

DC Power Solutions for EVERY Network Application.



Powering Business Worldwide

DC Power Solutions for Every Network Application

Eaton® recognizes the challenges that are unique to different customers' applications. We have a DC power solution to suit every network application be it telecommunications, data center or enterprise IT.

Eaton's large power solutions for central exchange and large data center environments

offer high efficiency and the high reliability of modular design with built-in redundancy and secure, always on-line, battery backup. Our smaller DC power solutions combine innovative flexible modular designs that are highly scalable, cost effective, easily installed and maintained, and compact for space-limited

applications like outdoor telecoms enclosures, or add-on power to data center and enterprise IT networks.

Our DC power solutions include fully integrated distributions and battery back up (optional) plus alternative energy hybrid solutions such as solar power.

All systems come with intelligent network monitoring and control.

Eaton's outdoor enclosures capability incorporates extensive experience of high quality, optimized custom designs for integration of power and OEM equipment.

OTHER INTEGRATED POWER OPTIONS

- Gen sets
- Fuel cells
- Inverters
- Converters
- Solar Modules
- Batteries
- Circuit breakers
- UPS

OUTDOOR CABINETS AND ENCLOSURES

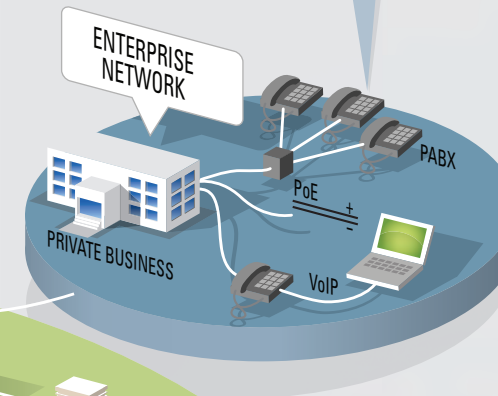
A wide range of outdoor enclosures come with a range of heat exchange and air conditioning options.



ENTERPRISE POWER SOLUTIONS*



900W to 4.5 kW



ACCESS POWER SOLUTIONS*



900W to 20 kW

CORE POWER SOLUTIONS*



Up to 300 kW

METRO POWER SOLUTIONS*



Up to 80 kW

More Intelligent,
More Powerful,
More Efficient

SMARTER ENERGY

Eaton DC smarter energy solutions can provide customers with effective answers to aggressive energy saving and carbon reduction goals.

- **Over 96% efficiency** of the Energy Saver Rectifiers puts Eaton DC power systems at the forefront of high efficiency.
- **Flexible mounting and power dense solutions** for space restricted applications.
- **Award winning outdoor enclosures design expertise** for high efficiency and super quiet operation.
- **Hybrid** intergrated energy solutions, utilising Eatons solar charger, SC200/SC300 controller functionality, gen sets and battery.
- **Extensive power management software solutions** for network asset optimisation.
- **Unparalleled site and network energy management** control features.
 - o **Solar Management** control and metering of solar based input sources.
 - o **Eaton Fuel Saver (EFS)** for hybrid power solution optimization to dramatically reduce generator operational costs.
 - o **Smart Alarms** provides highly configurable control and alarms for automated site management and performance improvement.
 - o **Advanced remote battery management** including time remaining during a discharge and state of health.
 - o **Modbus** for Building Management System (BMS) software.



An Eaton Green Product

Data Center Power Solutions

Efficient, reliable and flexible DC power solutions.

The advantages of DC power solutions have made them increasingly popular for data centers.

High Efficiency – Eaton’s large Metro and Core DC power solutions offer the high efficiency of single conversion architecture that means greater end-to-end system operating efficiency. In turn, it requires less power for cooling. This means longer run times on battery reserve power and/or a lower capital investment in batteries.

High Reliability – A direct link between the battery and the load means high reliability. With no dependence on moving parts (e.g. switches) or delays that can put critical equipment at risk of damage from transients, harmonic distortions and high switching voltages. The modular rectifier design means that there’s no need for risky by-pass protection for maintenance – avoiding further potential points of failure and damage.

Maximum Flexibility – Eaton’s modular DC systems are highly scalable, ensuring cost-effective investment (pay for what you need) and further improved efficiency. By adding or subtracting hot-pluggable power capacity in small increments, capital outlay is minimised and the system efficiency can be easily managed to within the optimal range. Eaton DC power systems also offer the flexibility of a wide range of options for distribution, mounting, communications and control.

Installation and commissioning is made easy with the built in intelligence of our system controller with automatic set up and default or factory customized programmable settings.



Access and Metro Power Solutions

Compact, powerful, efficient and secure power for network applications

Eaton’s Access power solutions encompass all the critical features necessary for access-level telecoms network applications including space restricted outdoor installations. Designed compact and powerful, these secure 24V and 48V DC systems utilize Eaton Access and Energy Saver rectifiers for high system efficiency and reliability, and come with integrated distribution and integrated backup power (optional). Metro Power Solutions are the largest of

the highly reliable, secure 24V and 48V systems, offering up to 80kW in a single cabinet. For larger systems backup power is realised in separate cabinets. Access and Metro solutions feature the improved user-friendly interface of the Eaton SC200/SC300 system controllers.

Suitable for telecom access network applications such as - 3G, 4G & 5G BTS/BSC, wireline access points, roadside cabinets, Wi-Fi nodes and large customer premises.



Enterprise IT Power Solutions

Secure DC power for business IT network applications

Enterprise power solutions are specifically designed for the secure power requirements of business/office converged data networks and their users.

Offering total simplicity with easy ‘plug-and-go’ installation, Enterprise power solutions are service maintenance-free and the slim-line profile makes this solution ideal for limited space situations such as server rooms. The intelligent system controller can monitor virtually any number of

input variables and provides extensive communications options including Ethernet, secure web server, SNMP agent and Modbus server.

Starting from 900W capacity up to 4500W with modular increments, Enterprise systems use a common platform for the Enterprise, Access and Energy Saver rectifiers which means that load capacity

upgrades are easy as the business power load grows.

Typical applications include power to business/office converged data networks - VoIP, PABX, PoE and Wi-Fi nodes as well as space restricted low power telecoms applications such as roadside cabinets.



Renewable Solutions:

Integrated solar hybrid systems

As networks are expanded globally many of the sites being installed are in locations without access to the AC grid, or a grid that can be unreliable. Eaton’s DC systems can be augmented with the SC200/SC300 Eaton Fuel Saver (EFS) function for hybrid generator set control.

This can be further enhanced with the Eaton ASC48-ES solar charger permitting solar panels to be connected to the site.

Suitable for telecom cellular sites, transmission repeaters roadside broadband nodes, and control systems.



Core Power Solutions

High capacity and secure DC power for core network applications

3G Core Power Solutions are very reliable, high capacity and secure 48V systems utilising the Core and Energy Saver series of power rectifiers. Flexible AC and DC distribution options are available. They are highly scalable up to 139kW in a single cabinet solution and 300kW in a multiple cabinet solution. Enhanced user-friendly interface of the Eaton system controllers

allows easy installation and commissioning, and intelligent monitoring and control. Additional security options are also available.

Suitable for core network applications such as:

- data centers
- central office/core telecoms power



Rectifiers and Controllers

The heart and brains of the DC power system

Eaton DC rectifiers are high reliability, telecom grade AC - DC 24V and 48V modules covering a wide range of DC power outputs to suit a wide range of applications.

From low powered and compact single-phase requirements of business/office converged data networks, to the high power density, single- and three-phase power requirements of large telecoms carrier networks and data centers.

Efficiency exceeding 96% with the Energy Saver Rectifiers, power dense and a standardized design assisting scalability, flexible mounting and universal AC input all contribute to system solutions to suit customer requirements.

Eaton system controllers offer highly advanced and user-friendly DC power system monitoring, control, and communications options. Onboard intelligence provides automated, fast and easy first time system setup with a default configuration file or factory customized

parameters. Capable of extensive site and/or network control and optimization using smart features such as Smart Alarms, Eaton Fuel Saver (hybrid solution), and advanced battery management features, operation can be optimized for automated energy efficiency and asset protection. Other software is also available for site management and the Modbus feature ensures compatibility with Building Management Services (BMS).



Eaton Outdoor Enclosures

Fibre to the home (FTTH), wireless or wireline

Eaton's Outdoor enclosures are a field proven design for all conditions and flexible for all applications.

Double and single (with insulation) skinned with an air

tight inner compartment and highly efficient heat exchangers and numerous intelligent control features such as variable fan speed operation, ensures the highest possible operating

efficiency and quiet operation. A large battery capacity for high power loads and longer battery reserve times when the AC mains power fails. Secure and with easy service access.



Inverter Power Solutions

Eaton offers a range of advanced modular and standalone power inverters to fit most situations for backup of your mission critical AC powered auxiliary equipment.

This means that you can get 'one stop shopping' for a fully integrated power solution from Eaton without multi-sourcing or confronting compatibility issues.

The Matrix modular and Telecom systems can include a network management card for SNMP, email and web access.



Eaton DC Power solutions are backed by more than 40 years of power system engineering and software design excellence, and a truly global company with a support infrastructure that means you are never alone when you choose Eaton as your power solutions provider.

SMARTER ENERGY