

SECONDS CAN COST MILLIONS

Cat® Switchgear

LET'S DO THE WORK.™





STAY UP AND RUNNING

When it comes to your facilities, an extended electrical disturbance or outage can be catastrophic to business. It is critical that your electrical systems remain up and running 24/7. Cat® generator paralleling switchgear is part of an integrated solution that provides peace of mind and reliability at your fingertips.

Available in both low and medium voltage configurations, it provides intuitive control, security, and power system data access to ensure your facilities remain on-line and open for business.



POWERFUL SYSTEMS

Cat switchgear offers a variety of systems to meet your specific application. All Cat Switchgear offerings help mitigate potential outages by providing you with access to real-time controls and information via color graphical touchscreen. All systems are designed to interface with building management systems. Control for multiple genset applications allow for kW and kVAR sharing, load sensitive generator demand, and engine hour balancing.

Emergency Generator Paralleling (EGP)

Parallels multiple gensets in applications where extended utility paralleling is not required. (commonly used with Cat automatic transfer switches capable of open or closed transition)

Emergency Transfer Load Manager (EXL)

Parallels a single engine generator set with a single utility source. Allows for manual selection of preferred source, provides automatic transfer to generator upon utility failure, and open or closed retransfer upon utility return.

Emergency Transfer and Load Management (XLM)

Parallels multiple engine generator sets with single or multiple utility sources. Allows for manual selection of preferred source, provides automatic transfer to generators upon utility failure, and open or closed retransfer upon utility return.

Custom

If our configurable switchgear offerings do not fit your needs, we offer fully customized solutions.



SCALABILITY

Cat switchgear and controls are designed to integrate with on-package, microprocessor-based Cat engine controls. This integrated system provides greater efficiency and reliability in one package, exclusively from your Cat dealer.

Products are available in three scalable systems: preconfigured, configure-to-order, and design-to-order. All systems include touchscreen operator interfaces, giving an overview of the system, generator, and engine. This easy-to-use touchscreen also provides annunciation and intuitive system control.



PRECONFIGURED

Caterpillar offers a variety of simplified paralleling configurations designed with a focus on economy and quick-ship capabilities. These systems provide for standardized sequences of operation and an array of standard options to meet basic paralleling application needs while allowing for modular expansion as a facility's critical loads grow.

EXL – Emergency Transfer Load Manager

- Single genset and single utility controls
- Supported operational modes:
 - Emergency standby
 - Import/export
 - Base load
 - Automatic genset exercising
- For use with Cat gensets equipped with EMCP 1, 2, 3, or 4



EMCP4 Master

- Controls up to eight gensets and a single utility
- Supported operational modes:
 - Emergency standby
 - Import/export
 - Base load
 - Automatic load shed/load add
 - Automatic load sense demand
- For use with Cat gensets equipped with EMCP 4.4



EMCP4 Supervisory Control Panel

- Controls up to eight gensets
- Supported modes
 - Emergency
 - Basic load shed/load add
 - Basic load sense demand
- For use with Cat gensets equipped with EMCP 4.4



EPIC – Engine Paralleling & Integration Control

EGIS – Engine Generator Integrated Switchgear

- Controls up to twelve gensets, a single utility, and 24 distribution breakers
- Modular design for staged buildouts
- Flexible control for expanding older systems
- Supported operational modes:
 - Emergency standby
 - Import/export
 - Base load
 - Automatic load shed/load add





CONFIGURE-TO-ORDER

Facilities with power, control, or options that fall outside the preconfigured solutions can depend on configure-to-order products. They incorporate a more flexible group of pre-engineered options and programming seamlessly coordinated for your specific application.

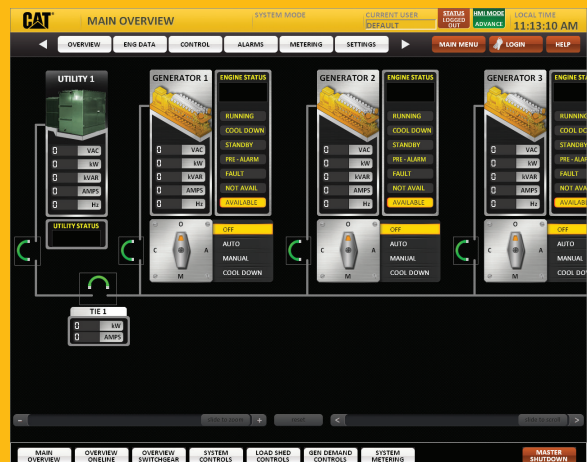
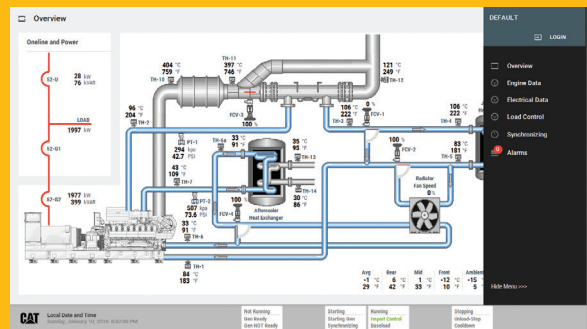
Configurable options include:

- PLC architecture
- Switchgear arrangement
- Protective relays
- HMI dimensions and screens



DESIGN-TO-ORDER

For the most complex sites, Caterpillar has the depth of engineering resources with the knowledge and experience to create completely custom systems. Design-to-order may include the use of alternative fuels, microgrid applications, your specific platforms and components, and complex customized sequences of operations.





PEACE OF MIND

Advanced Communications Capabilities

Cat switchgear is equipped with exceptional remote communications technologies so you can control and monitor your electric power generation system from anywhere at any time. In the office, at home, or on the road, you can access controls and information in real-time and respond immediately; even control multiple facilities from a single centralized site.

High-speed Integrated Control System

Control architecture options include redundant and dual-redundant high-speed, industrially hardened network for system control. This feature ensures proper system performance under any condition.

Fault Tolerance

Distributed processing and redundancy provide maximum efficiency and reliability. Cat switchgear systems are designed with four levels of fault tolerance so no single point of failure exists:

1. True distributed-control processors for each power source ensure the system continues to operate even if a single controller fails.
2. Redundant pairs of controllers execute master control functions. Failure of a single master controller will not interrupt system performance.
3. If the touchscreen fails, an "Instant Auto" switch places all digital controls in the Auto position, protecting your facility from power outages.
4. Finally, hardwired manual controls are provided in case all automation features fail.

FEATURES DESIGNED FOR EASE OF OPERATION

Best-in-Class Footprint

Integrated solutions with standardized components have less wiring, a smaller footprint, longer mean time between failures, and shorter mean time to repair.

Touchscreen Interface

The color touchscreen display is the key to powerful and simple operator interface. The screen gives the operator an instantaneous, easily understandable view of the entire system status. Easy-to-read information emulates traditional meters and gauges, conveying a wealth of information at a glance.

To access system controls, simply touch the corresponding portion of the screen. The entire generator set can be

monitored from one touchscreen. The easy-to-use interface makes it possible to view, monitor, and perform multiple functions including:

- Engine metering
- Protective relay settings
- Annunciators
- Adjusting load shed controls and generator demand priority
- Synchronize and parallel
- Set modes of operations
- Voltage and frequency adjustment

EASY	Color touchscreen display
EASY	See entire system status at a glance
EASY	Simple access to system controls
EASY	Less wiring
EASY	Shorter mean time to repair





Unmatched Customer Support

Whatever your application, Caterpillar has your power generation and electrical distribution system. Years of experience and a wide range of products makes your Cat dealer your single-source supplier of integrated generators, switchgear products, and local support and service by highly skilled technicians for your emergency/standby system. System life extension services are also available:

- Customer Value Agreement (CVA)
- Cat Extended Service Coverage (ESC Policy)
- Site-specific replacement parts
- Switchgear upgrades and retrofits
- Training services
- Site operation simulators

Standard or customized, Cat switchgear gives you the most reliable capabilities to protect your facility from outages. We're built to make sure you never lose power.

LET'S DO THE WORK.™

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