

Picture shown may not reflect actual configuration

MMC-M
Cat® Microgrid Master Controller (MMC)

Caterpillar is leading the renewable microgrid market with hybrid power solutions engineered to deliver unmatched performance, reliability, durability, and cost effectiveness.

FEATURES

General Description
The Cat® MMC is designed for large industrial/ commercial installations. The MMC will integrate a variety of traditional and renewable energy sources to provide overall monitoring and control of the assets. These assets may be either located at a common installation or dispatched over a wider region.

Panel
- UL508A industrial control panel
- 914.4 mm (36 in) x 1217.3 mm (48 in) x 33.2 mm (13 in) NEMA 3R wall mount control panel
- Industrial PC in a rugged metal enclosure, resistant to vibration and shock.
- 15.6” Industrial touch-screen display that includes microgrid system one-line, control and monitoring of connected assets.
- Operating temperature: 0°C to 40°C (32°F to 104°F) at 5%-85% relative humidity (non-condensing)
- Uninterruptible Power Supply with battery management
- Digital I/O module for interfacing with ATS and other relays
- Fan and heater for temperature regulation with thermostat control

User Interface
Provides visual interface to all control elements to simplify operator interactions with the distributed energy resources. Includes system visualization and user interface for manual or automatic control of the distributed energy resources.

Distributed Resource Dispatch
The distributed energy resources, including the photovoltaic (PV) system, energy storage system (ESS) and generator sets are controlled from the MMC. The MMC will determine the correct energy contribution from each of the distributed energy resources to maximize penetration from renewable energy sources and system reliability. Priority for distributed resource use can be changed from the MMC user interface.

Asset Optimization
The MMC may be configured to optimize overall performance based on different user-defined criteria. The optimization can be based on a number of different parameters, such as minimizing fuel cost, optimizing engine operation, or maximizing system reliability. The system may also be configured to provide a minimum level of spinning reserve online to respond to sudden load transients.

Grid Import/Export Control
The MMC will regulate the amount of real and reactive power contributed to the microgrid from the available utility service based on a programmable set point. This can be set to either import or export power based on the limit assigned by the system operator or utility.

Black Start
The MMC is capable of manual black start operation to energize the microgrid from a de-energized (black) state. The operator will manually start assets from the MMC. Loads can then be manually restored to the system with the MMC automatically adding generation to meet the load requirements

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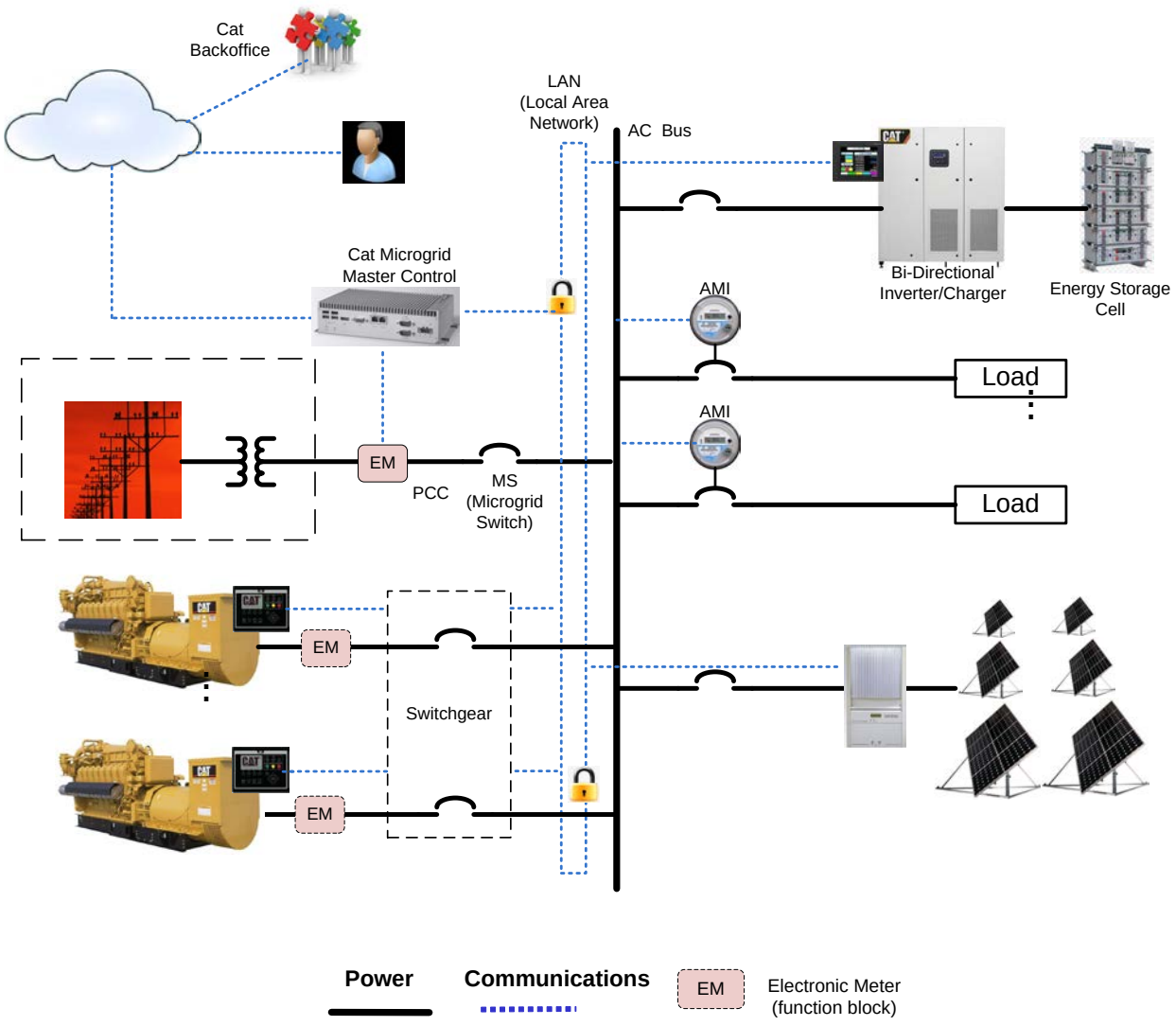
Microgrid Controllers

Remote Monitoring

The complete system is monitored remotely using Cat Connect Technology to provided real time monitoring of the performance and health of the installation. If an issue is detected, local technicians can be dispatched to resolve the problem.

Worldwide Product Support

- Cat dealers provide extensive post-sale support including maintenance and repair agreements.
- Cat dealers have over 1,800 dealer branch stores operating in 200 countries.



Materials and specifications are subject to change without notice.
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