladin® DesignBase™ is an internationalized electrical power systems modeler that can be used to create, analyze, and simulate virtually any type of power infrastructure regardless of complexity. It is the best-selling and most powerful electrical system design and simulation software platform... and the only power systems modeler that can be redeployed for on-line use, using EDSA's Paladin® Live™ platform.

Unlike conventional power systems design/CAD packages, Paladin® DesignBase™ gives electrical engineering professionals the means to create a robust, presentation quality electrical “designbase” – a detailed design and knowledge base of the performance specifications of their entire electrical distribution system.

As a total solution platform, Paladin® DesignBase™ provides the technological richness needed to simulate and analyze systems from a variety of static or dynamic perspectives. This includes the unique ability to precisely model and embed detailed control logic of intelligent electronic devices that control power flow throughout the system.

### 1. Powerful design and simulation

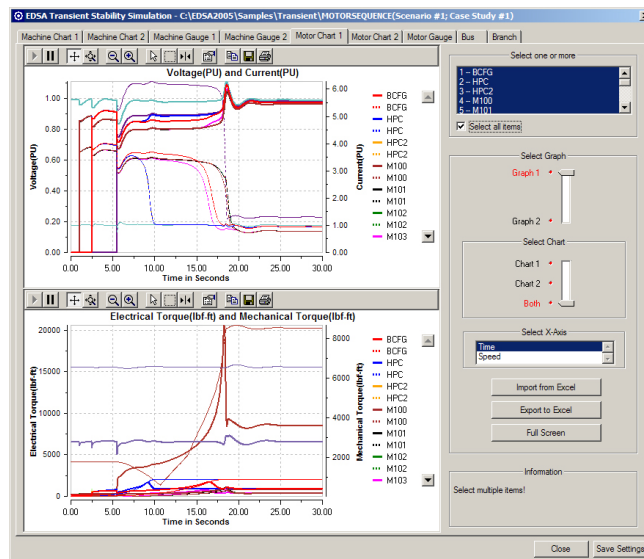
The designbase serves as the basis for powerful modeling, simulation, analysis, and “what if” testing prior to the construction phase, resulting in unparalleled levels of collaboration, and accelerated design schedules.

### 2. Get designs “Perfect on Paper”

The engineering intent behind all facets of the electrical engineer's design is preserved to guide downstream construction, installation, and maintenance crews... increasing adherence to overall project cost.

### 3. Future-proofing your facility

Once the facility is operational, the designbase can – using EDSA's Paladin® Live™ platform – serve as a benchmark against which actual measurements are compared, in order to identify potential operational problems while they are still in the formative stages, and they can still be preempted.



## Paladin® DesignBase™ EE Studio

The easiest and most sophisticated one-line diagramming design environment available for power system professionals. The entire EDSA modeling environment is provided, along with our electrical equipment libraries, database editors and all the tools needed to insure proper connectivity. Systems modeled with EE Studio can be used for detailed simulation and analysis. Includes:

- ActiveShapes technology
- Plugs and Sockets technology
- Intelligent Hyperlinking
- EDSA Database and component library
- Project Cost and BoM Reporting
- DWG Unplugged™ for reading/writing AutoCAD DWG and DXF™ files accurately
- Heidi® graphics engine
- DWF Export Kit for Web publishing
- Interactive Shape Editor
- VBA 6.2 Embedded for customization

# Paladin<sup>®</sup> DesignBase

## Power Systems Design and Simulation Platform

### Packages for <500 buses

**CE** – Base package (50, 100, or 500 bus)

- EE Studio features
- AC Fault Analysis Classical
- AC Fault Analysis ANSI/IEEE
- AC Fault Analysis IEC60909
- AC Arc Flash
- AC Power Flow
- AC Motor Starting Power Flow Method
- AC Protective Device Evaluation
- AC Protection Coordination

**SE** – Extended package (100 or 500 bus)

- All CE Package features
- Advanced Motor Starting and Performance
- Ground Grid Design
- Cable Ampacity
- 100, 500-bus configurations

**HE** – Power quality analysis (100 or 500 bus)

- All CE Package features
- IEEE 519 Harmonics Analysis with Filter Sizing

**TE** – Dynamic simulation (100 or 500 bus)

- All CE Package features
- Advanced Motor Starting and Performance
- Transient Stability Analysis
- Control Logic Model Builder

**PE** – All-in-one package (100 or 500 bus)

- All CE Package features
- All SE package features
- All HE package features
- All TE package features
- Fault Analysis IEC61363
- Active Optimal Power Flow

### Packages for <2000 buses

**Core** – Base package (100-2000 buses)

- EE Studio features
- AC Fault Analysis Classical/ANSI/IEC60909
- AC 1phase Fault Analysis
- AC Arc Flash
- AC Power Flow
- AC Motor Starting Power Flow Method
- AC Protective Device Evaluation
- AC Protection Coordination
- Power Factor Correction
- Wire and Conduit Sizing
- Short Line Parameters
- Transmission Line Parameters
- Bare Wire Sizing
- Generator Set Sizing
- 100, 300, 500, 1000, or 2000 bus packages

**Super** – Extended features (100-2000 buses)

- All Core package features
- Advanced Motor Starting and Performance • Motor Parameter Estimation

- Ground Grid Design
- Cable Ampacity
- Cable Pulling
- Transmission line Sag and Tension
- Load Forecasting
- 100, 300, 500, 1000, or 2000 bus packages

**Power 2000** – All-in-one package (2000 buses)

- All Core package features
- All Super package features
- AC Short Circuit IEC 61363
- IEEE 519 Harmonics Analysis with Filter Sizing
- Transient Stability Analysis
- Control Logic Model Builder
- EMTAP (Electromagnetic Transient)
- AC Voltage Profile Analysis
- Capacitor Sizing and Optimization
- DC System Analysis
- Short Circuit, Power Flow, Battery Sizing
- Reliability Assessment Analysis
- AC Voltage Profile Analysis

### Packages for unlimited buses

**EE-Plant** – All-in-one package (Unlimited buses)

- All Power 2000 package features
- Impedance Relay Coordination

### Optional Modules

- AC Short Circuit IEC 61363
- Transient Stability
- EMTAP (Electromagnetic Transient)
- Power System Voltage Stability
- Harmonics Analysis with Filter Design
- Control Logic Simulator
- DC System Analysis
- DC Short Circuit
- DC Power Flow
- Battery Sizing
- DCSDM Solutions
- Wire & Conduit Sizing
- Cable Ampacity Analysis
- Cable Pulling
- Cable Magnetic Field Analysis
- Bare Wire Sizing
- Transmission Line Parameter Estimation
- Transmission line Sag & Tension
- Impedance Relay Coordination
- Grounding Grid Design with 3-D Plotting
- Reliability Assessment Analysis
- AC Voltage Profile Analysis
- Power System Optimization
- Capacitor Sizing and Optimization
- Induction Motor Parameter Estimation
- Load Forecasting