

## Robust, comprehensive suite of advanced simulation tools for transmission, distribution and industrial power engineers

The world-class CYME power system analysis software is a robust, comprehensive suite of advanced simulation tools assisting transmission, distribution and industrial power engineers. The CYME suite of applications that was designed to help address the complex and emerging challenges of the electrical engineers that support power network planning and operation.

For over 25 years, the CYME software has been used for thousands of transmission, distribution and industrial projects around the world.

#### **Program Features**

The analytical capabilities of the CYME software fully support any type of power system simulation. Planning scenarios and case studies can be created to accurately and efficiently assess and substantiate the impact of modifications and reconfigurations to any power network, leading to improved asset management. CYME is mature yet modern software: proven to be accurate and reliable it continues to be actively enhanced and supported.

#### Simple yet powerful

The CYME interface is unified and straightforward, making its complex engineering calculation features easy to use. All the analysis functions used by power engineers are available as a seamless suite of applications, regardless of which modules are purchased. Simulations can be performed on virtually any network configuration.

The CYME software provides powerful modeling capabilities that support the detailed modeling of any distribution, industrial or transmission network of any scale or complexity. Creating balanced and unbalanced networks, secondary grids, substations, nested networks, whether radial or meshed, three-, two- or single phased, is fully supported and can represented schematically or geographically. To bring the network representation even closer to reality, the modeling capabilities are supported by extensive industry-standard

equipment and control libraries that can be enhanced by the user.

The CYME workspace is fully customizable. The graphical representation of the network components, and results and reports can be built and modified to supply the level of detail needed.

Innovative engineering technologies, industry practices and standards are at the core of the CYME algorithms, flexible user interface and extensive libraries.



# CYME Power Engineering Software

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#### Modular suite of applications

Core Modules for Transmission and Industrial:

- Power flow analysis for threephase electric power networks
- Fault conditions simulation for three-phase electric power systems.

Core Module for Distribution

- Per-phase voltage drop and power flow analysis
- Fault calculations (fault flows and fault voltages)
- Protective device analysis
- Optimal capacitor placement and sizing
- Load balancing and load allocation/estimation
- Analyses on balanced or unbalanced three-phase, two-phase and single-phase systems that are operated in radial, looped or meshed configurations.

#### **Additional CYME Modules**

Additional analysis modules are available for distribution, transmission or industrial power engineering within the CYME suite of applications. These work seamlessly with the core modules

- · Harmonic analysis
- Transient stability analysis
- Arc flash hazards analysis
- Load flow contingency (N-p)
- Dynamic motor starting
- Advanced project manager
- · Geographic overlay

The following modules further complement the distribution analysis capabilities:

- Reliability assessment
- Automated network forecast analyzer
- Steady state analysis with load profiles
- Protective device analysis
- · Long-term dynamics analysis
- Volt/Var optimization
- Low-voltage distribution network modeling and analysis
- Network configuration
  optimization
- Single contingency asessment and restoration
- Substations, sub-networks and secondary grid modeling

#### **Complementary Applications**

Furthermore, we offer other software designed specifically for distribution, industrial and transmission power system engineers. This includes the industry's most sophisticated cable ampacity calculations, grounding grid design and analysis, protective device coordination and creation/ maintenance of distribution network model.

#### Integration & Custom Software Development

We can help your staff successfully deploy off-line and real-time power engineering software solutions and integrate them with other enterprise systems.

System experts from Eaton are available on-site to ensure that all necessary aspects of the most efficient system integration are covered, according to your specific environment. We will assist you from start to finish. This assistance starts at the requirement evaluation and continues with system analysis, specifications, project management, testing, physical installation right up to the time the system goes into production, and training.

### Commitment to customer support

Our strength is based on the stable and trusting relationship we build with our customers. Since our start in 1986 as CYME International T&D, our customers have relied on our team which is renowned for its responsiveness, depth and quality. Today, Eaton's CYME development and support team is comprised of skilled computer specialists and electrical engineers experienced in power system planning design and operation, assuring that issues are addressed promptly and resolved professionally. Our open dialogue with utility and industry users combined with the high degree of knowledge of our engineering and technical staff ensures that the key power engineering issues and emerging trends of the power industry make their way into our software and solutions.



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