



PowerHouse™ Cabinets

Providing Uninterrupted DC Power For Today's Global High-Capacity Systems

CommScope's PowerHouse Cabinets are flexible, modular products that allow our customers to purchase power as needed. Our patented Enhanced Cooling System can double battery life when compared to traditional passive cooling systems. Our PowerHouse Cabinets provide state-of-the-art leadership in weatherized, sturdy craftsmanship, and mechanical and electrical design. The integrated design of the power system, battery plant and cabinet provides an uninterrupted power supply. In addition, system security is monitored by the factory-installed power system controller that sends unauthorized entry and system status warning alarms.



Product Description

CommScope's PowerHouse Cabinets are reliable, flexible, modular power sources for wireless cellsites. They are high-capacity power solutions that reliably accommodate growth, as your power needs increase. Housed in secure, weather-resistant cabinets for outdoor deployment, PowerHouse Cabinets offer integrated systems that are feature-rich and provide ease of installation and maintenance.

The standard cooling system has been designed to generate up to 6kW DC output. With the addition of a heat exchanger, you can grow the output to

PowerHouse Cabinet Front

20kW DC by adding rectifiers in the electronics compartment. Regardless of power output, the cabinet is cooled without the use of outside air in a sealed electronics compartment to keep out dust, contaminants, and condensation, preventing corrosion of the equipment.

Our patented Enhanced Cooling System for the battery compartment minimizes battery temperature, keeping it at or below average ambient temperature, significantly improving battery life. Depending upon geographic location, battery life can be doubled in our cabinets as compared to the average life of batteries cooled by traditional, passive methods. The hydrogen ventilation system in the battery compartment exceeds Telcordia and UL® requirements.

The PowerHouse Cabinet can house two rectifier shelves that may be equipped with up to 8 high-efficiency, plug-in switchmode rectifiers, sealed in an environmentally secure electronics compartment. The battery compartment has two shelves for batteries and can accommodate various manufacturers batteries. Depending on the number and type of batteries used, the PowerHouse cabinet can immediately supply many hours of battery reserve to a wireless cell site during a power failure. These cabinets truly provide a high-performance, uninterruptible DC power system.

To help ensure the security of your power cabinet, each unit is factory-equipped with alarm cabling that sends a signal from the remote site to a central location if an attempted unauthorized cabinet entry occurs. The doors are equipped with 216-type locking mechanisms and can also be secured with padlocks for added protection. In addition to external security, each PowerHouse Cabinet is equipped with a power system controller and a cooling system controller.

The power system controller provides overall power system control and diagnostics including: voltage setting; load sharing between rectifiers; float voltage compensation with battery temperature changes; alarm reporting and visual alarm indicators as well as other functions. A low voltage battery disconnect (LVBD) circuit prevents the battery cell voltage from falling below 1.75 volts/ cell (or a customer-specified value) which prevents possible damage to the batteries. The fan controller regulates the operation of the three fan systems in the PowerHouse Cabinet: the bay fan unit, the heat exchanger and the battery compartment fans. The fan controller turns the cooling systems on and off as required, and reports alarms. The power cabinet alarms are continually monitored through the radio equipment cabinet. This monitoring, and having DC power continuously available to the load, regardless of fluctuations or loss of AC, helps to ensure an uninterrupted power supply.

PowerHouse Cabinets require an external service entrance or subpanel with three AC feeds for AC distribution. For added flexibility, the cabinet can accommodate both clip and bullet type DC circuit breaker panels that are field installable, allowing for connectivity to various types of applications that grow as your cell site grows.

Quality materials, such as the corrosion-resistant 1/8" thick heavy-duty aluminum used for the body and most of the cabinet components, result in a durable, weather-safe power cabinet. These materials are used because of their strength, durability, fire and corrosion resistance, and heat transfer characteristics essential for outdoor applications. PowerHouse Cabinets are designed to be so durable that they meet the Telcordia GR-63-CORE specifications for Zone IV earthquakes. An electrostatically applied polyester paint produces an extremely durable, high-quality finish on all surfaces of the cabinet as well as an attractive appearance.

Designed specifically for the outside plant environment, PowerHouse Cabinets optimize heat transfer, environmental protection and ease of installation and maintenance. Our attractive and rugged power cabinets are deployed in harsh environments throughout the world, including the United States, South America, Central America, and Canada. Ongoing reliable operation in these climates is a testimony to their overall quality. Our CommScope cabinet manufacturing facilities and design engineering are ISO 9001 registered to ensure high-quality products and services. Our PowerHouse Cabinets meet Telcordia GR-487-CORE specifications assuring sturdy, durable, environmentally secure, low-maintenance cabinets.



**PowerHouse Cabinet
(front closed)**

Each cabinet is assembled, wired, and system tested at the factory to provide not only the highest standards of quality but also to assure quick, trouble-free installation.

We know that when your customers need service, you need to deliver. Let CommScope's PowerHouse Cabinets, with their integrated system monitoring and built-in alarms provide the power you need to help keep your customers satisfied.

Applications/Use

These cabinets have been designed with the flexibility to provide power to wireless cell sites, including Cellular CDMA, PCS CDMA and PCS TDMA applications.

PowerHouse Cabinets support growth in approximately 2kW increments for affordable initial costs a pay-as-you-grow plan. Our power cabinets have been designed by CommScope to be durable enough to function effectively in all outside plant environments.

Features

- System flexibility/modularity for incremental (2kW) growth.
- Enhanced cooling system for the battery compartment.
- Battery fusing and per string battery disconnect.
- Temperature Compensated Float Voltage.
- Low Voltage Battery Disconnect (LVBD) Function.
- Upgrade kits for the:
 - Heat Exchanger for electronics compartment.
 - DC Distribution Module.
 - AC and DC Cabling
- Alarmed cabinet doors connected to the integrated system monitoring to warn of any unauthorized entry.
- Factory installed cooling system and power system controllers, provide constant integrated system monitoring and send an indication of the system status back to a central location.
- Silent Security System.
- Cabinet construction materials are chosen for their high quality and durability, providing the protection-needed in harsh outdoor applications.
- Capable of accommodating various manufacturer's batteries.

Benefits

- Initial costs minimized due to modularity, options and upgrade kits.
- Output capability of up to 20kW DC power.
- Can provide immediate battery reserve to power your network in the event of an AC utility failure, providing uninterrupted service to your customers.
- Battery life is significantly improved due to our patented Enhanced Cooling System.
- Hydrogen ventilation is better than Telcordia and UL requirements.
- Safety is improved by battery fusing and per-string battery disconnect.
- Temperature Compensated Float Voltage increases battery life and greatly reduces the risk of battery thermal runaway. LVBD prevents battery damage due to cell reversal from deep discharge to less than 1.75 volts/cell.
- Safety and security is achieved through alarmed doors and integrated system monitoring.
- Central location will be alerted of unauthorized cabinet entry by our silent security system.
- Ease of installation.



**PowerHouse Cabinet
(rear door open)**

General Specifications

Cabinet Dimensions	Height: 66 in. (167.6 cm)
	Width: 31 in. (78.7 cm)
	Depth: 33 in. (83.8 cm)
Cabinet Operating Temperature Range:	-40°C to 46°C
Rated Output Power:	20 kW
Total Cabinet Weight Empty:	625 lbs.
Cabinet complies with Telcordia GR-487-CORE, GR-63-CORE and UL requirements.	

For more information on our products, please contact your CommScope Sales Representative or call 1-800-4CABNET (1-800-422-2638). You can also visit our website at <http://cw.commscope.com>

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