

- ✓ True Modularity
- ✓ True Rightsizing
- ✓ True Green Power
- ✓ True On Line

# POWER+

Modular UPS System  
10 -100 KVA





## True Modularity

### Maximum Power Availability

Owing to its modular N+1 structure, Power+ guarantees load integrity and minimizes the possibility of load failure.

**MTBCF: 707,882Hrs**

### Minimum MTTR

Designed from the ground up for cost savings, Power+ is a completely modular solution. Each 10 KVA module is entirely self-contained and ready for hot-swapping – without complex and expensive stocks of components, subsystems, and spare parts.

### True Rightsizing

As opposed to costly and complex N+n solutions, Power+ is comprised of 10KVA building modules. Built to grow as business grows, modular Power+ enables purchase of the capacity required today, while expanding tomorrow by simple module addition.

## Ultrahigh Power Density

Weighing only 21Lbs and measuring vertically 2U, lightweight 10KVA Power+ modules are easily handled by the individual technician. Offering complete power system density of 2W/inch<sup>3</sup>, Power+ provides high power density with a space-saving footprint.

## Universal UPS

Power+ offers all the benefits and power of a universal UPS, including:

- Frequency: 50/60 Hz
- Voltage: 3x208 V + N + G (5 wire system)
- Site configurable phases: 3/3; 3/2, 2/2\*

\*2/2 phase configuration is limited in capacity

## User Friendly

Designed for usability, modular Power+ offers:

- A user-friendly controller with all communication and control options easily accessible
- Intelligent battery handling that helps prolong battery life
- Simple maintenance procedures
- Notably quiet operation

## Integral Multi-System Parallel Connectivity

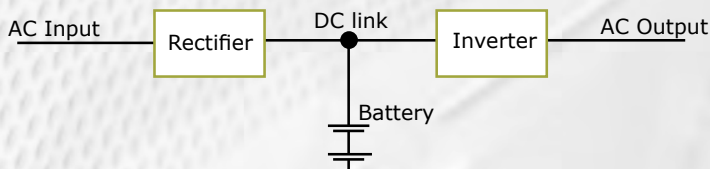
Power+ features optional built-in system parallel connectivity, enabling parallel-redundant connection of multiple systems up to 400KVA for data centers, industrial sites and large service operators that require the highest levels of resilience and availability.

## Decentralized Static Switch for Parallel Operation

In a parallel system configuration, Power+ systems operate in a decentralized mode, wherein all system internal static switches are synchronized. This ensures that all units can transfer to static switch bypass simultaneously, without the addition of external static switches – lowering expenses, and eliminating a significant potential point of failure.

## Double Conversion True On-Line Battery (VFI)

According to IEC 62040-3



## True Online Batteries Double Conversion VFI Topology

Complying with IEC-62040-3 standards, highest classification VFI-SS-111, the Power+ features a galvanic battery connected between the rectifier output and the inverter input on a common DC link, resulting in:

- Maximum reliability
- No transfer time to battery mode
- No need for separate battery charger

## Lower TCO & High ROI

- SAVE ON purchasing & installation costs
- SAVE ON electricity costs
- SAVE ON maintenance costs
- SAVE ON cooling costs
- SAVE ON space costs
- SAVE ON upscaling costs
- SAVE ON generator costs

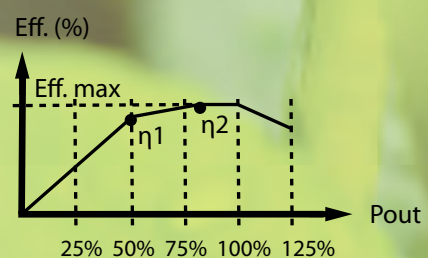
## True Green Power and High Efficiency

Power+'s UPS rightsizing enables significant reduction of energy loss, with efficiency directly influenced by load level.

Designed for highly-economical energy consumption, Power+ is a perfect fit in your data center and server room. Offering efficiency of up to 94%, a THDi of 3% on typical load, and input P.F 1 without harmonic filter, Power+ delivers:

- Significant energy savings
- Lower cooling costs
- Smaller generator sizing

Efficiency =  $P_{out}/P_{in}$



A typical 1+1 50kVA system operates at less than 50% load, therefore efficiency is low ( $\eta_1$ )  
An N+1 50kVA Power+ system operates at  $x/100 = 83.3\%$  load

Conclusion: the efficiency of an N+1 redundant Power+ system is higher ( $\eta_2$ )

### Power with environmental integrity

Gamatronic understands that energy-savings is not only a matter of cost-savings, but also of social responsibility. Power protection solutions from Gamatronic are based on green, clean, and globally responsible energy technology that meets and exceeds power requirements - while minimizing environmental impact.



# Power+ Models

## Power+ Classic

Power+ Classic is an electrically and mechanically modular 10-100KVA UPS system, uniquely designed to grow flexibly as power requirements grow. Easily upgradable on-site through addition of plug-and-play 10KVA modules, Power+ offers the optimal combination of efficiency, economy, and usability – and boasts the industry’s lowest TCO (Total Cost of Ownership) and fastest ROI (Return on Investment).

Capacity (kVA)	10KVA	20KVA	30KVA	40KVA	50KVA	60KVA	70KVA	80KVA	90KVA	100KVA
Dimensions (Inch)										
Power+ Classic M100 10 Slot										
H (in)	64.6									
W (in)	22.6									
D (in)	39									
Weight (Lbs)	362	384	407	429	452	474	497	519	542	564
Power+ Classic M50 5 Slot										
H (in)	42.1									
W (in)	22.6									
D (in)	27.2									
Weight (Lbs)	269	292	314	337	359	-				

\*Diversified assembly options are available. See the supplemental products section for internal battery cabinet options & dimensions.



Power+ RM

A complete IT solution based on the Power+ True On-line double-conversion modular UPS.  
RM50: 10kVA-50kVA UPS with maintenance bypass and hot-swappable batteries in a single rack.  
RM100: 10kVA-90kVA N+1 UPS with maintenance bypass in a single rack.  
Hot-swappable batteries in a matching rack are available.



Capacity (kVA)	10	20	30	40	50	60	70	80	90	90(N+1)
Dimensions (Inch)										
H	42U / 80" (including cabinet wheels / levers)									
W	24"									
D	39.4"									
Weight (Lbs) (w/o batteries)										
RM 50	766	788	811	833	856	-	-	-	-	-
RM 100	424	446	469	491	514	536	559	581	604	626

# Power+ Specifications

Topology	True Online Battery, Double Conversion VFI									
Construction	Modular parallel hot-plugged modules, continuous operation									
INPUT										
Voltage	3X208 V+N + G (5 wires system)									
Voltage Range	-25% ÷ +15%									
Current	Max. 28A per phase for a single module, no inrush current at startup									
Frequency	47 ÷ 63Hz									
Power Factor	1									
THDI	<5% at full load									
OUTPUT										
Rated Power	10kVA/8kW to 100kVA/80kW									
Frequency Tracking Range	±0.5, ±1, ±2, ±3, ±4Hz (selectable)									
Frequency (in free-running mode)	50/60Hz ± 0.1%									
Slew Rate	1Hz/sec									
Voltage	3 X 208V+N (adjustable)									
Static Regulation	±1%									
Regulation for Unbalanced Load	±1% for 100% unbalanced load									
Dynamic Response to 100% Load Step	±2%									
Overload	110% for 10 min.; 125% for 60 sec.; 1000% for 1 cycle									
Waveform	Sinusoidal									
THD	Less than 2% for linear load									
Load CF (max)	4:1									
AC-AC Efficiency (nominal)	Up to 94%									
DC-AC Efficiency (nominal)	Up to 97%									
BATTERIES										
DC-Link Voltage	±216V									
Number of Batteries	32 x 12V									
GENERAL										
Maximum Power Dissipation (Po=8KW)	510W (1740 BTU/h) for a single module									
Ambient Temperature	-10° to +40° (operating); -20° to +60° (storage)									
Relative Humidity	95% max non-condensing									
Altitude	4921 Feet w/o derating									
Enclosure	IP20									
Cooling	Forced - multi-fan with speed control									
STANDARDS										
EMC	IEC 62040-2, under EMC 2004/108/EC									
Design	IEC 62040-3									
Safety	IEC 62040-1, under LVD 2006/95/EC									
Low Magnetic Field Radiation	EMF as per ICNIRP									
ACOUSTIC NOISE (@5 Feet from front of unit)										
	10kVA	20kVA	30kVA	40kVA	50kVA	60kVA	70kVA	80kVA	90kVA	100kVA
Noise (dBA) half load	48	52	53	54	55	55.8	56.4	57	57.5	58
Noise (dBA) full load	51	54	55	57	58	58.8	59.4	60	60.5	61

\*All specifications are subject to change without prior notice

# Supplemental Products

## Internal Battery Cabinets and Batteries

Gamatronic's standard battery cabinets combine safety and flexibility with easy battery access.

Battery Capacity	Power+ Model	Dimensions (HxWxD) of each cabinet
32x 7 Ah Power+	Classic (up to 3 cab.)	10.5"x22.2"x27"
32 x 7 Ah 19"	Power+ 19" ( up to 3 cab.)	10.5"x19"x27"
2 x 32 x 20 Ah	Power+ Classic	36.4"x23.3"x27.8"
2 x 32 x 40 Ah 19"	Power+ RM	24"x42Ux39.4"

## Management

### Power+ Controller

All Power+ systems are supplied with an integral Power+ Controller that enables full remote UPS management through web access. This includes display of active alarms and alarm log access, automatic server shutdown, email alerts, and management of SNMP trap for interface with NMS software. Together with the optional external cellular modem, Power+ can also provide SMS alerts and enable remote cellular commands.

### WING

WING is a GSM cellular communication device, installed on UPS and DC systems, which provides SMS alerts of predefined system events to end users or control centers.

### G4 and G-Eye

Available for both manned and unmanned sites, the G4 and G-Eye Management and Monitoring Systems deliver user-friendly unit monitoring, control and management of physical UPS sites - including temperature and humidity, movement and doors, air conditioning units, servers, power devices , and more.

### PSM

PSM P+ is Windows-based shutdown software supported by WIN 2000/XP/2003, installed on a local PC and connected to P+ in the LAN. Shutdown of all Unix-based and Netware computers is supported through the master computer.

### GEMSi

Supporting both Gamatronic and a wide range of other power products, GEMSi (Gamatronic Element Management System) is a highly user-friendly application that provides real time remote monitoring and management of up to 1600 UPS control units at diverse and distributed sites.





**Visit our website at: [www.gamatronic.com](http://www.gamatronic.com)**

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