



VERTIV™

Liebert®

APS™ UPS

5kVA - 20kVA

Flexible, efficient modular UPS
for row-based application



WE ARE VERTIV

Vertiv, formerly Emerson Network Power, designs, builds ,and services mission critical technologies that enable vital applications for data centers, communication networks, and commercial & industrial environments.

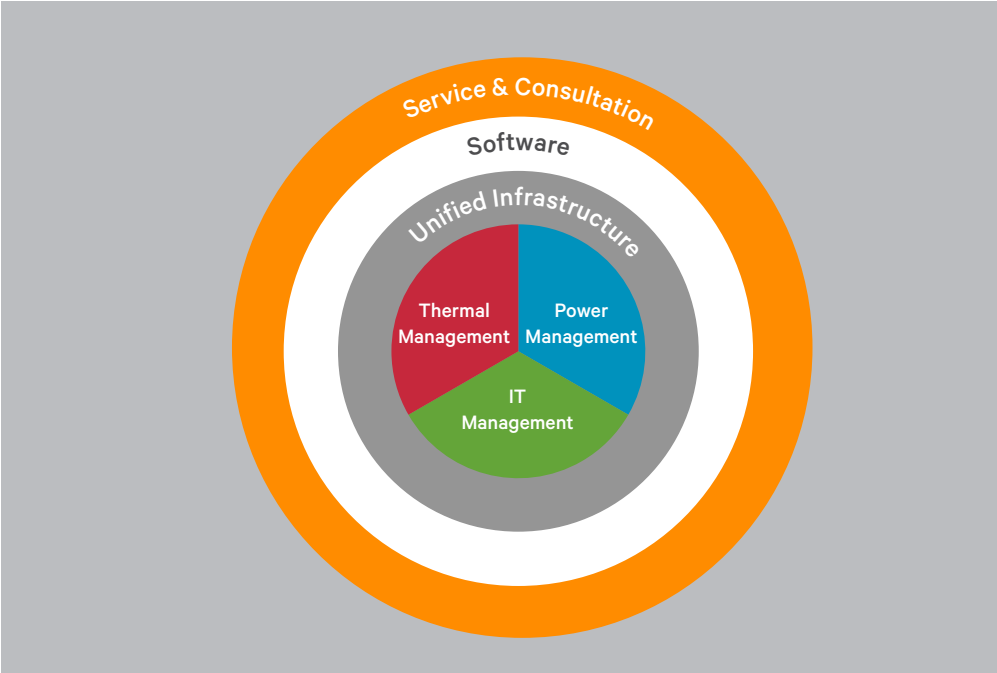


We support today's growing mobile and cloud computing markets with our portfolio of power, thermal and infrastructure management products, software and solutions, all complemented by our extensive global service network.

We help strengthen the world's most vital applications by bringing together global reach and local knowledge, and our decades-long heritage, including brands like ASCO, Chloride, Liebert, NetSure, and Trellis.

Vertiv
Your Vision, our Passion

With a unique combination of industry expertise, technology, and resources, our mission is to support and power mission-critical technologies that drive possibility.



ASCO®

Our global critical power switching, control, and management solutions, engineered to the most demanding specifications, ensures power, reliability, compliance and efficiency

Chloride®

Our global industrial power solutions meet the most demanding technical specifications and provide safe, reliable power- no matter the challenge

Liebert®

Our global power and thermal management solutions are some of the world's most efficient and reliable power and cooling technologies

NetSure™

Our global intelligently engineered DC power systems deliver high availability, energy efficiency, and scalability for converged networks

Trellis™

Our industry-leading software gives customers an integrated view of operations across IT and facilities resources, enabling better decisions that save time and money

A Modular Power Protection Solution for Today and the Future

Provide mission-critical availability while reducing costs and maintaining flexibility for the future with the Liebert® APS™ UPS, a modular power protection solution for 5 – 20kVA applications.

- Reliability
- Flexibility
- Economy

Low TCO

With the Liebert® APS™, you can maintain flexibility for the future and ensure the availability of your critical systems– all without sacrificing cost or energy efficiency. Additional features to help lower costs include:

Industry-leading efficiency:

- 91.5-92% efficiency: 200-240V in/out transformer-free systems.
- 88.5-89.9% efficiency: transformer-based systems.

Scalability that allows you to cost-effectively add power capacity or battery modules as needed.

Modular batteries, controls and power components to help reduce maintenance costs with user replacement.

Two year hassle-free factory warranty program for repair or replacement of your Liebert® APS™ UPS.

Module-level redundancy eliminates the expense of purchasing and planning for any additional cabinets.

Reduced installation time and cost because units are shipped pre-configured and factory tested, no need for on-site assembly.

Everything you need for efficiency and availability in one box: power modules, batteries, maintenance bypass, and distribution in a single, small-footprint cabinet.

Integral battery monitoring with temperature compensated charging to prolong battery life and help reduce replacement costs.



The Liebert APS UPS can be installed on raised floors, traditional flooring, or in rack enclosures.

Reliability and Serviceability

At the core of your business sits your data center and the services running in it. With the Liebert® APS™ UPS solution, you get peace of mind that your critical IT functions – and your business – will be available and running as expected through power disruptions, fluctuations and outages.

Internal redundancy capability (N+2/20kVA) enhances reliability and provides multiple layers of power protection.

No single point of failure - Full redundant design allows the critical load to run on conditioned power if there is a failure of any component in the system.

Configurable design allows you to customize the Liebert® APS™ UPS for your desired level of capacity and redundancy.

Fault-tolerant design, enables the power, battery and control modules to take themselves offline if there is a problem, without sacrificing overall system integrity.

Superior overload capabilities, able to provide conditioned power to temporary overloads without transfers to/from bypass power.

Internal wrap-around maintenance bypass and Frame-level bypass with independent controls in separate assembly.

Low TCO for today, Flexibility for the Future

Flexibility

What is the key to your business' success in the future? Being able to adapt efficiently and effectively as the needs of your users and core business power requirements change. It's about managing uncertainty, equipment density and capacity. The Liebert® APS™ UPS helps you stay ready for what's next:

Capacity on demand with FlexPower™ core modules that allow you to change capacity as needed in 5 kVA/4.5 kW increments - without powering down.

More real kW - 0.9 power factor provides more real power to support the I.T. load than other solutions in this size range.

Isolated and non-isolated models to provide the right solution for your power protection needs.

Integrated distribution PODs allow selection of a variety of distribution options to meet application requirements.

Trellis™ platform connectivity, so the Liebert APS can easily be integrated with this robust, real-time data center optimization solution.

Three Liebert Intellislot® ports allow integration and communication with a variety of infrastructure management solutions, leading to better power optimization and visibility.

Optional matching external battery cabinets provide longer battery run times to protect against sustained power issues.

Installation Flexibility – use on raised floors, traditional flooring, or in rack enclosures.

Large input voltage window, which minimizes transfer to battery and increases battery life; low line transfer can range down to 110v.



FlexPower core hardware assemblies enable quick and easy capacity increases

Hot-swappable FlexPower assemblies and battery modules may be added without



Service Solutions to Keep You Up and Running

To enhance the availability and trouble-free operation of your Liebert APS UPS, Emerson Network Power offers a range of optional service programs, including:

LIFE Technology remote monitoring and diagnostic service provides early warning of issues so you can respond to them more rapidly – or solve them before they happen.

Remote monitoring by factory experts, 24 x 7 x 365.

Included two year warranty includes onsite repair.

Start-up by factory-trained engineers to ensure proper installation and operation.

Customer resolution center provides direct access to our engineers, whenever you need them.

Exclusive, guaranteed four-hour response time so you never need to wait long for critical assistance.

Preventive maintenance visits to assess your equipment and make corrective adjustments.

Specifications

Parameters		10 Bay	16 Bay	12 Bay	16 Bay
		Transformer-free		Transformer-based	
Frame Rating	kVA	15	20	15	20
	kW	13.5	18	13.5	18
General & Environmental					
Conducted and radiated EMC levels		IEC/EN/AS 62040-2 Cat 2,CISPR22 Class A,FCC Part 15 Class A			
Compliant safety standards		IEC/EN/AS 62040-1:2008,UL 1778 4th Ed and CSA 22.2 NO.107.1			
Compliant immunity standards		IEC/EN/AS 61000-4-2,3,4,5,6			
Environmental		WEEE and ROHS2(6 by 6),REACH Compliant			
Mechanical					
Width (mm;in)		440(17)	440(17)	440(17)	440(17)
Depth(mm;in)		800(32)	850(34)	800(32)	850(34)
Height (mm;in)		695(27)	970(38)	1060(42)	1240(49)
Weight (frame Rating populated) (kg;lbss)	Unit weight	256.3(565)	317.5(700)	360.6(795)	417.3(920)
	Shipping weight	274.4(605)	335.7(740)	378.7(835)	435.4(960)
Environmental					
Operating temperature(°C)(°F)		0 - 40(32 - 104)			
Relative humidity (%)		0-95%,non-condensing			
Altitude (m)(ft)		3000(10000)@25°C(77°F)			
Efficiency(AC-AC)(%)		91.8-92.0	91.6-92.0	88.5-89.9	88.6-89.7
Nominal heat dissipation (BTU/Hr)(max)		4208	5747	5528	7956
Input Data					
Nominal input voltage (Vac)		200/208/220/230/240;Single Phase			
		380/400/415;3Phase			
Input voltage range (Vac)		The input voltage range based on the output loading,refer to User Manual			
Power factor (Cos)		Single-Phase input,>0.99; three-phase input,>0.95		Single-phase input,>0.99	
Input voltage range (Hz)		40 to 70 auto-sensing			
Battery Module					
Battery capacity (W)		36W @ 15min-rate to 1.67V per cell @ 25°C(77°F)			
Backup time (full load)(mintues)		5(for non-redundant system which has equal number of battery strings and power modules)			
Maximum charge current (full load)(Amps)		Power module internal charger:1.8A/Charger module:10A)			
Nominal voltage (VDC)		144			
Recharge time (Hrs)		<5 to 90% capacity(PM internal charger with 1:1 ratio of PM to Battery Strings)			
Output Data					
Output voltage (VAC)		200/208/220/230/240; Single Phase		100/100/173/200,110/110/190/220,115/115/199/230, 120/120/208/240;Single Phase	
Voltage regulation (%)		±3			
Voltage stability(100% step load) (%)		±7			
Voltage Recovery time (ms)		≤60			
Voltage distortion (%)		≤3,linear load			
		≤5,non-linear load		≤7,non-linear load	
Output frequency (Hz)		50/60			
Output overload capability (%)		<104% continuous			
		105% - 130% for 1 min			
		131% - 150% for 10 sec			
		151% - 200% for 1 sec			
		>201% for 205 msec			

Note : Specifications are subject to change without any prior notification.



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