

Liebert XDFN *PANDUIT* Edition

Your Stand Alone Data Center





Emerson Network Power Business-Critical Continuity™ Expert



Emerson Network Power, a division of Emerson, 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 support 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.

That’s why we can say we OptimizeIT!



Our technologies are designed to optimize your business efficiency by removing power and heat density constraints and allowing you to implement new systems and applications with less disruption.



PANDUIT *Connect Manage Automate*

PANDUIT™



PANDUIT is a world-class developer and provider of leading-edge solutions that help customers optimize the physical infrastructure through simplification, increased agility and operational efficiency. *PANDUIT's* Unified Physical Infrastructure (UPI) based solutions give Enterprises the capabilities to connect, manage and automate communications, computing, power, control and security systems for a smarter, unified business foundation. *PANDUIT* provides flexible, end-to-end solutions tailored by application and industry to drive performance, operational and financial advantages. *PANDUIT's* global manufacturing, logistics, and e-commerce capabilities

along with a global network of distribution partners help customers reduce supply chain risk. Strong technology relationships with industry leading systems vendors and an engaged partner ecosystem of consultants, integrators and contractors together with its global staff and unmatched service and support make *PANDUIT* a valuable and trusted partner.



Liebert XDFN: Best Performance In Any Environment

Do You Still Think You Need A Dedicated Area For Your Data Center?

Space constraints can cause a bottle-neck when deciding the location of your data center. Liebert XDFN is the data center in-a-box that can be placed wherever you wish. Liebert XDFN is an integrated equipment cabinet with built-in cooling, power distribution, racks and monitoring, ideally designed for those applications devoid of a data center or server room. This “all - in - one” cabinet is a universal solution that does not require a dedicated installation area. Any room can host your Liebert XDFN, without any noise implications for the surrounding environment. Moreover, being a stand-alone data center, it can be installed without affecting the existing cooling configuration.



The exclusive Digital Scroll compressor modulates cooling capacity to deliver the right temperature and humidity levels that the server requires.



Modulating cooling capacity reduces input power with partial loads, avoiding energy waste.



Liebert XDFN can be provided with 42U rack, with configuration from 1 to 3 rack, depending on the needs.



Liebert XDFN can be equipped with integrated Emerson Network Power rack mounted online UPS for the protection of your load.



Emerson Network Power rack PDU can be placed on board to manage power distribution.



Emerson Network Power supports its customers with the largest global services organization in the industry, delivering design, 24x7 installation and start up, warranty, constant remote monitoring, emergency service and site audits.



OptimizeIT™: cost effective solutions, right from the start, for our customers facing the new challenges coming from IT environments. Through standard modular solutions and integrated tools for an unparalleled support, we optimize IT equipment, to let our customers get more from their businesses.



With Liebert XDFN you will enjoy the freedom to place your data center where you wish, removing all the space constraints.



Liebert XDFN enhanced with PANDUIT Unified Physical InfrastructureSM (UPI)

Success is the result of good alliances and team work. This is what happens with Liebert XDFN: equipped with PANDUIT Unified Physical InfrastructureSM, customers can secure the integration and operation of their IT resources.

UPI-based solutions are designed to help customers manage risk within the physical infrastructure by intelligently converging physical and logical systems. These solutions leverage real-time information to increase safety and security in the workplace, manage systems more effectively, satisfy regulatory compliance requirements, minimize disruptions and maximize performance. Ultimately, these solutions help to mitigate risk across systems and between functional departments to enable business agility throughout the enterprise.



Future-ready *PANDUIT* connectivity reaches performance levels which exceed those required by industry standards.



The *PANDUIT* physical infrastructure is designed in tandem with partners such as Cisco and Emerson Network Power to meet the requirements of computing equipment.



Keep employees, buildings and equipment safe from tampering or damage with secure physical infrastructure. *PANDUIT* infrastructure connects all aspects of a building's security systems to provide real time information as well as tightened security.



Regulate systems throughout the enterprise, such as lighting, control panels, manufacturing equipment, etc and rely on top quality infrastructure to realize the maximum cost and operating benefits.



Power Systems – *PANDUIT* works closely with partners, such as Emerson Network Power, to complete the Unified Physical Infrastructure offering to ensure maximum uptime with minimum disruption.



PANDUIT infrastructure in the Emerson Network Power XDFN solution enables fast deployment, easy network management, adaptive cooling, seamless network connection and protection for your assets.



LIEBERT XDFN: Stand-Alone Data Center



Liebert XDFN allows the operations of your “all - in - one” data center with an existing chiller water infrastructure or independently, with direct expansion. In case of temporary power failure, Liebert XDFN protects the IT critical equipment thanks to a built - in UPS and BACK - UP ventilation system.

Technical Features

- The Digital Scroll compressor, the distinctive technology only offered by Emerson Network Power cooling products.
- Easy to configure and deploy N+1 redundancy.
- Liebert XDFN features up to 3 racks.
- On line UPS GXT and Rack PDU on board (optional).

Benefits

- High Energy Efficiency: thanks to the Digital Scroll compressor that seamlessly modulates the minimum cooling capacity the IT equipment really needs.
- High availability: the BACK - UP ventilation system, utilizing air coming from the surrounding environment to cool the rack, secures the operation of the servers in the event of power failure. The BACK - UP UPS protects the IT load during power outage.
- Flexibility: different configurations, from one to three racks and scalability to adapt to the growing needs of the IT equipment.
- Monitoring equipment, to ensure the maximum uptime.
- High Comfort: low noise impact on the surrounding environment.

Technical data

Performances

Net Sensible cooling capacity DX	kW	Up to 23,6
Net Sensible cooling Capacities CW	kW	Up to 25,6

Dimension & Weight

Cooling Module + Rack

Width	mm	1600
Depth	mm	1200
Height	mm	2400
Weight	kg	764

Our innovative world class technologies enable longer-life cycle and optimize the IT investments of our customers.



NETMANAGER™ High Capacity Horizontal Cable Managers



Copper QUICKNET™



STRUCTUREDGROUND™

PANDUIT Connectivity, Cable Management And STRUCTUREDGROUND™

The PANDUIT vertical cable management system ensures that equipment and cabling installation do not obstruct the critical airflow paths through the Liebert XDFN equipment, therefore significantly contributing to optimal cooling of the IT equipment. Furthermore, possible damage caused by ESD is prevented through use of the PANDUIT STRUCTUREDGROUND™ system within the Liebert XDFN, significantly improving equipment reliability by ensuring that sensitive electronic equipment is fully protected.

Why Specify PANDUIT™ QUICKNET™ Copper Or Fibre Cabling System In The Liebert XDFN Stand-Alone Data Center?

- Quick Deployment - 75% Less Installation Time than Field Termination - enables swift configuration deployment of Liebert XDFN by Emerson Network Power

- Improved Reliability - 100% Factory Performance Tested
- High Rack Density Utilisation Up to 48 ports in 1 RU
- High Performing Cabling System Supports Category 6 UTP and Category 6A (10GBASE-T) UTP STP Applications
- Custom Assemblies - Built to Your Specific Cabling Requirements
- Fiber QUICKNET™ is 100% tested to deliver verified optical performance and reliability for improved network integrity
- Fiber QUICKNET™ enables quick plug-in network deployment of up to 96 fiber connections in a single rack space with superior cable access and cable management capabilities; installation in less than 20% of the time of conventional field polish connectors with distribution cables
- Copper and Fiber QUICKNET™ offer dramatic packaging waste reduction against conventional installation equipment

LIEBERT XDFN: Additional Features



Nform



iCOM



Rack Power Distribution

iCOM

The iCOM control contributes to efficiency improvements by enabling more precise control of temperature and humidity. It monitors all functions and generates reports or alarms as needed.

It allows a service engineer, from a centralized location, to oversee the operation of Liebert XDFN. The iCOM unit has a Unit Diary that shares unit maintenance history with any authorized user or logged-in service contact, including records of what others have done. Through a communication card it is possible to integrate Liebert XDFN either in the Nform monitoring solution or to an external NMS (network management system).

MultiLink And Nform

The Liebert MultiLink solution works with the Liebert XDFN system to provide a simple, easy-to-configure computer protection solution in a multi-platform networked environment.

From a single workstation to a network of servers, MultiLink allows to monitor the system status and provides automatic orderly shutdown of designated computers. Nform software can be configured to monitor the Liebert XDFN system

for alarm notifications.

These alarms, or SNMP traps, are received by the software and processed to trigger event actions such as e-mail alerts or local notifications. For ease of use, OpenComms Nform's graphical user interface enables device status conditions through either a native SNMP interface or an HTML web browser interface.

Rack Power Monitoring And Management

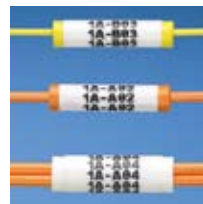
Power distribution inside the Rack is crucial. Emerson Network Power provides the capability to monitor and control each socket offering control of the total RMS Amp, RMS Volt and kW/h through SNMP, Telnet and WEB access.



Further Unified Physical InfrastructureSM Solutions To Complement Your Liebert XDFN Stand-Alone Data Center



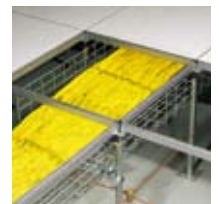
*PANVIEW iQTM
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Infrastructure
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*Identification.
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numbers*



*FIBERRUNNERTM
over head cable
management*



*GRIDRUNNERTM
under floor cable
management*



*PANDUIT Power over
Ethernet - DPoETM*



*PANDUIT power
connectors*



*NETKEYTM
connectivity*

Please see the online product catalog on www.panduit.com for full PANDUIT solutions to complement your Liebert XDFN Emerson Network Power Installation.

Configure Your Liebert XDFN!

The Liebert XDFN solution is particularly designed for small data centers and computing infrastructure in branch offices, as it cools the servers instead of the room. Have a look at the following configurations, to find the most suitable one for your needs.

For further information, visit the on line version on our website:

www.eu.emersonnetworkpower.com

1st Scenario

This configuration is suitable for small business customers who need to secure their critical infrastructure. This configuration **uses a 42U rack and can cope with** a hot spot within the existing infrastructure. Liebert XDFN can manage a heat load of up to 25 kW.

Suggested configuration: Direct Expansion but available also in Chilled Water configuration (through the building Chiller or with a dedicated chiller for IT)

1,9 m²

42 Us

up to 31,4 kVA per Rack

no redundancy



2nd Scenario

As with scenario 1, thanks to the back-up ventilation available in all racks, in the event of power failure to the cooling module, the server is safeguarded until the power is restored. During the operation of the back-up ventilation the rack is cooled with the room air.

Applicable for heat density per rack up to 12kW (14kVA).

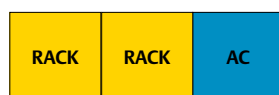
Suggested configuration: Direct Expansion but available also in Chilled Water configuration

2,9 m²

84 Us

up to 14 kVA per Rack

no redundancy



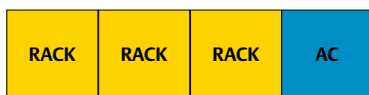


3rd Scenario

Suitable for **medium enterprises** where the heat load is up to 8kW per rack and where - in addition to servers - there are storage and VoIP devices that do not generate a great deal of heat. As for all the configurations, cooling maintenance can be done without access to the IT racks, as the cooling module is independent.

Suggested configuration: Chilled Water but available also in Direct Expansion version

4,0 m²
 124 Us
 up to 9,4 kVA per Rack
 no redundancy

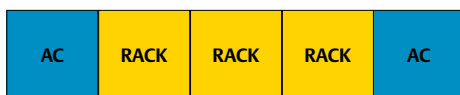


4th Scenario

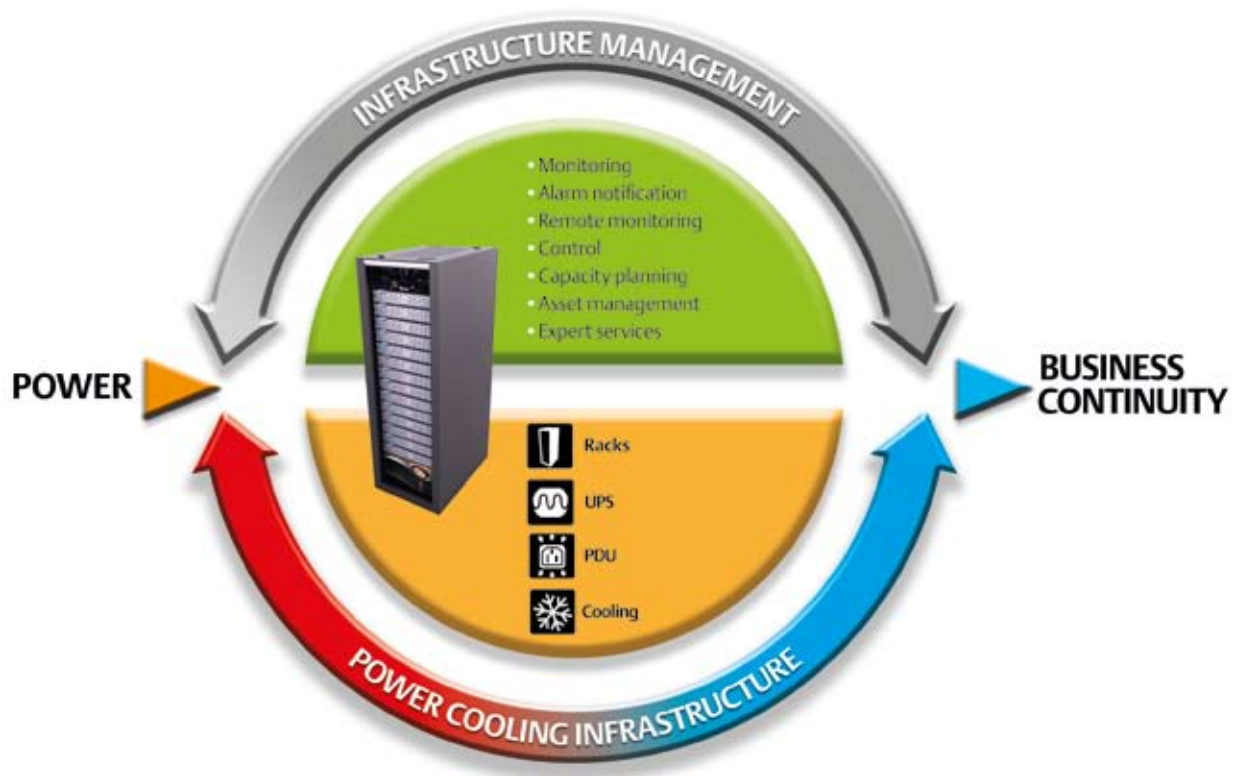
As for scenario 3 but for applications where 100% backup is needed (configuration n+1). The cooling unit is in the stand-by mode and **can be alternated daily with the working unit**. In case of maintenance or failure of one of the cooling units, the standby unit will take over the **heat load dissipation**.

Suggested configuration: Chilled Water but available also in Direct Expansion version

5,0 m²
 126 Us
 up to 9,4 kVA per Rack
 with redundancy



Emerson Network Power Business-Critical Continuity™ Expert



Get More on line: www.eu.emersonnetworkpower.com



Tech Support

Always On! Our Commitment to your daily Business, provided by our World Wide Tech support available in 5 languages (English, French, Spanish, German & Italian).



e-Learning Platform

A wide spectrum of information, tech-focus and knowledge test to upgrade our Partners' competence.



Newsletter

Go On - Line and submit immediately to get our monthly IT Channel Business newsletter. Available in 5 languages, including special promo, event news and tech pills.



Online Configurator

Configure your Liebert XDFN in a click! Select the Liebert XDFN that suits your needs and get a quotation in a few easy steps.



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

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, monitoring, and connectivity. All solutions are supported globally by local Emerson Network Power service technicians. Liebert power, precision cooling and monitoring products and services from Emerson Network Power improve the utilization and management of data center and network technologies by increasing IT system availability, flexibility and efficiency. For more information, visit:
www.emersonnetworkpower.com
www.eu.emersonnetworkpower.com

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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 |

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Emerson Network Power Srl- ISO 9001:2000:
Design, manufacturing, assembling and sales of chilled water
mixture and equipment for high precision air conditioning.
Design of uninterruptible power supply (UPS Power). Sales of
small uninterruptible power supply (UPS Small and Micro)



Emerson Network Power Srl-ISO 14001:2004:
Design, manufacturing, assembling and sales of chilled water
mixture and equipment for high precision air conditioning.
Sales of uninterruptible power supply (UPS Power). Design
of uninterruptible power supply (UPS Power). Sales of small
uninterruptible power supply (UPS Small and Micro). HQ Service
Activities (Spare parts warehouse, Technicians training)

