DC Power Overview

Powerful Solutions for Critical Data
and Telecom Applications

NetSure™ Applications

- Radio Base Station / Microwave Site / 5G, 4G, 3G
- Wireless & Wireline Access
- Central Office / MTSO
- CATV Headend
- Computer Room
- Data Center
- Enterprise (PBX, LAN)
- Network Closet
- Outside Plant Cabinets & Shelters

From major switching and data centers to remote shelters and computer rooms, NetSure DC power systems have the features and proven performance to match your network application needs.

A Brilliant Combination of Technology and Real-World Capability

The NetSure line of DC power systems from Vertiv™ demonstrates unparalleled reliability and industry-leading efficiency ratings at 12, 24, 48 and 400 VDC. Vertiv rectifiers — the heart of the power system — possess some of the highest power densities and smallest footprints in the business. These power solutions can be further enhanced with the addition of intelligent controllers, remote system monitors, battery management units and a full range of distribution modules.

Mini DC Power Systems, 0.5 kW to 6 kW Power Capacity

High-density mini-sized DC power solutions for outside plant enclosure, central office or embedded applications.

NetSure™ 2100 Series

The NetSure 2100 Series, a compact -48 volt, 48 amp DC power shelf, features an advanced control unit, up to (3) positions for 1000W high-efficiency eSure rectifiers and space for distribution breakers and fuses. The power system supports 19"W and 23"W rack mounting and is available in a number of configurations. The distribution section supports four different options for circuit breakers up to 60A or GMT fuses up to 15A. A low voltage battery disconnect option is available.

NetSure 2100 Rear View

NetSure 2100

Optional NetSure 48V Battery Cabinet

VERTIV

Vertiv provides a complete range of communications network infrastructure solutions and services built on an industry-leading reputation for quality, reliability and value.

Small DC Power Systems, 2 kW to 28.8 kW Power Capacity

Highly reliable, uninterruptible cost-effective power systems for small data or telecom installations.

NetSure™ 5100 Series

The NetSure 5100 Series, a compact -48 volt DC power solution, features an intelligent NCU controller, a high efficiency rectifier, converter, solar converter and multiple distribution options to meet a variety of application demands. The system is available with integrated and external distribution panels, and can provide +24 volt DC power when equipped with converters.

The NetSure 5100 Series is ideal for telecom access and network edge applications requiring reliable, high power density up to 600A at -48 VDC or up to 400A at +24 VDC. Optimally designed for use with Zone 4 compliant relay racks and cabinets, thanks to a high operating temperature of +65°C and high operating efficiency levels above 96%. Cost-effectively supports climate system dimensioning in outdoor enclosure applications.

NetSure 5100 with Integrated Distribution

NetSure 5100 with External Distribution

Hybrid NetSure 5100 with 2 Row External Distribution

NetSure IPE R48-1000C & R48-2000C

NetSure™ IPE Series

The NetSure IPE Series is ideal for use in network edge applications including 5G, DAS, and multi-dwelling units (MDUs). Rapid deployment outdoors is easy since the unit is hardened and does not require a separate housing for protection against the elements. Fanless cooling eliminates maintenance and results in silent operation, enabling deployment in public areas.

Medium DC Power Systems, 10 kW to 300 kW Power Capacity

Modular, flexible design for switching, wireless base stations, transmission, LAN, WAN & other networking operations.

NetSure Accessories

Batteries and more for DC power systems.

NetSure™ 7100 Series

The versatile NetSure 7100 DC power system offers single or three-phase input up to 277/480 VAC and is now available as an indoor enclosure in the row. Designed for 3500 watt or 2000 watt rectifiers and 1500 watt DC to DC converters this modular design provides up to 4000 amps of current for -48 volt systems with up to 520 amps at +24 volts. The basic components of the power system include the NetSure Control Unit (NCU), module mounting shelf assemblies which house the rectifiers and converters, and a modular distribution cabinet.

NetSure 7200 Series

The NetSure 7200 DC power system is an efficient and reliable multi-bay power system that delivers intelligent control, metering and monitoring. The foundation of the system is a patented, proven 3.5kW eSure™ rectifier, featuring high frequency switching technology in a compact package. The flexible and modular design of this series enables deployment in a variety of site configurations and allows for scalable buildouts to match capacity to demand.

Batteries & Accessories

Products frequently used together with DC power systems are available, including battery disconnects, batteries, battery strands, battery trays, bus covers, assorted panels, circuit breakers and much more.

Converter Technology

eSure™ Power Extend Converter
The eSure™ C48/58-1000 Power Extend Converter is a 1000W, -48 VDC to -58 VDC converter with bullet terminals designed to increase power output to remote radio heads (RRHs) and function as an overcurrent protection device for the RRH circuit. It is ideal for upgrading legacy DC power plants at macro cell sites to support the increasing power requirements of 5G applications.

Rectifier Technology

eSure High-Efficiency Technology
eSure rectifiers deliver world-class reliability and the highest efficiency in the industry. Ranging from 1000W to 3500W DC output, these extremely dense modules minimize energy loss, reduce carbon emissions and lower operating cost.

Large DC Power Systems, 20 kW to 600 kW Power Capacity

Power systems for data center and central office applications such as wireline & wireless switching, transmission, data routing and large telecom hotels.

NetSure 8200 Series

Integrated -48 VDC 3-phase rectifiers, distribution, control and monitoring in a single frame. Expandable to 16,000 amps with additional frames.

LCD Display

NetSure 8200

DC Power Distribution

NetSure Distribution Series

High capacity, modular bays deliver effective secondary -48V DC load distribution with increased visibility and detailed understanding of all loads in your core facility. These top or bottom feed distribution bays deliver 4,800 amp (eight panel) or 3600 amp (six panel) continuous rating with an interrupting capacity of 10,000 amps. Ideal for colocation and core facilities including cable headends, MTSOs and MSOs requiring protection of power plants up to 640 amp capacity per load.

NetSure Distribution Bay

Individual current measurement for each fuse/breaker

Distribution Panels

DC distribution panels for NetSure systems are designed to provide overcurrent protection for multiple small loads. Panels accept either fuses from 1A to 20A or load breakers up to 150A. Options include up to (36) GMT fuses or up to (4) load breakers and (12) GMT fuses. The fuses plug into one of the mounting positions on the front panel. Each position has a localized return landing.

NetSure Distribution Panel

Emerging DC Architectures

Power systems designed to address emerging applications in telecommunications, data centers, and commercial building.

12V & 48V DC Power

Centralizing power in the rack allows both main power and backup power to scale at the same rate as the IT load. With this 12V or 48V DC integrated rack solution from Vertiv™, IT loads and power are configured to minimize stranded capacity and to size hold up times according to the user's needs. The result is an efficient and economical power strategy that provides ultimate flexibility by enabling IT capacity to be added one rack at a time.

12V DC Rack with NetSure ITS

400V DC Power

NetSure 400V DC Power systems from Vertiv are built with proven topologies including modular, hot-swappable 15kW rectifiers that achieve greater than 97% peak efficiency. This architecture can significantly reduce copper cabling costs compared to -48V DC and can improve availability and efficiency compared to traditional AC power. NetSure 400V DC to -48V DC converter systems extend the copper reduction benefits of 400V DC to existing -48V DC networking loads in core telecom applications.

NetSure HVT

Enclosure Solutions

Custom designed or standard enclosures available for all types of telecom and data equipment.

Vertiv XTE 200 Series

This series of enclosures is specifically designed for small cell applications where DC power is required to support your network equipment. The power cabinets not only house the DC power system, but also have 1 RU of room for ancillary network equipment. They can be paired with a separate battery enclosure in a variety of pole mount configurations.

Vertiv XTE 400 Series

The XTE 400 series is a family of three small to medium sized enclosures that are designed to support a wide range of equipment for communication networks, monitoring equipment and general industrial applications. Even though these enclosures are relatively small in size, there is a long list of rack, backboard, power, thermal and mounting options that make these enclosures very adaptable to your specific requirements.
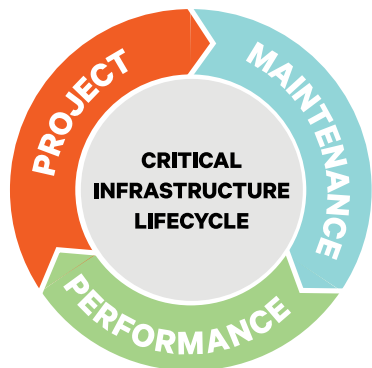

Vertiv XTE 600 Series

By far our broadest line of enclosures, the XTE 600 series ranges from 8RU all the way to 44RU of equipment space. They can be configured in literally thousands of combinations such that they are ideal for any wireline or wireless application, including - DSLAM, FTTx, backhaul, macro cell, C-RAN, and batteries. These enclosures have field proven reliability and have been deployed widely throughout North America by all major operators for over ten years.

Vertiv XTE 800 Series

Our largest size of enclosures supports seven-foot-tall relay equipment racks and give you the ability to walk into them for protection from the elements. In addition to multiple sizes that can be configured to your specific application, they have the added benefit of being classified as a 'cabinet' vs. a 'shelter' in most jurisdictions which keeps permitting and deployment costs to a minimum.

Services

CRITICAL INFRASTRUCTURE LIFECYCLE

A complete life-cycle approach to service, from project launch to ongoing maintenance and performance optimization

We strive to keep your network infrastructure highly available, efficient and adaptable, so you can:

- Increase mean time between failure
- Decrease operating cost
- Implement future technologies while maximizing your resources

Project	Maintenance	Performance
When launching new facilities or powering up new equipment, you want to do it right – right from the start	Services to ensure that your business-critical infrastructure operates reliably, safely and efficiently	Full range of services designed to optimize infrastructure performance and reduce complexity
• Plan • Design • Engineer • Integrate • Commission • Project management	• Preventive and corrective maintenance • Remote services and monitoring • Cap / fan / battery replacements • Repair • Spare parts	• Assess • Audit • Model • Configure • Upgrade • Train