



POWERING TECHNOLOGY

Reliably powering your business.
Solving your power needs.

POWER SOLUTIONS FOR TELECOM/DATACOM





ABOUT UNIPOWER

UNIPOWER is a world-leading provider of dependable high-efficiency power electronics and power conversion systems and power supplies. Available solutions include a complete line of high-efficiency rectifiers, inverters and DC power systems for mission-critical applications. With decades of experience supporting customers around the world, UNIPOWER is focused on bringing reliable power solutions to users across a broad range of applications and environments.

Our Products

Designed to fit into new telecommunications and data installations as well as existing infrastructure, UNIPOWER offers easy installation and maintenance with 'plug-and-play' capabilities that enable rapid time to deployment. System features include:

- ▶ Modular designs to assure flexibility
- ▶ Scalable solutions that can grow with your needs
- ▶ Customizable configurations to meet your specific requirements
- ▶ Quick-connect designs to speed installation and maintenance
- ▶ High-efficiency operation for operational savings

Our Customers

UNIPOWER has an installed base of more than 300,000 systems delivered to world-class companies on five continents. Our customers represent a broad range of applications in telecom, datacom, cable, power utilities, energy, military, municipal and embedded system markets.

UNIPOWER PRODUCTS



Our promise to you - "Quality Starts With Me"

UNIPOWER's mission is to provide outstanding service and robustly designed products for our customers. We know that understanding our customers means listening to their needs and designing a solution that meets or exceeds their requirements.

Why Choose UNIPOWER?

- ▶ **Experienced Team.** With more than 25 years experience, the UNIPOWER team provides industry leading expertise to help you make the right power decisions for your business.
- ▶ **Global Service Network.** With a global network, UNIPOWER is located close to your operation for fast, dependable delivery and service. We speak the language and live the culture of our global customers.
- ▶ **Industry Leading Quality System.** UNIPOWER guarantees reliability with a full range of internationally accredited regulatory quality approvals.
- ▶ **Flexibility to meet your needs.** UNIPOWER is able to customize solutions to meet your application needs.

Long Life, Easy Maintenance

Proven with more than 25 years of reliable operation in a wide range of environments including challenging telecommunications installations in the harshest environments, UNIPOWER's quality focus minimizes maintenance requirements and expensive truck rolls. When service is needed, thoughtful designs featuring hot-swap modules and easy-access components make maintenance simple and straightforward. Non-technical operators will find these systems extremely user-friendly as they can be monitored either on-site or remotely over a TCP/IP WAN with features including:

- ▶ Familiar Browser Interface
- ▶ Remote Diagnostics
- ▶ Remote Monitoring with SNMP
- ▶ Short Mean Time to Replace
- ▶ Comprehensive Battery Monitoring
 - Monoblock Level
 - Equalize over Internet
 - Load Test over Internet

Robust System Management

For enhanced monitoring and control, the UNIPOWER ACX Advanced pluggable intelligent controller module offers enhanced monitoring and control of system parameters for a broad range of UNIPOWER DC Power Systems including the Aspiro and Guardian product families.

The compact module includes USB or RS-232 interface and Form C dry contacts along with micro SD card data logging to support up to 64 rectifiers as standard or as many as 256 with 4 x 64 multiplexer board. Parameters monitored include: DC voltage, rectifier current, rectifier temperature, system capacity, battery parameters, and circuit breaker status.

PowCom™ Software provides Windows-based remote and local real-time monitoring and control for the Aspiro and Guardian DC Power Systems. Using USB or RS-232 communications, PowCom Software features an intuitive interface that automatically adjusts to the connected system's configuration and simplifies access to system status, alarm displays, and parameters for connected batteries as well as data logging capabilities. For on-site status at a glance, front panel LEDs display alarm and warning notifications while voltage-free closed contacts allow remote signaling.



Aspiro Integrated Rack-Based DC Power Systems

The Aspiro rack-based systems meet rigid telecom requirements combining high reliability with configuration flexibility. They offer a range of DC power solutions for diverse applications such as broadband access, cable head ends, micro/pico BTS cells, enterprise 911, GSM-R, LTE and 5G.

Available in 1RU and 2RU rack configurations, the fan-cooled, -48VDC systems offer a host of features including hot-swappable components, >95% efficiency, LCD displays, battery breakers and field-replaceable controllers that simplify operation and maintenance. The ACX Advanced system controller provides system management complete with remote access via ethernet, web server and SNMPv3 interfaces.

The Aspiro 1U is a compact 19/23" or ETSI rack-mounted system that can accommodate one or two Aspiro family high-efficiency, hot-swap rectifiers to accommodate a total load (plus charge current) of 45A (2.4kW). Highly flexible distribution options including circuit breakers or GMT fuses optimize the 1RU shelf solution for space-critical applications.

When more power is needed for applications such as radio base stations, broadband nodes and core sites, the Aspiro 2U can house up to four rectifiers in a 19" rack with a total load current of 60A (3.2kW) with additional battery charge current up to 30A. Maintenance is simplified with easy front access and options including battery and load disconnects, AC and DC distribution and front connect using a shelf slide out.



Aspiro Rectifiers – The System Building Blocks

When configuring an Aspiro system, UNIPOWER offers two hot-swappable rectifier options that can be installed in the Aspiro Series DC power system racks: 800W XR08.48G with 16.7A output current and the 1200W XPGe12.48G with 25A output current. Both feature excellent efficiency and thermal protection as well as wide operating temperature and wide input voltage ranges. Together with advanced technology they enable cost-effective and reliable solutions suitable for both indoor and outdoor environments.

Guardian Access - Integrated DC Power Systems

The Guardian Access family of products offers a range of highly configurable integrated DC power systems in 19" rack-mounted chassis that provide an output of -48VDC for loads from 180A to 1200A. Configured with the popular Guardian rectifiers that boast 96% efficiency, systems can be structured with up to 11 rectifier modules and include a selection of user-specified load and battery breakers appropriate to system size.

From compact 2RU to 7RU, the internally fan-cooled models feature simple installation, three-alarm status indicators and LCD touchpad display for local monitoring.

The field-replaceable ACX Advanced hot-pluggable controller enables monitoring of system parameters, controls rectifier output, and provides alarms for system failures. Up to 10 Form-C relay outputs provide alarms for remote use. Systems also include two digital inputs and outputs as well as a microSD card slot for extended data logging. All systems are compatible with UNIPOWER's Windows-based PowCom™ software for additional remote and local real-time monitoring and control options using USB or RS-232 communications.

Guardian Access M38 systems can be specified with up to three rectifier shelves with a maximum total current of 600A (N+1) that can be shared between the load and battery charge current. M38 models include a 4RU distribution module that provides a total of 20 DC circuits and up to 8 battery breakers with Low Voltage Battery Disconnect (LBVD) for battery string protection, giving optimum user flexibility.

When -48VDC bulk power is needed, the Guardian Bulk M42 offers an efficient 10RU 19" rack-mounted DC power solution with 1200A (N+1) capacity. The M42 system incorporates six rectifier shelves that can accommodate up to 23 Guardian family high efficiency hot-swap rectifiers. Internal fan cooling with speed control that is a function of load and temperature keep acoustic noise to a minimum.

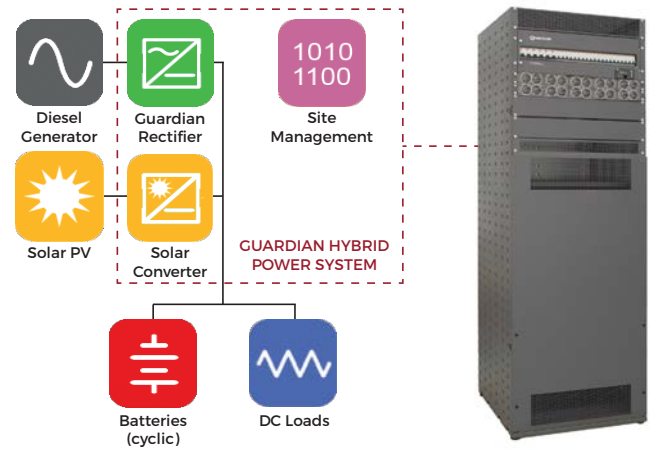


Guardian Rectifiers - Flexible System Components

Building blocks of the Guardian systems, the Guardian rectifier family includes a selection of hot-swappable 48VDC models from 2kW to 3kW as well as a 2.9kW solar converter for solar power or hybrid applications. These highly efficient modules assure significant savings in operating expenses as a result of reduced energy consumption.

Guardian Hybrid Configurations Address Multiple Conversion & Storage Needs

UNIPOWER addresses inefficiencies related to continuously running generator-powered sites with hybrid configurations that incorporate flexible, modular power and storage technologies. Adding deep cyclic batteries significantly reduces generator runtime and fuel consumption operational expenses due to less frequent maintenance intervals. In the event of genset failure, cyclic batteries provide a degree of operational redundancy that can eliminate the need for a second generator in many cases. Featuring a hybrid bus architecture, hybrid solutions are ready for action in grid-connect, off-grid and renewable deployments with maximum power point tracking.



Cost-Effective Outdoor Solutions

UNIPOWER can supply a wide variety of outdoor power cabinet solutions that provide protection and thermal management in harsh outdoor environments. Cabinets can include complete AC distribution and earth connection points while housing the power system, DC distribution and system controller with enough space for mounting telecommunications equipment. Mounting options include floor-standing, wall-mount or pole-mount. We partner with a number of regional enclosure experts to provide custom solutions for a wide range of customer requirements.

Flexible Inverters & Inverter Systems

The 19-inch rack-mountable SCIMITAR Series sinewave inverters include models up to 5kW in compact 1RU, 2RU and 3RU form factors (depending on power level), with built-in Static Transfer Switches, programmable frequency, 12/24/48VDC inputs and 115/230VAC outputs to support a wide range of telecom, network, data center and industrial applications.



The modular Bravo Series offers compact and scalable inverters that convert a 48VDC power source into pure sine wave 120 or 230VAC output. In conjunction with a DC power system, the Bravo family enables an excellent AC backup solution. Using the latest inverter technology, the hot-swappable Bravo TSI 2.5kVA (48VDC/120VAC) and ECI 3kVA (48VDC/230VAC) modules assure superior energy efficiency in a space-saving size. Bravo technology eliminates all single points of failure with full scalability: Bravo TSI 2.5kVA modules can scale up to 80kVA while the 3kVA modules can be scaled to 2.7MVA. Bravo TSI 48/120 and ECI 48/230 systems can be configured for operation in split-phase and three-phase applications using a combination of shelves. A translator board allows integration with UNIPOWER's Aspiro and Guardian DC Power Systems and enables the ACX Advanced Controller to monitor key parameters for all components.

Sageon DC Systems - 24 or 48VDC Integrated Bulk Power Modules & Cabinet Systems

SAGEON Integrated Power Modules feature simple operation while delivering enhanced, built-in intelligence that minimizes manual adjustments and measurements to provide vital information needed to manage power. With 24V and 48V solutions from 40 to 1200A, all systems incorporate 2400W Sageon Micro Rectifiers. Designed and built in the USA, they are well suited for bulk power, outside plant, Homeland Security Networks, Wireless sites, Microwave sites, cable/internet installations and various OEM applications.



Sageon Micro



Sageon II Bulk



Sageon II PMD



Sageon III

Power Distribution Panels

UNIPOWER offers a selection of power distribution options featuring 1RU to 4RU Power Distribution Panels with DC 12V, 24V or 48V and AC 120V or 230VAC configurations available. DC breaker and fuse panels are available for 19-inch or 23-inch rack mounting. Single- and dual-bus versions can be configured with operating voltages of 12V, 24V and 48V. Convenient AC distribution panels include 1RU single- and dual-bus units operating at 120VAC or 230VAC single-phase.



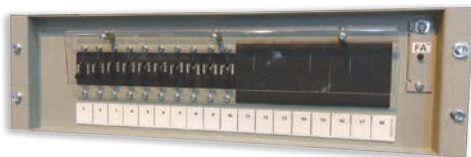
DPPIU



DPAC1U



DPP2U



3768



3783

Accessories

To complement the systems, UNIPOWER offers a comprehensive range of accessories including relay racks, battery racks, battery shelves, ground termination panels and batteries.



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