

Liebert® GXT4™ UPS Product highlights

Miguel Rascon
Product Manager



Emerson Network Power – EMEA

Single-phase UPS Portfolio

Liebert® APS
(On-line)



5-20 kVA (230 V)

- *Best protection available*
- *Scalable / redundant design*

Liebert® GXT4™ (On-line)



GXT3 10kVA Tower

0.7, 1, 1.5, 2, 3 kVA & 5, 6, 10 kVA (230 V, RT)

- *Best protection available for mission-critical IT applications*
- *Highly configurable options*

Liebert® PSI
(Line Interactive)

0.75, 1, 1.5, 2.2, 3 kVA (230 V)



Cost-effective power protection for distributed IT applications

Liebert® PSA
(Line Interactive)

500, 650, 1 K, 1.5 KVA (230 V)



Power protection against power outages with voltage conditioning

Liebert® PSP
(Offline)

500, 650 VA (230 V)



Surge and outage protection

0.5

0.7

1

3

5

10

15

20

Capacity (kVA)

Liebert® GXT4™ UPS Highlights



**Efficient and Lowest
TCO UPS**

Maximizes both capital and operational efficiency



**Flexible Design and
Advanced Technology**

*Multiple battery and distribution options
backward compatible with the Liebert®
GXT3 UPS*



**Intuitive, Intelligent
Operation**

*Intuitive color LCD control screen with
multiple configuration options*



**Designed for Easy
Service and Warranty**

*Hot-swappable batteries and best warranty
in the business, providing ultimate peace of
mind*



**Flexible Monitoring &
Management Options**

*Monitoring and shutdown software add
flexibility to each installation*

Efficient and Lowest TCO UPS





Efficient and Lowest TCO UPS

Maximizes both capital and operational efficiency

Active ECO mode provides high efficiency operation



0.9 Output Power Factor *(most models) - increases useable power available in the same space*

Programmable output sockets - *for optimum battery usage and less battery cycling*



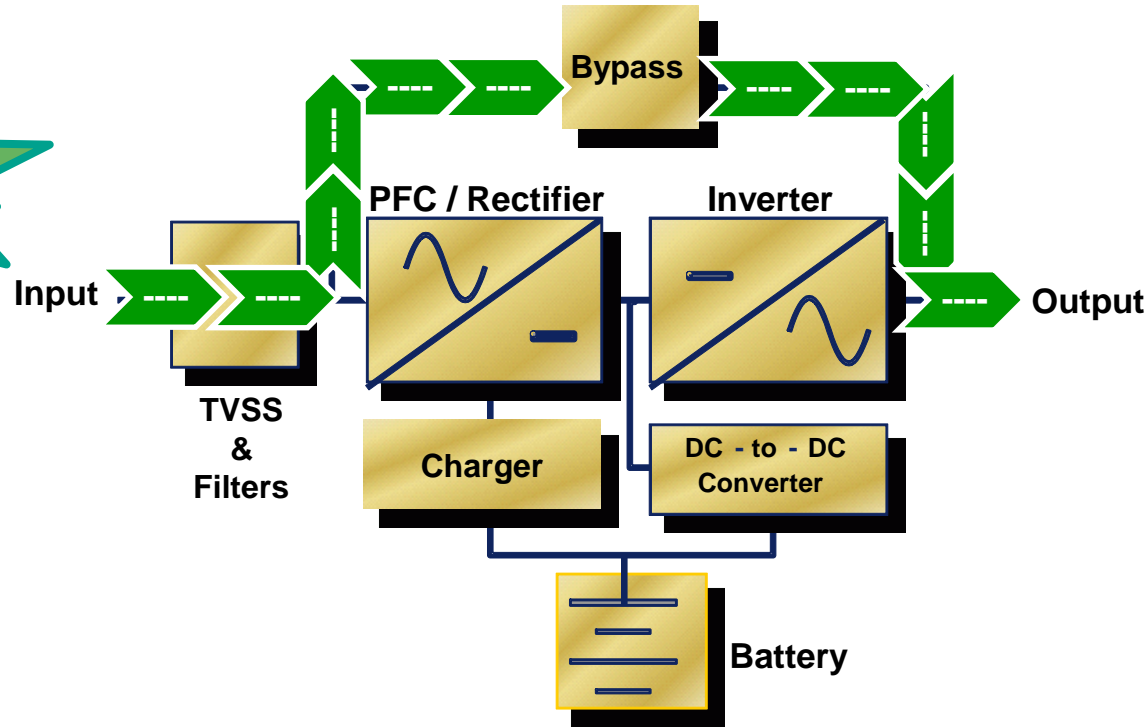
Tested, proven design – *builds on the success of the Liebert® GXT3 UPS*

ENERGY STAR® qualified





Active ECO Mode, up to 97% Efficiency



- In Active ECO mode the Liebert® GXT4™ UPS operates in bypass
- Inverter remains powered and idling for maximum protection against unexpected utility outage
- If utility power is lost or out of tolerance, the Liebert GXT4 UPS transfers back to inverter, then waits a preset (configurable) amount of time before going back to ECO mode once utility power is restored



Output Power Factor 0.9

More real power (Watts) from the same “size” UPS :

- ✓ More active loads can be connected to the UPS
- ✓ Avoids the need to oversize the UPS
- ✓ In most Liebert[®] GXT4[™] ratings (5 – 6 kVA with PF=0.8)



- Think of power like a glass of cappuccino.
- 0.9 power factor means more cappuccino and less foam!
- Competitors with a lower power factor give you less useable power in the same “size” UPS.

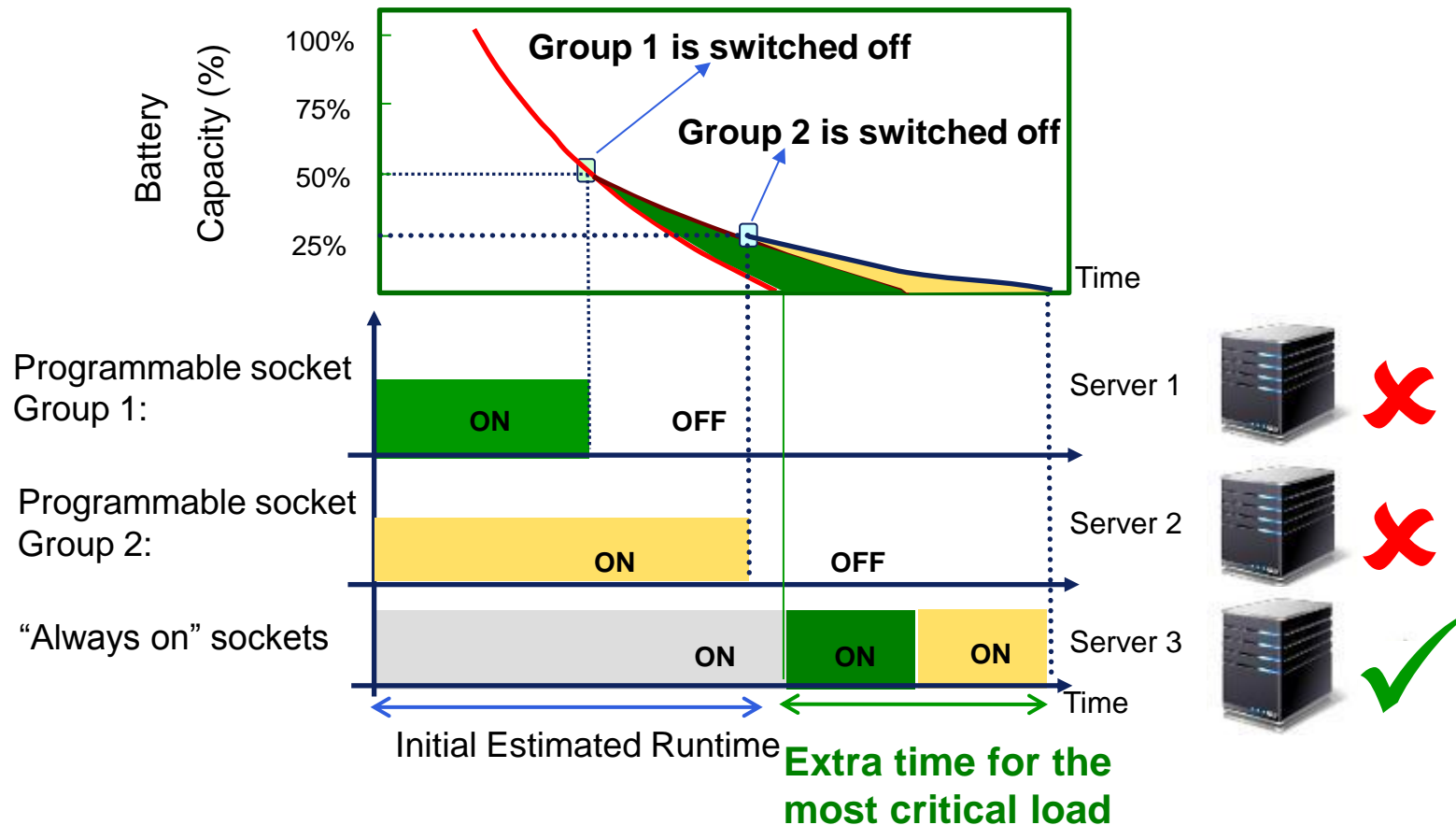
Programmable Output PowerSockets

Key
Differentiator

Advantages:

- ✓ Battery energy is reserved for most critical loads (extra runtime)
- ✓ If less critical loads are disconnected, less battery cycling occurs

Available in Liebert® GXT4™ Micro



ENERGY STAR® Qualified

Key
Differentiator

The ENERGY STAR® program was established by the U.S. Environmental Protection Agency (EPA) as a way to:

- Identify and promote energy efficient products
- Reduce energy consumption
- Help individuals save money
- Aid in the protection of our climate through superior energy efficiency



ENERGY STAR® Qualified UPS Products

The ENERGY STAR Program was established by the U.S. Environmental Protection Agency (EPA) as a way to identify and promote energy-efficient products, in order to reduce energy consumption, help individuals save money and aid in the protection of our climate through superior energy efficiency.

The ENERGY STAR UPS Program helps customers make informed decisions when purchasing, as they consider ways to efficiently design and apply UPS from small server deployments to large data centers. ENERGY STAR qualified UPS products use an average of 35% less energy than their standard counterparts.

Following is a list of Liebert® UPS products tested and qualified to bear the ENERGY STAR mark.

STAR models	Product	UPS Rating	Input Volts - 000V	Power Factor	Efficient Power, kW	Model Number
Liebert CXT4™ 120V UPS	CXT4-2000RT120	2.0	110/115/120	0.9	2.7	CXT4-2000RT120
	CXT4-2000RT120	1.00	110/115/120	0.9	1.746	CXT4-2000RT120
	CXT4-1500RT120	1.5	110/115/120	0.9	1.25	CXT4-1500RT120
	CXT4-1000RT120	1	110/115/120	0.9	0.9	CXT4-1000RT120
	CXT4-700RT120	0.7	110/115/120	0.9	0.63	CXT4-700RT120
Liebert CXT4 200/120V UPS	CXT4-10000RT200	10	200/100 to 240/120	0.9	9	CXT4-10000RT200
	CXT4-8000RT200	8	200/100 to 240/120	0.9	7.2	CXT4-8000RT200
	CXT4-6000RT200	6	200/100 to 240/120	0.9	4.8	CXT4-6000RT200
	CXT4-5000RT200	5	200/100 to 240/120	0.9	4	CXT4-5000RT200
Liebert CXT4 200V UPS	CXT4-6000RT500	6	200 to 240	0.7	4.2	CXT4-6000RT500
	CXT4-3500RT200	3	200 to 240	0.9	2.7	CXT4-3500RT200
	CXT4-10000RT230	10	200 to 240	0.9	9	CXT4-10000RT230
Liebert CXT4 230V UPS	CXT4-6000RT230	6	200 to 240	0.7	4.2	CXT4-6000RT230
	CXT4-5000RT230	5	200 to 240	0.9	4	CXT4-5000RT230
	CXT4-3500RT230	3	200 to 240	0.9	2.7	CXT4-3500RT230
	CXT4-2000RT230	2	200 to 240	0.9	1.8	CXT4-2000RT230
	CXT4-1500RT230	1.5	200 to 240	0.9	1.25	CXT4-1500RT230
	CXT4-1000RT230	1	200 to 240	0.9	0.9	CXT4-1000RT230
	CXT4-700RT230	0.7	200 to 240	0.9	0.63	CXT4-700RT230
	CXT4-5000RT230	5	200 to 240	0.9	4	CXT4-5000RT230

EMERSON
Network Power



Flexible Design and Advanced Technology





Flexible Configurations and Advanced Technology

Multiple battery and distribution options backward compatible with Liebert® GXT3 UPS



Controllable & programmable outlets –
Liebert® GXT4™ Micro 700-3000 VA ratings



Multiple battery options – *for longer run times*

Multiple power output distribution options

Multiple agency certifications –
CE, GS Mark and UL/cUL



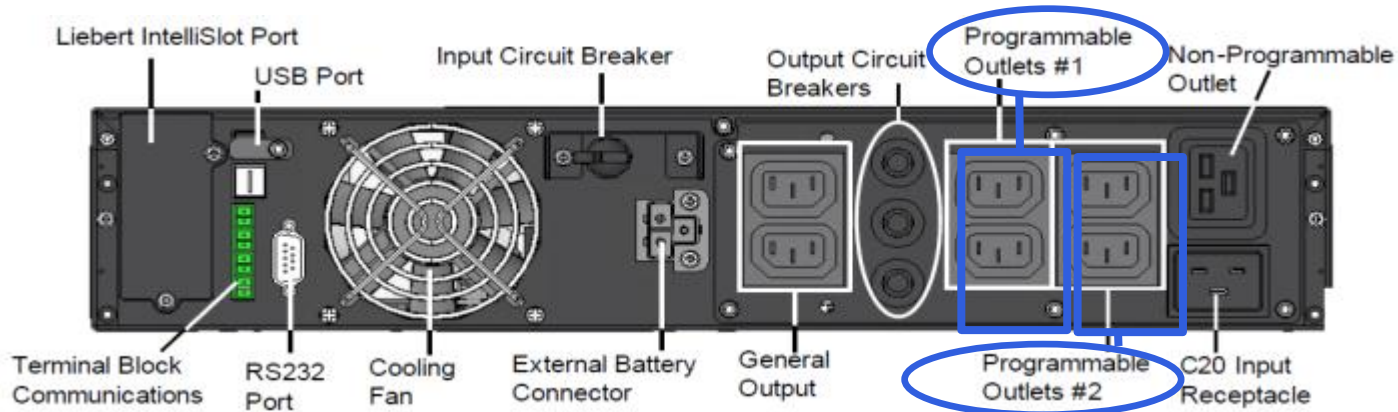
Flexible Rack/Tower design with smart packaging





Programmable Sockets

- ✓ **Two pairs of independently controllable socket groups (700 – 3000 VA models only)**
- ✓ **Each pair can be programmed for load shedding to turn OFF:**
 - When the UPS is in overload while operating on battery power
 - When on battery for a pre-defined number of minutes
 - When a pre-defined backup time remains
 - When battery capacity reaches a pre-defined level
- ✓ **Each pair can be programmed for sequential restart to turn ON when utility is restored for a pre-defined number of minutes**
- ✓ **Programmable sockets are configurable from:**
 - Front panel LCD screen
 - Configuration software
 - Webcard HTML interface





Liebert® GXT4™ Micro Multiple Battery Options

- **Hot-swappable internal batteries**
- **Battery management includes efficient three-stage charging technique and comprehensive discharging protection**
 - Automatically raise End of Discharge (EOD) voltage for lighter loads to protect against over discharging



Liebert GXT4 Micro battery kit detail

- **Only 2 part numbers for battery cabinet**
- **Compatible with Liebert® GXT3™ Micro**
 - **Small dimensions: 2Us (85 mm height)**
 - **Up to 6 external battery cabinets**
 - **Runtimes up to 2-5 hours at full load (depending on rating)**

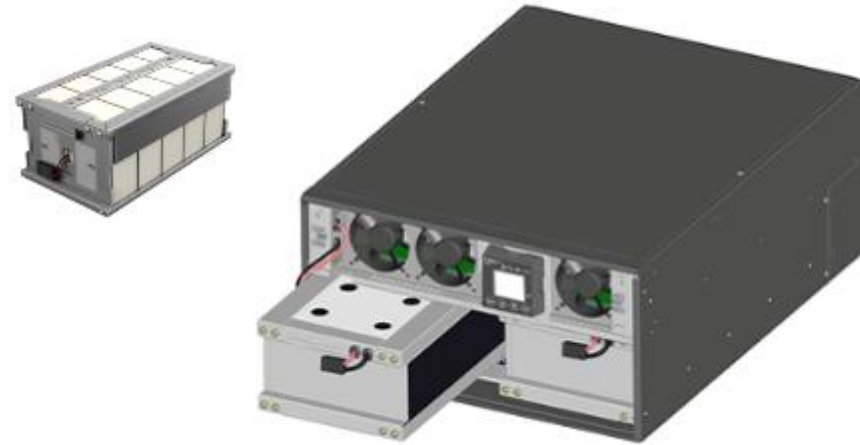


Liebert GXT4 Micro with external battery cabinet



Liebert® GXT4™ Small Multiple Battery Options

- Hot-swappable internal batteries
- Battery management includes efficient three-stage charging technique and comprehensive discharging protection
 - Automatically raise End of Discharge (EOD) voltage for lighter loads to protect against over discharging



Liebert GXT4 Small battery kit detail

- Single battery cabinet compatible with Liebert® GXT4™ 5-6-10 kVA
 - 1 x 20 batteries x 12 V x 9 Ahr
 - Small dimensions:
 - 430 x 580 x 173 mm³ (W x D x H)
 - Up to 6 external battery cabinets
 - Runtimes up to 1-2 hours at full load (depending on rating)



Liebert GXT4 Small with External battery cabinets





Multiple Agency Certifications

➤ Agency certifications and marks:

➤ CE mark

➤ GS mark

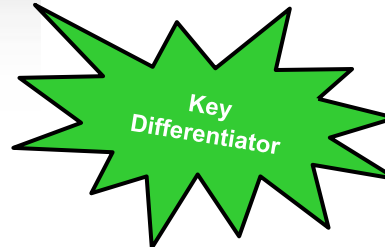
➤ UL/cUL (depending on ratings)

- 700 VA, 1 kVA and 3 kVA ratings

✓ Sales inside EU

✓ Independent accredited by a third party which has evaluated, tested and certified the product for electrical safety

✓ UL/cUL safety testing for NA markets



Flexible R/T Design with Smart Packaging

- **Flexibility for mounting in tower or rack**
 - ✓ **Single part number for both form factors**
 - ✓ **Small and compact sizes**
 - **2Us height (85 mm) for Micro models (1-3 kVA)**
 - **5-6Us height for Small models (5-10 kVA)**
 - ✓ **LCD display can be rotated**
 - ✓ **Versions available with railkits and webcards bundled (-K part numbers)**



Liebert GXT4 Small rack and tower mounted

Flexible R/T Design with Smart Packaging

Lifting straps included for easy removal from box



Complete bundle (*) :

- ✓ User manuals
- ✓ Safety instructions
- ✓ CD with software
- ✓ Power cables
- ✓ Communication cables
- ✓ Plastic tower stand sets
- ✓ Mounting hardware



**Cable strain relief
(to avoid power cable
disconnections)**



(*) Check bundled items for each rating on user manual

Advanced UPS Technology

Advanced technology based on the successful Liebert® GXT3 UPS

- Zero transfer time
- UPS inverter is permanently on-line, continuously generating clean, precise and regulated AC output power
- Uses battery only in case of utility interruption
- Provides stable output voltage and frequency
- Frequency converter operation
- Dynamic bypass provides an alternate path for mains power in the unlikely event of a UPS malfunction
- Intelligent battery management
- Robust and reliable UPS
- Global portfolio with models for 120 V-UL or 230 V-CE
- Parallel / redundancy operation for Liebert® GXT4™ 10 kVA RT
- Input breakers included for maximum protection

Intuitive, Intelligent Operation





Intuitive, Intelligent Operation

Intuitive color LCD control screen with multiple configuration options



- **Intuitive Color LCD Screen** – *easy menu structure and full configuration capability*

New!

- **Multiple Configuration Options** – *program from the LCD screen or the included software through USB or RS232 ports, and control from the web card interface*

New!

- **File Upload** – *configuration file can be saved and uploaded to other Liebert® GXT4™ UPS of the same size & voltage*

New!



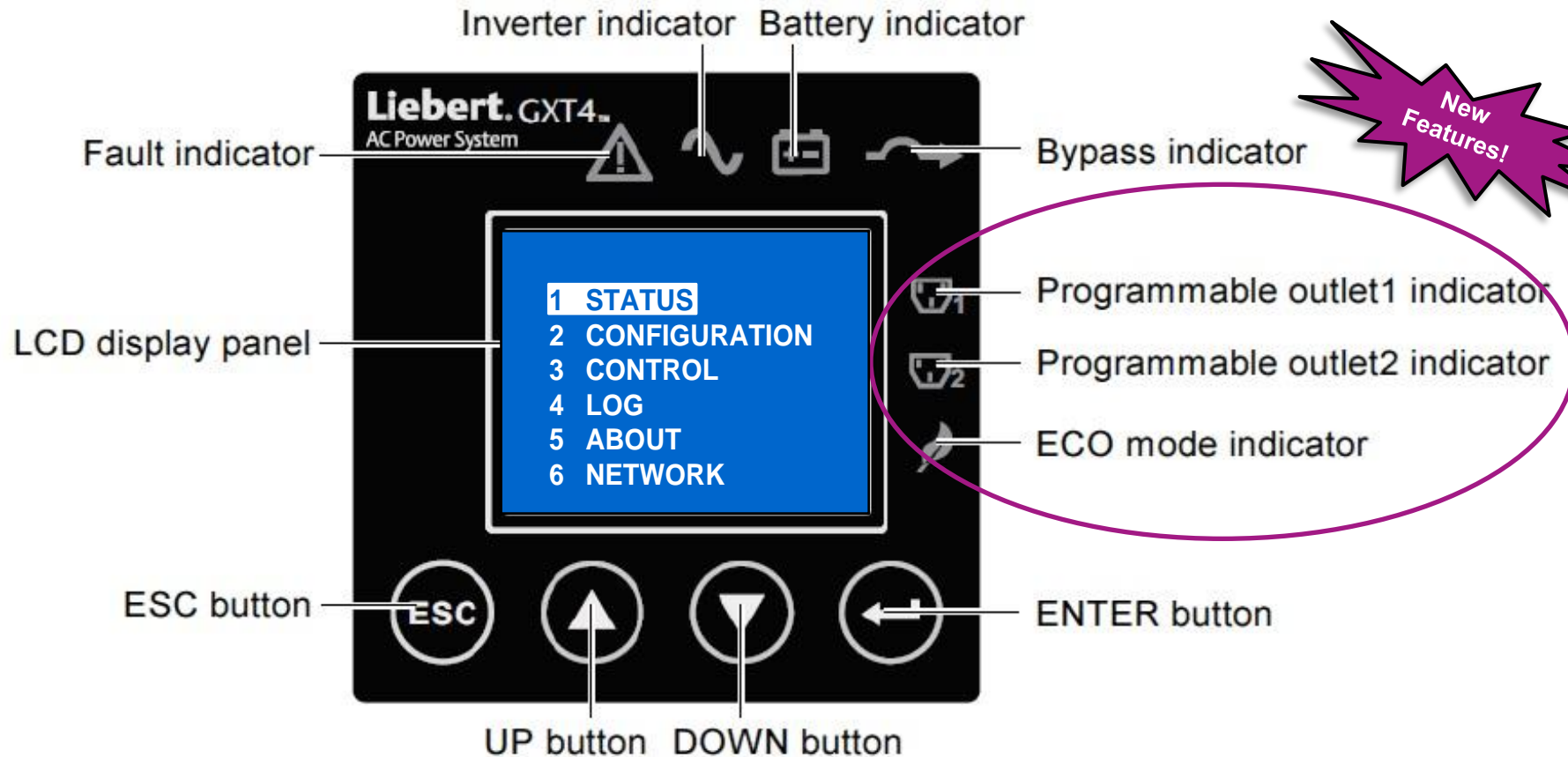
Intuitive Color LCD Screen



- *Easy menu-driven display*
- *Screen colors can be changed*
- *Rotatable for rack or tower installations*
- *Multi-language:*
 - *Default in English*
 - *Up to 10 more languages (to be uploaded)*
- *LED status indicators remain available for easier and visual indicators*
- *Four background colors available*



Front Panel Controls on LCD Screen





Multiple Configuration Options

Programming & Configuration – Software included in the Liebert® GXT4™ UPS

- PC connects to the UPS via USB cable

- Supports multiple languages (provided on installation CD)

- English
- Spanish
- French
- German
- Italian
- Portuguese
- Russian
- Polish
- Turkish
- Dutch
- Norwegian

Emerson UPS GXT4 Tool V1.1 Version

UPS | Battery | Outlet1 | Outlet2 | ECO Mode | Dry Contact

EMERSON Network Power

UPS Model: GXT4-3000RT120

Output Voltage: *120 Volts

☒ Enable auto restart ☐ Enable guarantee shutdown

☒ Startup on Bypass ☒ Enable L-N Reverse Detection

Frequency Selection

☒ Auto Sensing - 50 or 60 HZ - Bypass Enabled

☐ Auto Sensing - 50 or 60 HZ - Bypass Disabled

☐ Frequency Converter - 50HZ - Bypass Disabled

☐ Frequency Converter - 60HZ - Bypass Disabled

Audible Alarm Control

☒ Enable Audible Alarm Control

Help Menu:

UPS Setting File

Download

Upload

Refresh Exit Apply Factory Setting



Multiple Configuration Options

Programming & Configuration – Programmable sockets

Socket Control

- **Turn On:** Turn on socket immediately; only available when socket is off.
- **Turn Off:** Turn off socket immediately; socket will remain off until user turns on the socket manually.
- **Reboot:** Turn off and turn on the socket immediately; only available when socket is on.
- **Battery Discharge Duration**
- **Battery Runtime Remaining**
- **Battery Capacity**

EMERSON Network Power V1.1 Version

UPS | Battery | Outlet1 | Outlet2 | ECO Mode | Dry Contact

Outlet Control:

Turn On Turn Off Reboot

Outlet Setting:

Turn on delay 0 0-30(mins)

☐ Turn off outlet on overload when UPS on battery mode

Battery Discharge Duration:

☐ Turn off when UPS on battery for 5 0-30(mins)

☒ Turn on when power returns 0 0-30(mins)

Battery Runtime Remaining:

☐ Turn off when runtime is less than 3 0-30(mins)

☒ Turn on when power returns 0 0-30(mins)

Battery Capacity:

☐ Turn off when battery capacity < 20 %(20-80)

☒ Turn on when power returns 0 0-30(mins)

Help Menu:

Turn off outlet immediately. Outlet will remain off until user manually turn on the outlet.

Upload language

UPS Setting File

Download

Upload

Refresh Exit Apply Factory Setting



Multiple Configuration Options

Programming & Configuration – Active ECO mode

- **Off:** UPS operates with the load powered by the inverter.
- **On:** UPS will use specified conditions to decide when to power the load by bypass and when to power by inverter.
- **Voltage tolerance:**
 - 5%, 10% or 15%.
- **Frequency tolerance:**
 - 1 Hz, 2 Hz or 3 Hz.
- **Requalification Time:**
 - 5 min, 15 min or 30 min

EMERSON Network Power

CXT4 Tool V1.1 Version

UPS | Battery | Outlet1 | Outlet2 | **ECO Mode** | Dry Contact

ECO Mode: *Off

ECO Bypass configuration

Voltage tolerance: *10%

Frequency Tolerance: *3Hz

Requalification Time: *5min

Upload language

UPS Setting File

Download

Upload

Help Menu:

Requalification time will be used when ECO Mode is enabled and the input voltage or frequency goes out of tolerance and the UPS transfers to Inverter. Once the utility returns to within tolerance levels, the UPS will wait the set requalification time and verify the utility did not go

Refresh Exit Apply Factory Setting



Multiple Configuration Options

- **Programming & Configuration** – configuration file can be saved and uploaded onto other Liebert® GXT4™ UPS of the same size & voltage

The screenshot shows the 'Emerson UPS GXT4 Tool V1.1 Version' window. It features a sidebar on the left with the Emerson Network Power logo, an 'Upload language' button, a 'UPS Setting File' label, and 'Download' and 'Upload' buttons. The main area has tabs for 'UPS', 'Battery', 'Outlet1', 'Outlet2', 'ECO Mode', and 'Dry Contact'. The 'UPS' tab is active, displaying fields for 'UPS Model' (GXT4-3000RT120) and 'Output Voltage' (*120 Volts). Below these are checkboxes for 'Enable auto restart', 'Enable guarantee shutdown', 'Startup on Bypass', and 'Enable L-N Reverse Detection'. A 'Frequency Selection' section contains four radio button options: 'Auto Sensing - 50 or 60 HZ - Bypass Enabled' (selected), 'Auto Sensing - 50 or 60 HZ - Bypass Disabled', 'Frequency Converter - 50HZ - Bypass Disabled', and 'Frequency Converter - 60HZ - Bypass Disabled'. There is also an 'Audible Alarm Control' section with a checked 'Enable Audible Alarm Control' checkbox. At the bottom, there is a 'Help Menu' text area and buttons for 'Refresh', 'Exit', 'Apply', and 'Factory Setting'.

- Provides download (save) of configuration file and upload to another Liebert GXT4 UPS of the same size and voltage



Communication & Interface Cards

IS-WEBCARD “Webcard”

- SNMP
- Web Browser
- Email / SMTP Notifications
- SMS Text



OC-485 “MODBUS Card”

- MODBUS RTU
- IGM



IS-MULTIPORT “Multiport Card”

- UPS connection of up to 4 computers
- For use with Liebert® MultiLink™ shutdown software



IS-RELAY “Relay Card”

- Provides up to 5 contact closures





IS-WEBCARD Screen Shots



monitor

control

configure

event log

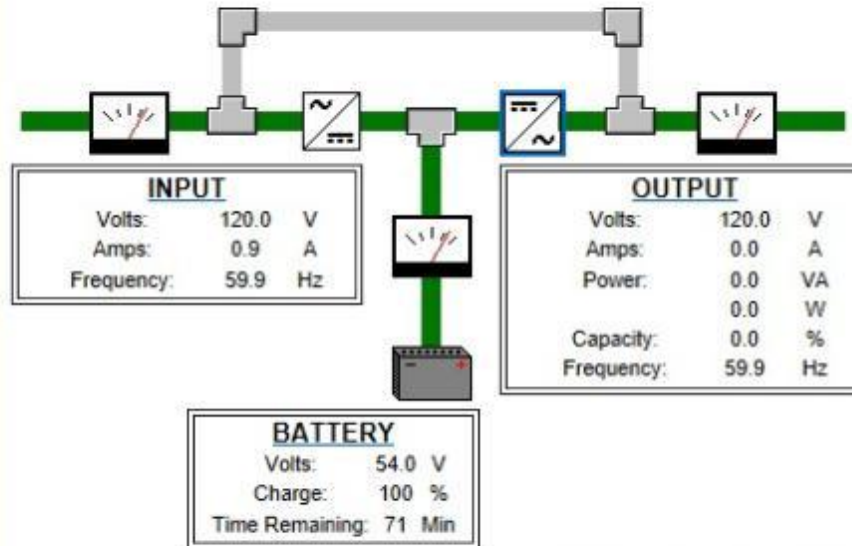
support

Agent Information:
GXT4-1000RT120
Brian's Office
Liebert GXT4 1000VA/90...

Summary:

Updated: December 30, 2014 09:43:03AM

Device Status:
Load Protected:
No Alarms Present



UPS Load on Inverter



Monitor Categories:

- GXT4
 - Summary
 - Active Alarms
 - Battery
 - Bypass
 - Input
 - Inverter
 - Output
 - Hardware
 - Configuration
 - Other

Active Alarms:

No Alarms Present

Designed for Easy Service and Warranty





Designed for Easy Service and Warranty

***Hot-swappable and the best warranty in the business.
Liebert® service provides ultimate peace of mind***

Batteries are hot-swappable – UPS can keep inverter power connected to the load during the swap

LIFE™ services offer continuous remote monitoring (Liebert® GXT4™ Small 5-6-10kVA)

Best warranty in the business – “hassle-free” two-year warranty with advanced UPS replacement

Liebert® services Expertise – provides basic and enhanced support in case of troubles or warranty issues





Hot-Swappable Batteries

Continuity and availability for your critical load

- **Hot-swappable** internal batteries
- UPS can keep inverter power connected to load during the swap



Liebert GXT4 Micro battery kit detail

- **Maintenance bypass** and output power distribution PODs for service and maintenance



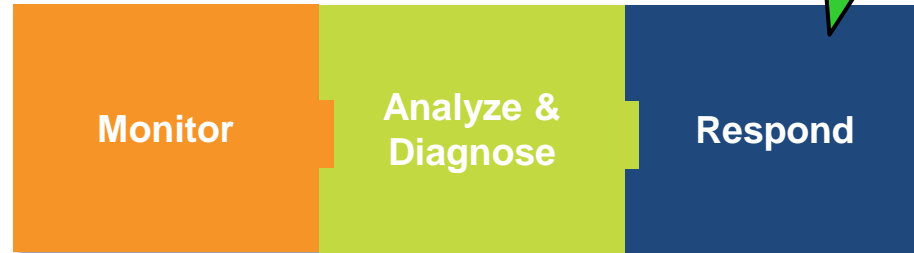
Liebert® MicroPOD



Liebert® GXT4™ Small embedded POD

LIFE™ Service

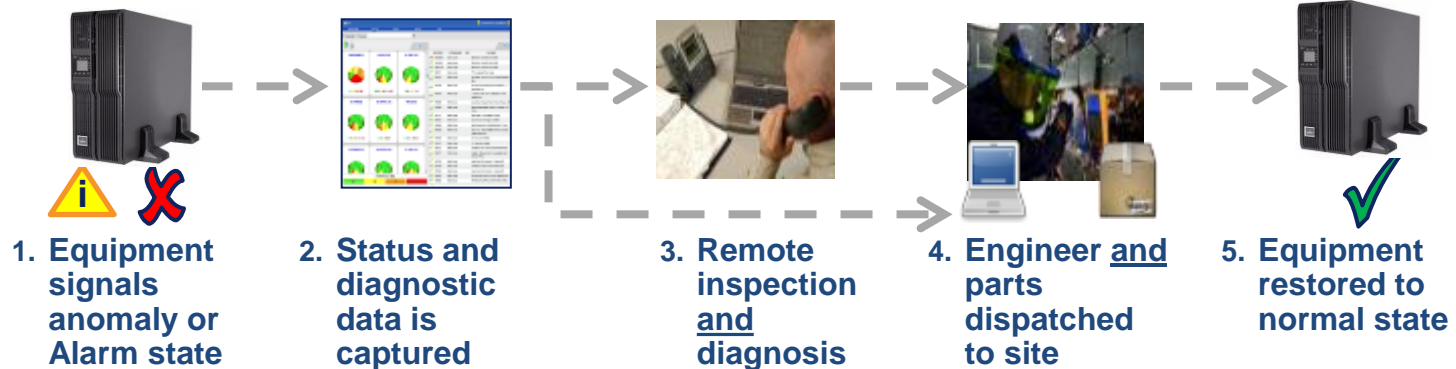
Key
Differentiator



- Adds a virtual expert to your team, 24 / 7 / 365
- Improves system Mean Time Between Failure (MTBF) and delivers the lowest Mean Time To Repair (MTTR) in the industry.

Liebert® GXT4™

LIFE™ Service



Warranty and Services



- **UPS Tech Team**

- Post-sales support and warranty claims
- 24 / 5 multi-language tech support
- EN, FR, DE, IT, ES
- Can be reached by:
 - Phone (toll-free number from EU countries and toll number from outside EU)
 - E-mail
- Focused on **0-10 kVA**

- **Warranty extensions (1 year, optional) for Liebert® GXT4™ Micro models**



Tech Support

Always On! Our Commitment to your daily Business, provided by our World Wide multi language Tech Support.

Toll-free **00-80011554499**

Toll **+39 02 98250222**

liebert.upstech@emerson.com

Toll-Free Number Countries

Austria

Belgium

Czech Republic

France

Germany

Hungary

Ireland

Italy

Luxembourg

Netherlands

Poland

Russia

South Africa

Spain

Sweden

Switzerland

UK

Flexible Monitoring & Management Options





Flexible Monitoring & Management Options

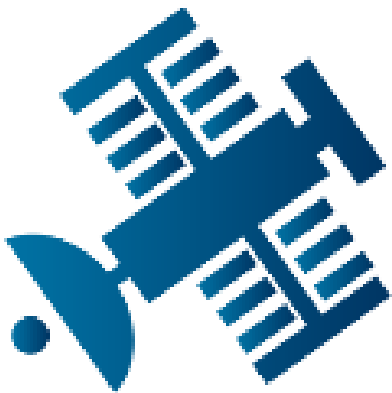
Monitoring and shutdown software add flexibility to each installation

Liebert® MultiLink™ bundle – *Monitoring and shutdown software is included for each Liebert® GXT4™*

Communication webcard – *perfectly integrated into Emerson Network Power Monitoring Ecosystem*

Multiple interface options – *LCD display, multiple ports, terminals, webcard, MODBUS card & relay card*

DCIM compatible – *compatible with Liebert® Nform™, Liebert® SiteScan® Web and Trellis™ platforms*

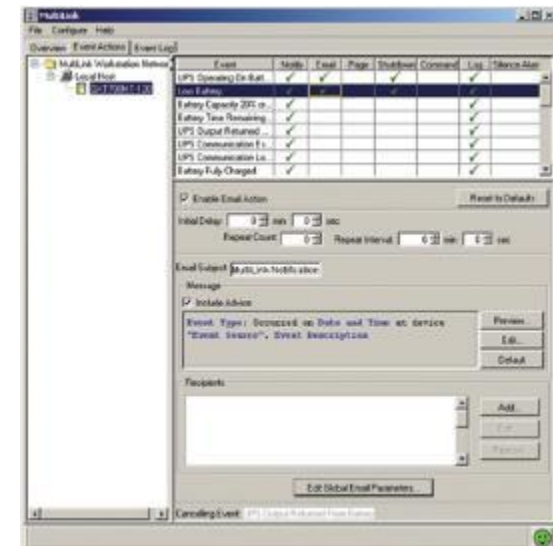
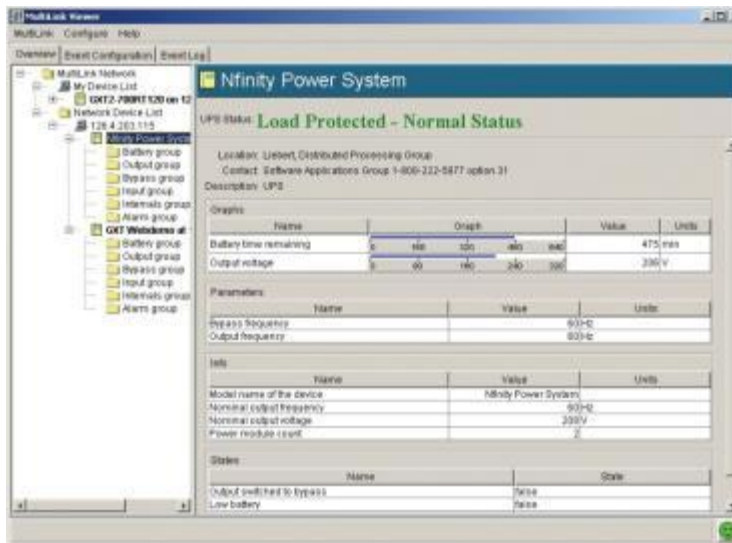
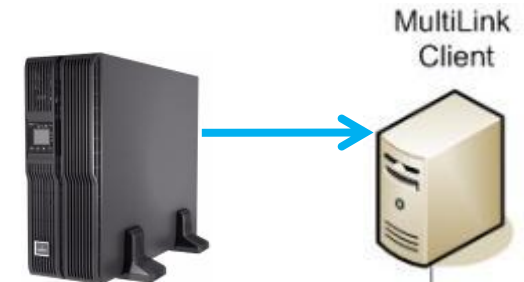




Liebert® MultiLink™

Monitoring and shutdown software is included in each Liebert® GXT4™

- Automated shutdown to proactively protect data
 - Single workstation or network of servers
- Utilizing network or cable connection
- Graphical user interface
- Configurable alarm and event notification
- UPS communication through USB or RS232 port





Communication Webcard: IS-WEBCARD

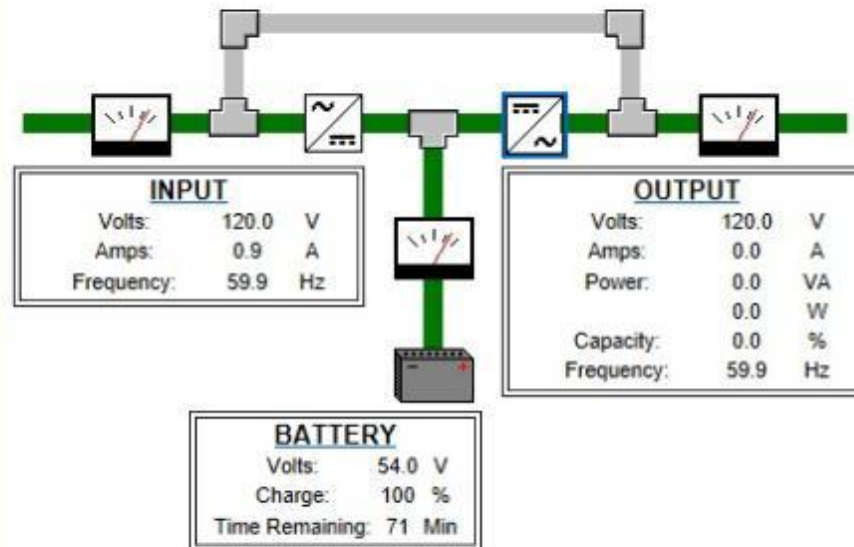
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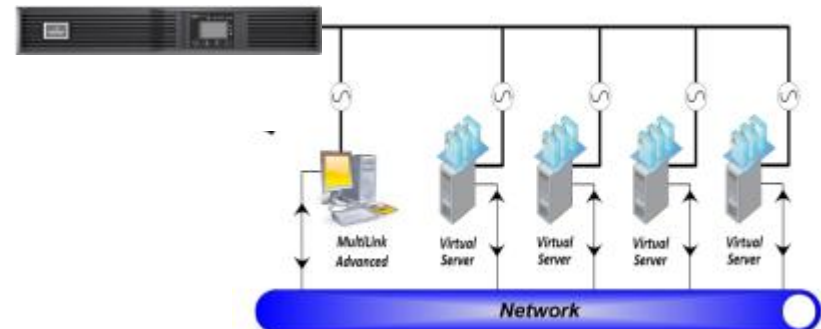
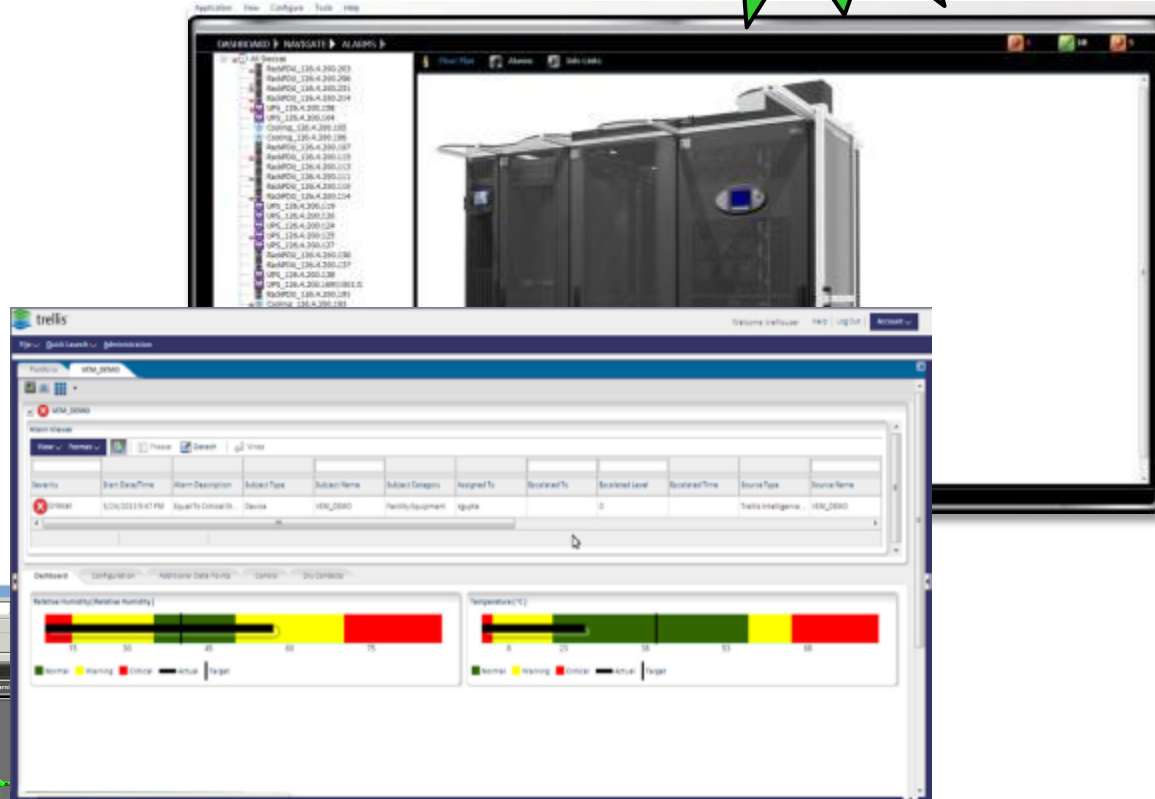
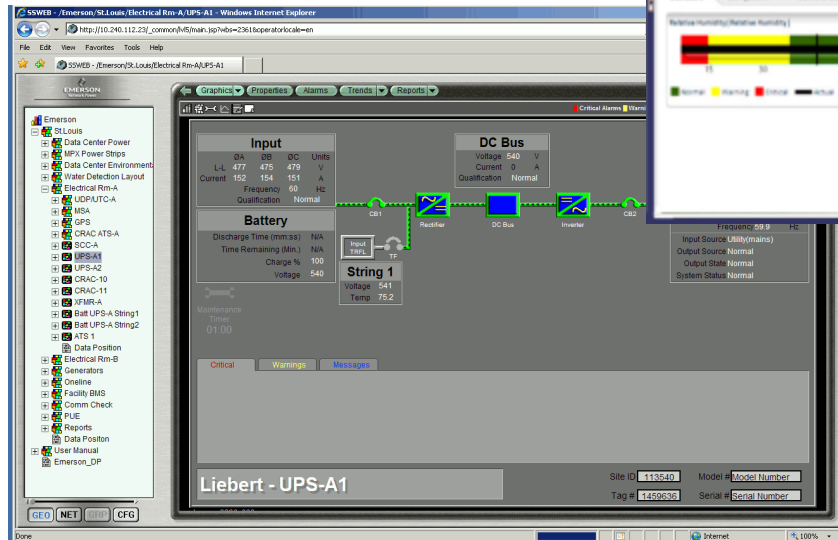


✓
...and color LCD display

DCIM Compatible

Key
Differentiator

- Liebert® MultiLink™
- Liebert® Nform™
- Liebert® SiteScan® Web
- *Trellis*™
- Third-party systems



Liebert® Nform™ Description

- Easy way to monitor Liebert® GXT4™ and other UPS
- Tracks alarms and conditions
- Sends notifications
- Performs other management actions
- Communicates with any equipment that uses SNMP
- Hardware independent
- Auto discovers and configures any Emerson Network Power device on the network
- Allows the user to easily monitor equipment in multiple locations via one dashboard
- Effectively eliminates the need for expensive third-party monitoring applications
- Can run on a PC or within a virtual IT environment



Liebert® GXT4™ UPS Highlights



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TCO UPS**

Maximizes both capital and operational efficiency



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Advanced Technology**

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Management Options**

*Monitoring and shutdown software add
flexibility to each installation*

The End



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