

Liebert Nform is a network communications system that will enable you to leverage the distributed monitoring capabilities of your network connected equipment. This software solution combines full-scale monitoring with simple to use deployment through the use of the existing network infrastructure. It is both scalable and adaptable so it can grow as your systems expand and business needs change.



Features & Benefits			
Feature:	Higher Availability:	Flexibility:	Lowest Total Cost Of Ownership:
Auto-discovery of Liebert Equipment	The ability to add multiple device types quickly for centralized management.	Multiple Network Segments can be scanned for networked equipment.	Simplified installation and configuration reduces overall installation time, reducing costs.
Supports non-Liebert equipment	The ability to monitor and control a wide range of support systems.	Provides monitoring of systems by multiple vendors eliminating the need for 3rd party software.	Supports current investments of existing systems deployed across the enterprise, keeping costs down.
Web Integration	Simple navigation of monitored systems from a centralized location.	NA	Eliminates the need for customized interfaces by utilizing the standard interface native to each piece of equipment.
44 Base Device Templates	Since the device templates are installed with every Nform system, monitoring of new equipment is readily available.	As infrastructure changes to the demands of a flexible business model, the Nform software by default is ready to adapt to changes to the critical infrastructure.	As additional equipment is deployed the monitoring of that equipment is simple, no additional cost is required to add systems to the Nform Software.
Alarm Filtering – Trap Forwarding	Filtering of alarms lessens the burden on a Network Management System with numerous alarms that often hide the critical alarm events.	The software can be configured to forward specific alarms to a Network Management System.	Now send only alarms that need some type of response. Reduce downtime by focusing on the root-cause of the immediate incident.
Device Management	No understanding of SNMP or MIB's required for basic monitoring.	N/A	Most systems require a good understanding of SNMP and MIB's. Device templates remove the technical aspects of monitoring SNMP based equipment.
Notification Update	When system uptime is in question to due to power fluctuations causing battery runtime, the software can send shutdown commands to the non-critical system first giving more runtime to system most critical.	N/A	As alarms are received by the system, notification reports detail every system or individual that has been alerted, allowing resources to respond accordingly and remove the redundancy of alarm reaction.
Desktop View	Quickly view the availability of the overall system with a summarized view.	Provides a dashboard view of the entire critical management system.	This dashboard view allows an immediate response to changes in the critical system, ensuring higher availability and reducing the downtime.



Features & Benefits *continued*

Feature:	Higher Availability:	Flexibility:	Lowest Total Cost Of Ownership:
Device Surveillance	Ensures the availability of each monitored piece of equipment by active monitor polling.	As long as the device supports SNMP, the system can actively poll equipment and determine the online status.	Some monitoring systems determine the availability of equipment by a simple ICMP ping. Nform determines availability by SNMP, testing the interface that is key to successful monitoring. This reduces the cost associated with unplanned downtime due to failure of alarm notifications.
Device Diagnostics Report	Diagnostic reports can be run on monitored equipment, detailing each critical interface: SNMP, ICMP, WEB and Telnet, and its reliability.	N/A	Reporting on system availability and the overall state of monitored equipment and all its interfaces allows quicker response to problems with the system, reducing downtime and creating a more reliable system.
Shutdown of Workstation and Servers	When system uptime is in question due to power fluctuations causing battery runtime, the software can send shutdown commands to the non-critical system first, giving more runtime to the system most critical.	The software can be configured to send shutdown notifications to servers and workstations on any alarm event.	Increases the runtime for critical equipment; orderly shutdowns prevent the loss of data for key business systems.
Communications Loop-Back	The software will execute an internal SNMP Trap that will be sent on the network and re-routed back to Nform, ensuring the software is operating per its configuration and confirming monitoring availability.	This loop-back test offers tremendous flexibility. It can be set up with any type of notification and configured to run at any time of the day.	Due to changes in security policies, often firewalls and new routers are setup which prevent the passing of valid communications of alarm events from monitored equipment. This loop-back test is crucial to availability; reducing the cost associated with downtime due to the lack of critical alarm notifications.
Condition Based Device Commands	When changes or fault conditions are imminent, the software can be configured to take appropriate actions on the monitored equipment, automating the desired reaction such as turning on additional cooling or rebooting of systems.	The software can be configured to take immediate action on equipment, taking a holistic approach on the overall critical system.	Maximizes efficiency, automates operational changes to system to automatically respond to environmental or alarm events. This ultimately reduces the cost associated with dispatching personnel to alarm events.



Frequently Asked Questions

Question	Resolution
Can Liebert Nform shutdown operating systems when an alarm is received, as your Liebert MultiLink software does?	Yes, by adding the Liebert MultiLink shutdown license, Liebert Nform can be setup to send shutdown commands to Liebert MultiLink 1.5 clients.
If I am not using Liebert equipment, can I still use Nform?	Yes. Liebert can custom build templates for your UPSs to work with Liebert Nform.
Do I need a dedicated machine to run the system?	No, Liebert Nform can be installed on your computer to manage a few devices.
I have a NMS (Network Management System) why do I need Liebert Nform?	Liebert Nform is specifically designed to manage the critical equipment working with an NMS. It can be used to filter alarms and send only the most critical alarms to an NMS.

Liebert Nform Competitive Comparison

Feature		Liebert	APC
Lock Application	Lets you select the alarm that you wish to delete, acknowledge it, close it using the tool bar ribbon buttons.	Yes	No
Desktop View	Provides a desktop overview of all managed devices. Users can quickly identify all devices operating normally, any present alarms and any devices not communicating properly.	Yes	No
Notification Updates	Users can quickly view the notifications on a device. This can be displayed per device.	Yes	No
Device Diagnostic	Provides a managed device summary report that includes version number of device, agent, alarm notification and alarm status. The report will also test each of the communication interfaces on the device; SNMP, Web, Telnet, ICMP.	Yes	No
Parametric Data View	User can view all the SNMP parametric data available on the device.	Yes	No
Network Statistics	The system will provide the NMS statistical data on the agent and how it performs on the customer's network.	Yes	No
Alarm Management	All alarm history can be viewed and managed. Users can view the history of each device or the complete system. User can acknowledge alarms and add comments to the alarms to define why a specific event happened.	Yes	Yes
Alarm Definition	User can view detail information on events or parametric data, explaining why an event happened and the parametric data for the managed equipment.	Yes	Yes
Auto-Logoff	Can automatically log the user out of the application. This essentially works like a screen saver. The system will be in "Lock Application" mode.	Yes	No
Users	The system supports two users; an administrator and power user, access level for system configuration or just alarm management.	Yes	Yes



Specifications

Software Options

System Features	Liebert Nform Software ** Download Edition	Liebert Nform Software Professional Edition	Liebert Nform Software Enterprise Edition
Local Client Viewer	1	1	1
Remote Concurrent Client Viewer	No	No	5
Supported Operating Systems	Windows NT 4.0 w/SP6 or higher, Windows 2000, Windows XP, Windows 2003 Server	Windows NT 4.0 w/SP6 or higher, Windows 2000, Windows XP, Windows 2003 Server	Windows NT 4.0 w/SP6 or higher, Windows 2000, Windows XP, Windows 2003 Server
Real-Time Monitoring and Control			
Device Status Polling	Yes	Yes	Yes
Default Devices Supported	1	30	100
Web Card Integration	Yes	Yes	Yes
Open Architecture (Monitoring of non-proprietary SNMP devices) Device Template Included	Standard RFC1628 UPS Device Template Included	Standard RFC1628 UPS Device Template Included	Standard RFC1628 UPS
Device Supported	All Liebert UPS, Environmental, Power Distribution, and Monitoring products that support a SNMP interface	All Liebert UPS, Environmental, Power Distribution, and Monitoring products that support a SNMP interface	All UPS Liebert, Environmental, Power Distribution, and Monitoring products that support a SNMP interface
Notifications and Alerts			
Propagate Application to foreground	Yes	Yes	Yes
Load Local Viewer	Yes	Yes	Yes
Play Sound Wave	Yes	Yes	Yes
Play Default Beep	Yes	Yes	Yes
Flash Application when Minimized	Yes	Yes	Yes
Standard Actions			
E-mail Notification	Yes	Yes	Yes
Run External Program Capability	Yes	Yes	Yes
File Write			
Shutdown Network License*	Yes	Yes	Yes
Shutdown ML Clients			
Advance Notifications*	No	No	Unlimited Included
SNMP Set Request(s)	No	No	Yes
SNMP Get Request(s) Report	No	No	Yes

* Note: These add-on packages can be added to the system with Licensing

** Software available at no charge at Nform.liebert.com

Liebert Nform Additional Licenses

PART NUMBERS

NFORM-30N
NFORM-100N
NFORM-500N

Nform Additional Managed Device Licenses

Managed Device License kits allow the user to incrementally add support for monitoring additional numbers of network devices. Node Licenses are additive and manageable through License Key Administrator.

Liebert Nform Managed Device Licenses

NFORM-1CUSER
NFORM-5CUSER
NFORM-10CUSER

Concurrent Client License allows the user to incrementally add support for additional numbers of connected clients. Concurrent Client Licenses are additive and manageable through License Key Administrator.

Liebert Nform Advance Notification License

NFORM-ANOTIFY

Advance Notification License allows the user to add support for SNMP SET/GET Requests Actions.

Liebert MultiLink® Network Shutdown License, Unrestricted

MLLKU

Liebert MultiLink Network Shutdown License allows you to efficiently shutdown workstations and servers running Liebert MultiLink throughout the network via Event-Alarm conditions from Liebert Nform.

Liebert Nform Related Products



Liebert IntelliSlot Webcard

Delivers SNMP, Telnet and web-management capability for enhanced communications and control of Liebert UPS, Power Management or Precision Cooling systems. The card manages a wide range of operating parameters, alarms and notifications, transmitting data over the network.



Liebert IntelliSlot Web/485 card with adapter

Enables the Network and Building Management Systems that monitor your computing, communication and facility infrastructure to also monitor your Liebert cooling equipment through your existing network.



Liebert MultiPort4

Relay contact multiplexing unit communicates the On Battery and Low Battery status of a single UPS to connected PCs, servers, or workstations. The user-installable, hot-swappable card provides UPS communications to a host computer and up to four additional computer systems with the Liebert IntelliRack multiplexing unit or UPS systems equipped with the Liebert IntelliSlot communication port.



Liebert MP Advanced Power Strips

“Smart” power strips allowing customers to monitor and control equipment at the receptacle level.



Liebert GXT

A fault-tolerant, network-enabled UPS capable of delivering data center quality power protection to racks and small rooms. Available in 500, 700, 1000, 1500, 2000, 3000, 6000, and 10,000 VA.



Liebert NX (40-120kVA)

The new Liebert NX with SoftScale™ UPS platform can be sized to current requirements and then easily scaled as needs change.



Liebert NX (10-30 kVA)

A compact three-phase true online UPS that offers power-factor correction, frequency conversion, internal dynamic bypass, internal maintenance bypass switch, internal batteries, additional battery cabinets, intelligent local monitoring and remote communications.



Liebert DS Cooling

An active precision room cooling system providing a highly energy-efficient solution, including temperature, humidity, filtration and airflow.

Liebert MultiLink™ Automated Shutdown Software

Liebert MultiLink is featured in these Scenarios:	Scenario A 1-2 Racks Single Phase page 8	Scenario B 1-2 Racks Single Phase page 10	Scenario C 3-6 Racks Single Phase page 12	Scenario D 7-10 Racks Three Phase page 14	Scenario E 10-30 Racks Three Phase page 16	Scenario F 30-60 Racks Three Phase page 18
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Liebert MultiLink is the perfect complement to a Liebert UPS system, preventing unexpected server shutdowns and minimizing downtime. The software provides unattended, orderly shutdown for one computer or many, and is especially effective with large server farms. Available for all popular operating systems, Liebert MultiLink has full event management and displays UPS instrumentation on screen.



Features & Benefits

Flexibility:	Higher Availability:	Lowest Total Cost Of Ownership:
<ul style="list-style-type: none"> Full functionality and automated shutdown protection right out of the box—virtually no configuration is required. Orderly shutdown on virtually an unlimited number of computer systems. User-selectable language interface—English, Canadian French, Latin American Spanish and Simplified Chinese. Quick configuration through the unique event manager matrix—from one screen, configure specific event actions while maintaining a view of the overall system configuration. 	<ul style="list-style-type: none"> Supports multiple shutdown configurations that incorporate network and serial based shutdown solutions for one or many computer systems. Includes integration to the Liebert IntelliSlot Web/485 Card with Adapter and the Liebert IntelliSlot Web Card interface, advanced action logging, enhanced unattended shutdown configurations and support for three-phase UPS systems. 	<ul style="list-style-type: none"> Using the network to send alarm messages and data can dramatically reduce cable and installation costs. Remote management of distributed Liebert MultiLink systems is also available with the network administration license, enabling any Liebert MultiLink installation on your network to be controlled from one centralized computer for more efficient management of your power protection.

Frequently Asked Questions

Question	Resolution
Do I need a Network Administration License for Liebert MultiLink?	You only need the Network Administration License when you are monitoring multiple UPSs or remotely controlling one Liebert MultiLink 3.x workstation from another Liebert MultiLink 3.x workstation.
Does the Liebert MultiLink Unlimited License work for all of my sites?	Each of the Liebert MultiLink License Kits is per one UPS. Each UPS must have a Liebert MultiLink License Kit when shutting down multiple computers / servers.

Competitive Comparison

Feature	Liebert MultiLink	PowerWare LanSafe5	APC PowerChute Business Edition	MGE Power Management Module
Type of Monitoring Connection	Serial, Contact Closure, SNMP	Serial, Contact Closure, SNMP	Serial, Contact Closure, SNMP	Serial, Contact Closure, SNMP
E-Mail Notification	Yes	Yes	Yes	Yes
Paging Notification	Yes	Yes	Yes	Yes
Configurable Alarm Text Messages	Yes	Yes	Yes	Yes
Multiple Computer Automated Shutdown	Yes	Yes	Yes	Yes



Specifications

System Features	MultiLink 1.5	Multilink Fundamental Version 3.6	Multilink Advanced Version 3.6 ¹
Type of Monitoring Connection	Contact Closure, SNMP	Serial, Contact Closure, SNMP	Serial, Contact Closure, SNMP
Graphs	No	Yes (Bar)	Yes (Bar)
Diagnostics Tests	No	Yes (Battery)	Yes (Battery)
Battery Replacement Notification	No	Yes	Yes
Output Control	No	Yes	Yes
Audible Alarm	No	Yes	Yes
Broadcast Notification	No	Yes	Yes
Automated Shutdown	Yes	Yes	Yes
E-mail Notification	No	No	Yes
Paging Notification	No	No	Yes
Event Based Command Scripts	Yes	No	Yes
Data Logging	No	No	Yes
Event Logging	Yes	Yes	Yes
Action Logging	No	Yes	Yes
HTML Integration (Hot Link to UPS Web Card)	No	Yes	Yes
Power Flow View	No	Yes	Yes
Secure Shutdown Options	No	Yes	Yes
UPS On Bypass Notification	No	Yes	Yes
Three-Phase UPS Certification	No	Yes	Yes
Global Notification Address Book	No	No	Yes
UPS Alarm Silence	No	Yes	Yes
Multiple Device Monitoring(LAN)	Yes	Yes	Yes
Multiple Device Monitoring(Out-of-Band)	Yes	Yes	Yes
Multiple Computer Automated Shutdown	Yes	Yes	Yes
UPS Compatibility	All Models	All Models	All Models As Previous Version
SNMP Trap Forwarding	No	Yes	Yes
Data Integrity (Protecting Network Transmission Equipment)	No	Yes	Yes
Configurable Alarm Text Messages	No	Yes	Yes
Alert Message Delay	No	Yes	Yes
Remote Management	No	Yes	Yes
Remote Access Password Protection	No	Yes	Yes
OS Compatibility	http://multilink.liebert.com	http://multilink.liebert.com	http://multilink.liebert.com

¹ MultiLink Advanced, version 3.6 can be purchased using part number MLADV. MultiLink Fundamental, version 3.6 can be upgraded to MultiLink Advanced, version 3.6 without the loss of configuration data or installed license files.

Liebert MultiLink Related Products



Liebert MultiPort4

Relay contact multiplexing unit communicates the On Battery and Low Battery status of a single UPS to connected PCs, servers, or workstations. The user-installable, hot-swappable card provides UPS communications to a host computer and up to four additional computer systems with the Liebert IntelliRack multiplexing unit or UPS systems equipped with the Liebert Intellislot communication port.



Liebert CommSure™

A redundant UPS interface that allows network managers to create their own high availability power system using existing UPS systems. The system eliminates false shutdown signals that occur when separate UPS systems are used to power computers with redundant power supplies.



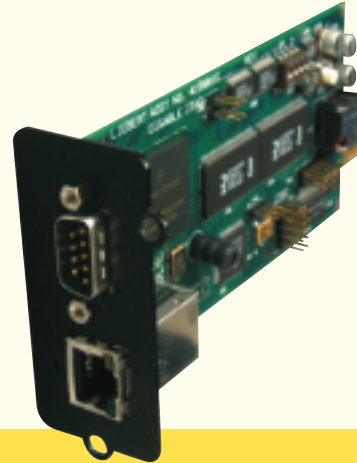
Liebert MultiLink License Kits

Enable in-band shutdown on more than one computer utilizing your existing network infrastructure. MultiLink License kits decrease installation time and cost removing the need to run additional cable to each server or workstation that will be shutdown.

Liebert IntelliSlot Web Card

Liebert IntelliSlot Web Card is featured in these Scenarios:	Scenario A 1-2 Racks Single Phase page 8	Scenario B 1-2 Racks Single Phase page 10	Scenario C 3-6 Racks Single Phase page 12	Scenario D 7-10 Racks Three Phase page 14	Scenario E 10-30 Racks Three Phase page 16	Scenario F 30-60 Racks Three Phase page 18
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Liebert IntelliSlot Web Card (formerly Liebert OpenComms Web Card and Liebert OpenComms NIC Card) delivers SNMP and Web management to a Liebert UPS, Power Management or Precision Cooling system connected to any 10 or 100 Mbit Ethernet network. The interface provides for remote web or in-the-field firmware upgrade. Alarms and parameters are transmitted over the network using SNMP, email, and SMS text. In addition, Liebert IntelliSlot Web Card w/Adapter supports Modbus.



Features & Benefits

Flexibility:	Higher Availability:	Lowest Total Cost Of Ownership:
<ul style="list-style-type: none"> Allows systems to be viewed from the network using a web browser. Delivers SNMP, Telnet and web management. Provides security using HTTPS message encryption. Supports 10 and 100MBit Ethernet for legacy and modern networks. 	<ul style="list-style-type: none"> Provides compatibility with Liebert MultiLink shutdown software to prevent data loss and ensure data availability. Supports Liebert SiteScan WEB enterprise monitoring software to provide trending for proactive analysis and maintenance to ensure facility uptime. Interfaces with Liebert Nform alarm notification software to facilitate quick corrective action. 	<ul style="list-style-type: none"> Allows use of existing network, saving the cost of dedicated wiring. Requires no additional software installation for basic monitoring. Provides notification in the absence of a comprehensive monitoring system. Provides a single point of information/control.

Frequently Asked Questions

Question	Resolution
What Liebert products are supported by the IS-WEBCARD?	Liebert PowerSure PSI line-interactive UPS, Liebert GXT on-line UPS, Liebert GXT 6 & 10kVA on-line UPS, Liebert GXT 2U on-line UPS and Liebert Nfinity on-line UPS
What Liebert products are supported by the IS-WEBLB?	Liebert NX on-line UPS and Liebert Hinet on-line UPS.
Where can I obtain a user manual for my Liebert IntelliSlot Web Card?	http://www.liebert.com/product_pages/Product.aspx?id=184
Where can I view and test drive the web interface for the product I am purchasing?	http://demos.liebert.com/
What is the default User Name and Password for the Liebert IntelliSlot Web Card?	User Name: Liebert Password: Liebert
How many SNMP Trap targets can I configure in the Liebert IntelliSlot Web Card?	20
Is the Liebert IntelliSlot Web Card hot-swappable?	Yes, you will not be required to shutdown your UPS to install this card.
Can I obtain a list of the supported SNMP Traps and parameters from the card?	Yes, on the Support Tab of the Web interface is the SNMP capabilities Information (i.e. Traps/Events, Parameters). In addition, this information is available via the serial connection and Telnet. Consult the User Manual for more details.

Competitive Comparison - Network Card Comparison (for small UPS products only)

Feature	Liebert IS-WEBCARD	APC-MGE AP9619	Powerware ConnectUPS-E	Tripp Lite SNMPCARD
Enterprise Management System Compatible	Yes	Yes	Yes	Yes
Fault notification	Yes	Yes	Yes	Yes
Integrates with system shutdown software	Yes	Yes	Yes	Yes
Password security	Yes	Yes	Yes	Yes
Reboot equipment remotely	Yes	Yes	Yes	Yes
Remote device management (software)	Yes	Yes	Yes	Yes
SNMP Management	Yes	Yes	Yes	Yes
UPS MIB (RFC-1628) Support	Yes	NO	Yes	Yes
Web Management	Yes	Yes	Yes	Yes
Secure Web (SSL)	Yes	Yes	Yes	Yes
Network Firmware Upgrade	Yes	Yes	Yes	NO
Email Support	Yes	Yes	Yes	Yes
Multiple Browser Support	Yes	NO	Yes	Yes
Email Support	Yes	Yes	Yes	Yes
Multiple Browser Support	Yes	Yes	Yes	Yes

Specifications

Power Requirements

AC Inputs	18 - 24 VAC; 50/60 Hz
DC Inputs	12 - 36VDC 18 - 24 VAC; 50/60 Hz
Power Consumption	6VA maximum (1.75W)
Dimensions - W x D x H: in. (mm)	3 x 5-1/4 x 1-1/2 (76 x 134 x 38)
Net Weight - oz. (kg)	7 (0.2)
Shipping Weight - lb. (kg)	1.3 (0.6)
Ambient Operating Environment, °F (°C)	32 to 104 (0 to 40); 10% to 90% RH (non-condensing)
Ambient Storage Temperature, °F (°C)	-4 to 140 (-20 to 60)
Protection	SELV Isolated User Connections, Watchdog Timer Circuitry

Communication Ports

Service Terminal (RS-232)	DB9F, DTE
Ethernet Communications	RJ45

Liebert IntelliSlot Related Products



Liebert Nform

A simple to use monitoring and communications software solution that combines full-scale monitoring with cost-effective deployment through the use of the existing network infrastructure.



Liebert MultiLink™ Shutdown Software

Liebert MultiLink software monitors battery status and warns users of impending power loss and automatically shuts down systems in a safe and orderly manner.