

SmartMod™

Intelligent, Integrated Infrastructure In A Rapid-Deployment Enclosure





Emerson Network Power, a division of Emerson Electric Co., is a global company that combines technology with design to supply innovative solutions for the benefit of its customers.

Emerson Network Power is the leader in the “***business-critical continuity***” field, thanks to the company’s products and services.

Emerson Network Power’s broad technology base and global expertise supports a full spectrum of enterprise-wide solutions for today’s vital business needs.



Regardless of your size, you can’t afford for your critical business systems to go down and you can’t waste time recovering your IT infrastructure after a disruption.

Leave that to us, the experts in *business-critical continuity*: from grid to chip, from the biggest to the smallest data centers, we are ready to serve your needs with the solutions we have developed.

More standardization, so you don’t need further budget allocations to install it. More simplification so you don’t need to be a specialist to get the best for your business. More support, so while you are enjoying doing business, we are protecting you.



*Emerson Network Power is the global leader
in enabling Business - Critical Continuity™.
Everywhere.*



SmartMod™: Deploy Your High-Capacity, Intelligent And Secure Data Center Infrastructure In A Short Timeframe.

Resulting from the expertise of a global leader in the “Business-Critical Continuity” field and combining maximum energy savings with operational flexibility, this Containerized Data Center Infrastructure Emerson Network Power branded is a step forward to solve all the criticalities today’s IT Managers are facing. When space seems to be never enough, the IT infrastructure is requiring for additional power and your servers are suffering for increasing temperatures, you can find the answer from the outside.

As the name suggests, it is a complete data center installed into a container, combining all the most advanced Emerson Network Power products: Knürr Miracel® Racks, the complete range of the Liebert® Precision Cooling, AC power systems (starting from the UPS to the PDU) and Monitoring solutions, until the rack mount Avocent platform. For these reasons, the Data Center Infrastructure into the container, guarantees those

performances the IT Managers require in everyday activity. They will find the right answer to their many needs just trusting in one single source: Emerson Network Power.

A Single Mind:

Why wasting time and money? Composing your data center infrastructure can be easier than ever. From rack to cooling, from power to monitoring, ending with the Service, Emerson Network Power Data Center Infrastructure covers all your needs.

Measurable Efficiency:

The Liebert® APM, that’s to say the adaptive power module, has been designed with *best-in-class* true online double conversion efficiency of 96% in a compact, single frame enclosure, so that to protect the network while dramatically reducing the energy wastes. The EC fans technology installed on the Liebert® CRV, the infra-rack cooling module, works to regulate the air flow accordingly to the real

needs of the servers, so that to reduce the fan input power.

Modularity:

Even if you do not know now, your business can grow. So, be ready for the unforeseen: from power or cooling, modularity is assured from the beginning. Adaptive rack PDU, hot-swap modules, allow you to quickly adapt your infrastructure as it grows up.

Easiness:

When you don’t have to rely on different sources, it is easier to find and get the best solutions to your needs. Delivered, and manufactured by one single expert in business critical continuity, these are all integrated, and so plug-and-play, solutions. That’s why we are always ready to serve your business.

Reliability:

Uninterruptable power systems energy efficient precision cooling, monitoring systems to anticipate the unforeseen: combine them together and enjoy peace of mind.



*Power, Cooling, Monitoring, Space:
many Needs. One Single Source.*



Liebert® CRV Is A Self-Contained Precision Cooling Unit, Ideally Designed For Cooling Rows Of Racks.



Liebert® CRV, placed close to the heat source, is continuously monitoring any variations in heat load and instantly delivers the most efficient and effective cooling possible.

The Liebert® CRV is a plug-and-play unit, designed for open or contained applications.

Liebert® CRV, designed using advanced, computer-aided fluid dynamic technology, features the best possible air distribution across racks, tested and proved by largescale laboratory and applied tests.

Ideally Suited For:

Rack-level cooling and specifically designed for high return air temperatures.

Key Features

- iCOM Large Graphic Display
- EC FANs to regulate the airflow and reduce the fan input power
- Copeland Digital Scroll to modulate the cooling capacity
- iCOM control to monitor the heat variations



Cooling, Power, Monitoring, Pre-installed.
Just plug and play your servers.



Liebert® APM: The New Leap Forward.



Liebert® APM Is A Modular 3 Phase UPS System In A 19 Inch Rack.

Designed for in-the-row applications, Liebert® APM can adapt to your changing business needs thanks to its modular and scalable architecture from 30kW to 150kW in a single rack.

In every single configuration step Liebert® APM is optimized to deliver first-in-class efficiency in double conversion mode regardless of the actual load level, ensuring you are not wasting power with an over-dimensioned and inefficient ups choice.

With an amazing 30kW in 3U module and integrated battery, Liebert® APM packs the highest power density in a single rack space, saving room for your business critical load.

Reliability is ensured by each module having its own DSP, avoiding a central control to become a single point of failure.

And when it comes to service, Liebert® APM, thanks to its hot-swap power and battery modules, is as simple and fast as it gets.

Ideally Suited For:

Small and medium data center applications

Key Features

- High Power Density
- Flat Efficiency Curve: > 95% from 25% to 100% load
- Scalable, Pay as you grow
- Low MTTR
- Hot Swap
- Distributed Intelligence
- Sleep Mode
- Unity Output Power Factor
- 0.9 Lead to 0.9 Lag Load Capability
- Internal Battery
- Rack form Factor



Liebert® APM is optimized to deliver first-in-class efficiency in double conversion mode regardless of the actual load level.



Knürr Miracel® Rack For Every IT Infrastructure.



Heavy Duty Rack

- Newly designed more stable extrusions and new, heavier duty-corner piece grant to Miracel the capabilities to manage static load of 1500 kg and more.

Aluminium Construction

- Proven technology based on aluminium extrusions offers high flexibility and stability with low weight. The T-slot system in the frame guarantees freely selectable arrangement of accessories.

Cable Management

- Guaranteed orderly and spacesaving cable management. Adjustment at installation site, cable management can be selected from extensive range of accessory componente.

Convenient

- Door mounting without tools.

Flexible Ventilation Component

- The correct ventilation solution is always provided by the corresponding selection of accessory components. Still applicable from Miracel®: 83% perforation, which guarantees unobstructed airflow of the installed components.

Screw Construction

- Dismantling the rack guarantees easy accessibility, even to the most restricted areas.

Key Features

- Heavy Duty Rack
- Aluminium Construction
- Cable Management
- Convenient
- Flexible ventilation component
- Screw construction



Protecting your IT infrastructure



Liebert® Nform: Monitoring With Predictive Analysis Capabilities.

The Liebert® APM and Liebert® CRV equipment can be fully monitored by Nform software. Nform offers flexibility, availability, lowest total cost of ownership. It is ideally suited for IT managers, Network management, System integration, Multiple Data Centers across many locations. Nform relies on TCP/IP network and communicates with the “supervised” units via SNMP protocol, an industry standard. Through Nform, parameters like voltage, current, power etc for Liebert® APM and temperature, humidity, working hours etc for Liebert® CRV will be always under observation into one window. Every event or alarm will be reported via e-mail, SMS and pop-up. Every event action can be customised by sending notifications and/or running



Windows commands. Every third party equipment, SNMP capable, can be integrated into Nform for a total monitoring solution. Dry contact devices can be integrated too with the use of Liebert® vEM-14.



*Because your infrastructure
is critical to the business.*



IT is Continuously Evolving: Enjoy Peace Of Mind.

Manage The Health Of Your Critical Infrastructure

All your mission-critical service needs are handled seamlessly, and you are never left out of touch.

Today's complex facility support systems - everything from precision air conditioning to UPS and alarm monitoring - have become critical in every sense of the word.

That's why you need to manage the health of your entire critical infrastructure with a service partner who can offer you *Business-Critical Continuity™*.

Exactly the kind of protection Emerson Network Power Services provides.

Emerson Network Power's approach to servicing your critical space covers all aspects of availability and performance, from individual power and cooling equipment to the entire mission-critical system.

Proper Service Enables *Business-Critical Continuity™*

Our services deliver superior performance in three critical areas:

- **Up-time assurance**
- **Downtime recovery**
- **Return on investment**

We are dedicated to blending insight and innovation with sophisticated technologies to deliver ever-increasing system availability.

Emerson Network Power is the industry force behind the next generation of mission-critical services.

These services are designed to adapt to the changing needs of your business, and deliver protection when and where it's needed.

We have the deepest, most comprehensive global service presence in the industry, and we're your only source of instant access to vital information on your Liebert® and Emerson® products.

We provide such an array of services for one simple reason: so you have the time and resources to concentrate on your own customers.

We take care of the technology; you take care of your business.

*More than 35,000 organizations in 70 countries
depend on our Business - Critical Continuity™.
Promise: your IT infrastructure stays
up to support your Business!*



Thanks to the Liebert® HPA, the SmartMod™ does not need any additional external cooling connection.



Fire estinguish equipment for a maximum safety environment.



Power distribution cabinet with automatic transfer switch (ATS) from Asco, another division of Emerson Network Power.



The internal enviroment has been divided in two sections, easily breaking down any space constraints.

Ensuring The High Availability Of Mission-Critical Data And Applications.

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, infrastructure management, and connectivity. All solutions are supported globally by local Emerson Network Power service technicians. Liebert AC power, precision cooling and monitoring products and services from Emerson Network Power deliver Efficiency Without Compromise™ by helping customers optimize their data center infrastructure to reduce costs and deliver high availability.

For more information, visit:

www.EmersonNetworkPower.com

or www.Eu.EmersonNetworkPower.com

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Emerson Network Power

The global leader in enabling Business-Critical Continuity™

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|----------------|--|------------------------------|-------------------------------|
| ■ AC Power | ■ Embedded Computing | ■ Outside Plant | ■ Racks & Integrated Cabinets |
| ■ Connectivity | ■ Embedded Power | ■ Power Switching & Controls | ■ Services |
| ■ DC Power | ■ Infrastructure Management & Monitoring | ■ Precision Cooling | ■ Surge Protection |