NetSure™ DC Power Solutions with eSure™ High-Efficiency Technology
Among the array of ever-changing challenges facing today’s telecom businesses, the growing concerns about energy consumption and increasing energy costs continue to dominate the industry. It’s a challenge that places a premium on efficiency, and one that Emerson Network Power is responding to with products offering the highest efficiencies on the market – some approaching 97 percent. Any infrastructure solution today must reduce energy usage and carbon emissions – and minimize TCO.

Telecom architecture is changing. With remote areas of the network taking on a more important role, providers need strong outside-plant partners and solutions to keep pace. Reduced operating expenses and improved network performance are even more critical today, as is service quality, because of the growing number of bundled offerings.

But your telecom business continues to depend on reliability – reliability in delivering results, reliability in future-proofing your architecture and navigating through changes, reliability in ensuring that your systems have the synergy to be resilient while adapting to your customers’ needs.

**eSure technology – Reliability and efficiency**

It’s that unique blend of reliability and efficiency that continues to set the NetSure™ DC Power technology platform apart. As the paramount platform for integrated DC power technology, we lead the industry in high-efficiency performance, with products like the eSure™ rectifier – the next step in the evolution of the NetSure DC Power technology platform. Upgrading to the latest generation could result in considerable energy savings.

**Best-in-class customized solutions**

The NetSure DC Power technology platform leverages Emerson Network Power’s range of products and services, creating an unprecedented amount of synergy within an integrated DC power solutions platform. By offering best-in-class power technologies engineered to meet each client’s specific global, regional and local needs, every DC power solution can be customized to fit the exact application.

Simply, we let you focus on what’s most important: staying connected to your customers. And we keep the connection open with a complete range of telecom services backed by global support from more than 150 service locations and over 2,000 certified professionals, each with knowledge and expertise in local safety, environmental and labor specifications.

The result: Emerson Network Power safeguards your reliability – your Business-Critical Continuity™ – assuring that your peace of mind is guaranteed, your power ensured.
Breadth of applications

**Structures/sites**
1. Central office/MTSO site/CATV headend
2. Wireline remote office
3. Wireline remote terminals and cabinets
4. Radio base station/microwave site
5. Multidwelling unit (MDU)
6. Wireless cell site
7. Enterprise large data-center
8. Enterprise small data-center

**Technology**
1. VoIP integrated cabinet
2. Fiber to the curb (FTTC)
3. Fiber to the node (FTTN)
4. Microwave transmission
5. Enterprise servers
6. Wireline: IP SONET and soft-switching
7. Wireless: LTE, WiMAX and 3G

**Products**
1. NetSure 201 & 211
2. NetSure 501 & 502
3. NetSure 700 & 701
4. NetSure 801
5. NetSure DC Power Distribution
6. NetSure inverters
7. Batteries
8. NetPerform & EnergyMaster™

Our NetSure DC Power technology platform fulfills the power needs of telecom providers that require reliability across different environments, from wireless and wireline networks to data centers.

**Wireline – Fixed network**
The NetSure DC Power technology platform supports your wireline needs and protects your bottom line. Emerson Network Power’s world-class modular components are complemented by mechanical portions that are region specific, so our platform adapts to your wireline-network DC power requirements.

**Wireless – Mobile network**
You need prompt, dependable deployment and maintenance services for DC Power. The NetSure DC Power technology platform provides more than individual products; it provides engineer support, services and a complete power solution for radio-network controllers, base stations and all other wireless-network DC power needs.

**Enterprise – Data-center network**
With a tightly integrated array of products to support remote monitoring and various data-center DC power prerequisites, the NetSure DC Power technology platform provides data and voice networks with the tools these environments need for Business-Critical Continuity and protects against the direct and indirect costs of downtime.
Integrated systems for indoor and outdoor applications

These systems come in extremely dense packages that can be mounted in any indoor or outdoor application for wireless and wireline networks and can be optimized to meet requirements cost-effectively, while allowing for easy expansion in the future.

NetSure DC Power cabinetized solutions allow regional configuration centers to “put together” an almost unlimited number of configurations, easily and quickly, to fulfill site-specific requirements.

A typical NetSure DC Power cabinetized-solution power system includes batteries, cabinet and integrated electronics, where applicable.

Key features

- Compact flexibility – Provide more space for revenue-generating equipment
- Constant power – Deliver more current at lower voltages, to meet load or recharge demand
- Modular design – Simple to install and operate; allow users to grow system in cost-effective increments
- Compliant with global standards – Deliver quality, performance and dependability, no matter what the application or environment demands, to meet changing needs
- Remote access – Provide options allowing users to view, control and interact with the system, using TCP/IP, RS-232, web browser (HTTP) or SNMP
- Cabinet – Robust and space-efficient system enclosure with earthquake protection
- Flexible solutions – Complete range of power solutions.

### NetSure 211
- North America & EMEA
- -48 VDC
- up to 6kW
- up to 125A

### NetSure 501
- EMEA
- -48 VDC
- up to 24kW
- up to 500A

### NetSure 502
- North America
- -48 VDC
- up to 36kW
- up to 750A

### NetSure 501
- China
- -48 VDC
- up to 8.5kW
- up to 180A

### NetSure 700
- North America
- +24 VDC
- up to 200kW
- up to 4000A
- -48 VDC
- up to 20kW
- up to 400A

### NetSure 700
- EMEA & Asia Pacific
- +24 VDC
- up to 11kW
- up to 230A

### NetSure 801
- EMEA
- -48 VDC
- 3-phase input
- up to 700kW
- up to 14500A

### NetSure 801
- North America
- -48 VDC
- up to 960kW
- up to 20000A

### NetSure 802
- North America
- -48 VDC
- up to 720kW
- up to 1500A
**Configurability and flexibility**

These systems display the flexibility for one family within the NetSure DC Power technology platform to be custom-configured for various applications within the data- and telecommunications-network infrastructure.
NetSure rectifiers utilize state-of-the-art DSP controls and soft-switching topologies, to provide conversion efficiency and sinusoidal input current under all operating conditions. Advanced cooling techniques and transient protection ensure reliable operation under abnormal or extreme temperatures and other environmental conditions. Their small size and plug-and-play design provide easy system expansion in existing or newly installed shelves, without configuration or setup adjustments.

These rectifiers offer wide input-voltage and operating-temperature ranges, are hot swappable and have an integrated speed-controlled, field-replaceable fan.

**Power conversion units**

NetSure rectifiers are globally renowned, with over 1.25 million units deployed and an unmatched reliability of less than 0.5% failure rate (200 years MTBF).

**Key features**

- Compact high-performance switch mode with sinusoidal input current, for low total harmonic distortion
- Plug-and-play technology
- Horizontal or vertical mounting positions
- Temperature range: -40°C to 65°C (-40°F to 149°F)
- Robust design for extremely high MTBF
- Wide AC operating range: single-phase rectifiers from 85–300 V, 3-phase rectifiers from 260–530 V
System management

There are two versions of smart controllers available for the NetSure DC Power technology platform: SCU+ and ACU+. These controllers offer different monitoring functions and are hot swappable, to permit easy upgrades.

The SCU+ and ACU+ both enable remote monitoring of the telecom site’s AC main supply, DC power plant, battery backup and site environment. They also provide for advanced battery management, such as sophisticated boost-charge control, remaining-time prediction, constant current test, scheduled test and fast test. The information and alarms from a specific site can be monitored or checked by means of a simple web browser or special monitoring software. The SCU+ and ACU+ also provide a built-in web interface for remote access, via a standard browser or the Emerson EnergyMaster™ network-management software.

SCU+ key features
- Menu operated and user friendly
- Advanced battery management
- Control of rectifier and batteries
- Basic PLC function
- Visual and audible alarms
- 200-alarm history log
- RS-232 user-configurable digital inputs
- Hot-swappable and dry contacts
- Web and SNMP support
- Basic energy management

ACU+ key features
- All the functionalities of SCU+
- USB port
- Advanced PLC function
- Energy savings
- Up to 400-alarm history log
- Power split and master/slave, for system expansion
- Supports up to 16 supervision modules (SM AC, SM BAT, SM IO)
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Emerson Network Power, a business of Emerson (NYSE:EMR), is the global leader in enabling Business-Critical Continuity™ from grid to chip for telecommunication networks, data centers, health care and industrial facilities. Emerson Network Power provides innovative solutions and expertise in areas including AC and DC power and precision cooling systems, embedded computing and power, integrated racks and enclosures, power switching and controls, monitoring, and connectivity. All solutions are supported globally by local Emerson Network Power service technicians. For more information on Emerson Network Power’s full suite of solutions specifically supporting the communications network infrastructure, including NetXtend™ outside plant enclosures, NetSure™ DC power systems, and turnkey services, visit: EmersonNetworkPower.com/EnergySystems.

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Emerson Network Power
Energy Systems, World Headquarters
4350 Weaver Parkway, Warrenville, IL 60555 USA
Toll Free: +1-800-800-1280 (USA and Canada)
Telephone: +1-440-246-6999 Fax: +1-440-246-4876

Emerson Network Power
Energy Systems, Europe, Middle East & Africa
P.O. Box 92113, SE-120 07 Stockholm, Sweden
Telephone: +46 8 216 60 00 Fax: +46 8 216 71 77

Emerson Network Power
Energy Systems, Latin America
Pompano Beach, FL, USA
Telephone: +1-954-984-3400 Fax: +1-951-984-3450

Emerson Network Power
Asia Pacific
Hong Kong
Telephone: +852-2572-2201 Fax: +852-2802-9250
Nanshan District 518057, Shenzen, China
Telephone: +86-755-8601-0808 Fax: +86-755-8601-0909

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