



台
達
電
子

Uninterruptible Power Supply **NH Plus** 20~120KVA Introduction

- **Overview**
- **Key User Benefits**
- **Typical Applications**
- **Optional Accessories**





Overview



Positioning:

Provide industry-leading **low TCO !**





Models

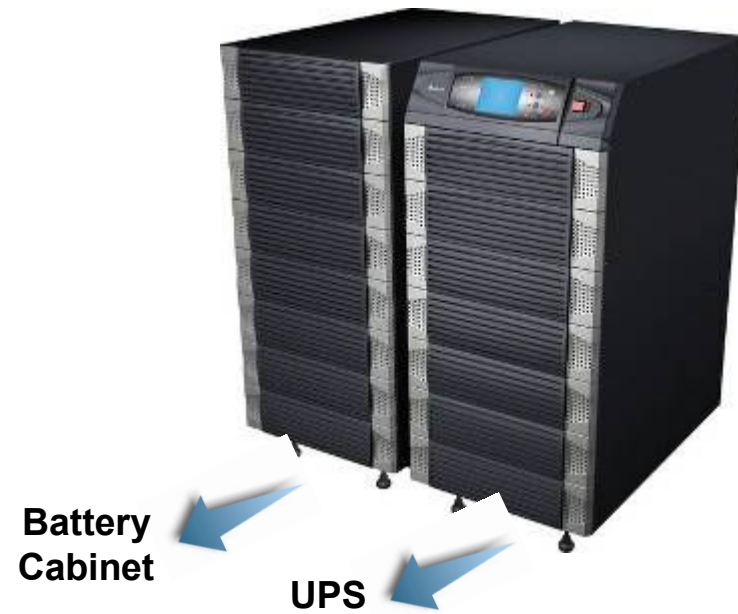
NH Plus 120 :
Up to 6 Power Modules
Max. Capacity : 120kVA.

Dimension(WxDxH): 520x910x1165 mm
Weight : 170/200/230/260 kg



NH Plus 80:
Up to 4 Power Modules
Max. Capacity : 80kVA.

Dimension(WxDxH): 520x975x1695 mm
Weight : 320/350 kg





Key User Benefits

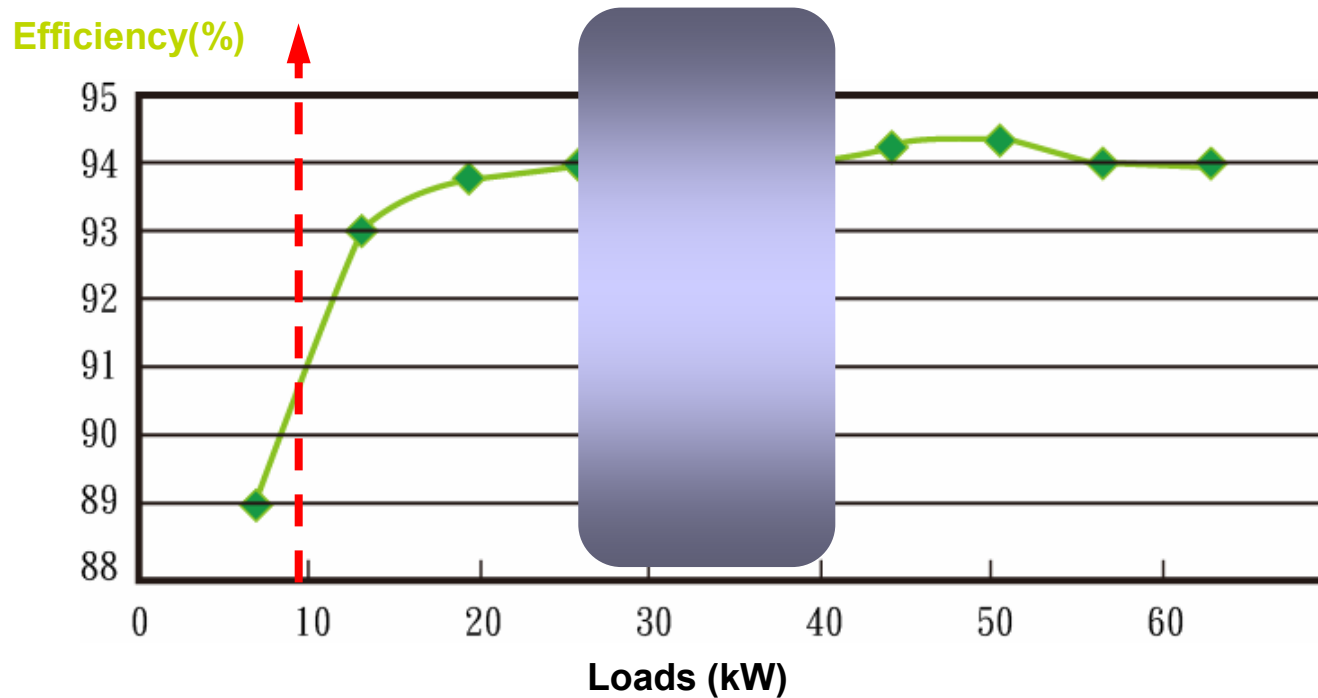
- **TCO Savings**
- **Availability**
- **Flexibility**
- **Manageability**



Industry-leading Low TCO

- **High Efficiency :**
Maintain 94% high efficiency even at 25% loads.
- **Modular Design :**
Lower initial investment and high scalability.
- **Lower THD :**
Lower distortion and better power quality.
- **Hot-swappable :**
Easy maintenance and short recovery time.

- High Efficiency



For the most common application: 40~60% loads, NH Plus maintains **94% high efficiency !**

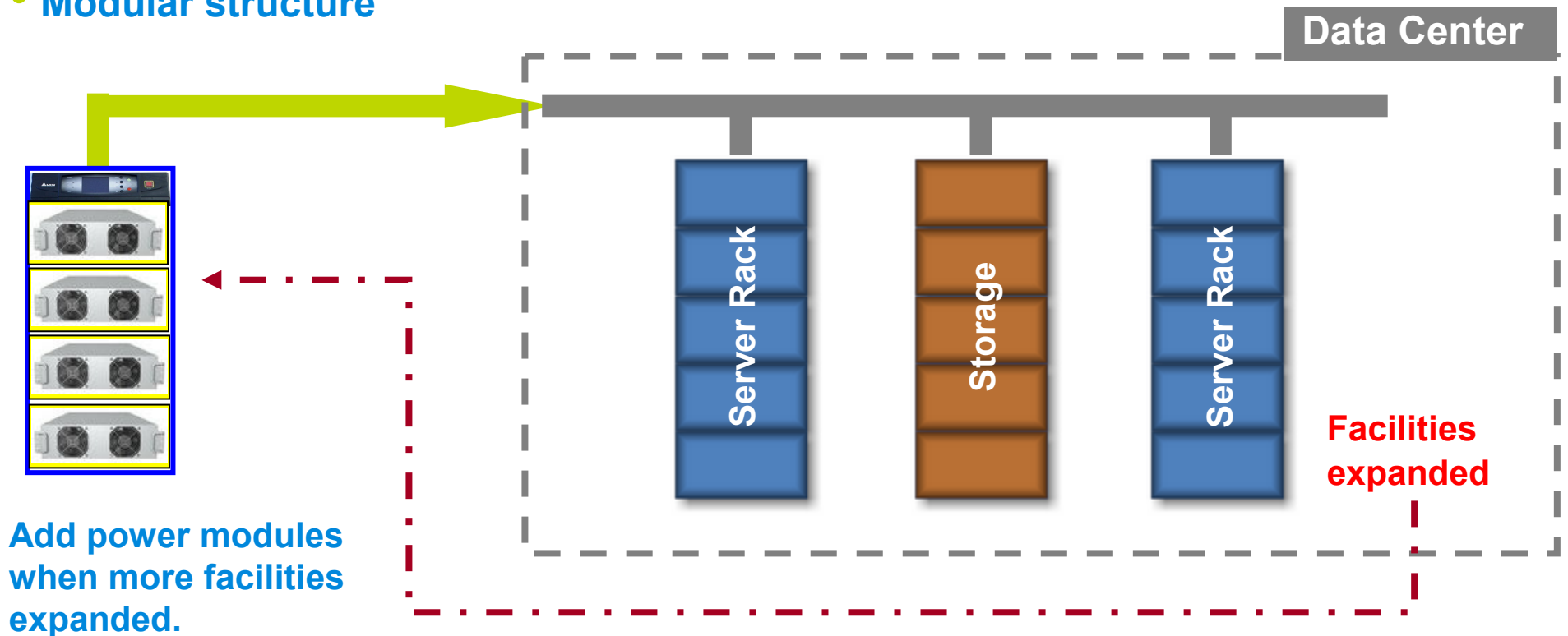
Maintain **90%** high efficiency even at **15% loads**

Benefits

- Lower energy consumption.
- Operation cost savings.

- Example: 80kVA

- Modular structure

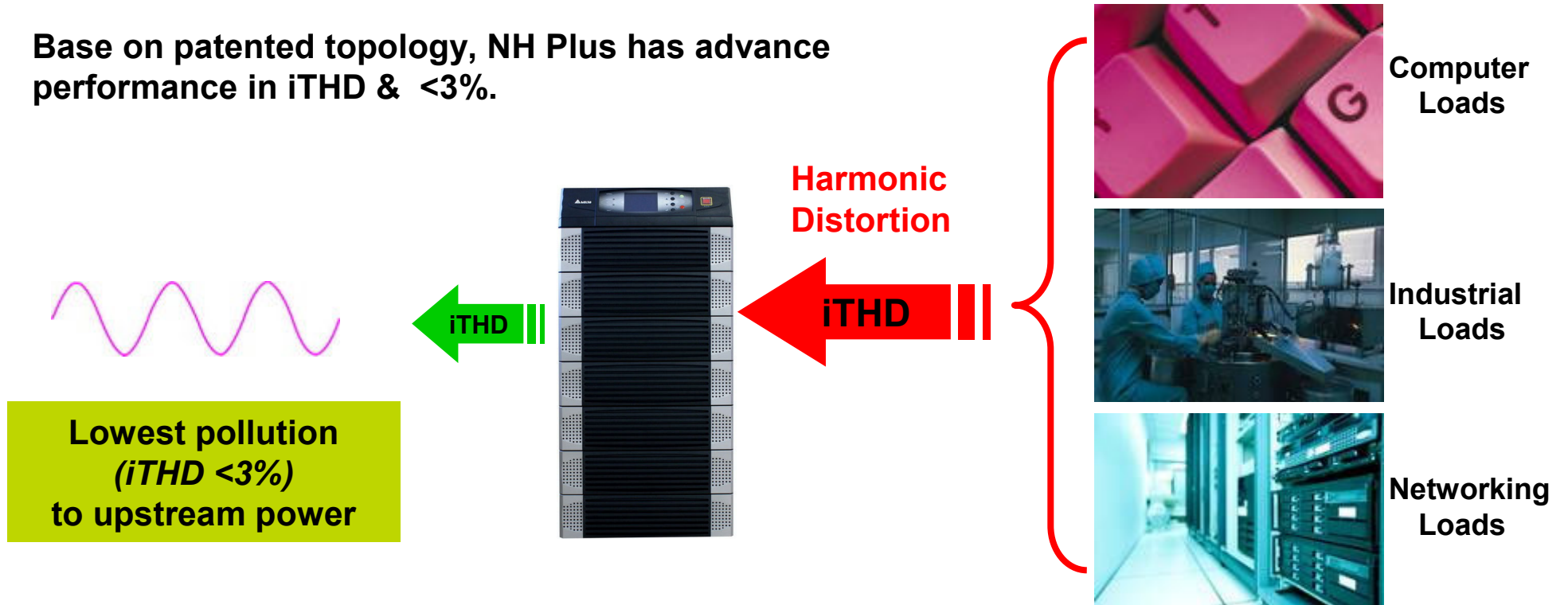


Benefits

- Optimize your investment.
- Expand as your business grows. No over sizing !
- Easy for spare part planning.

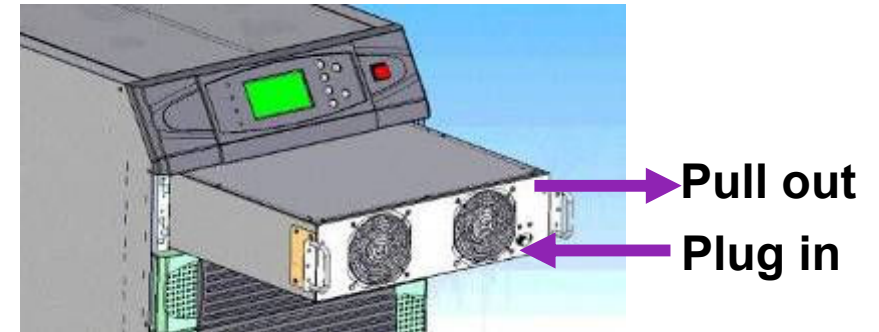
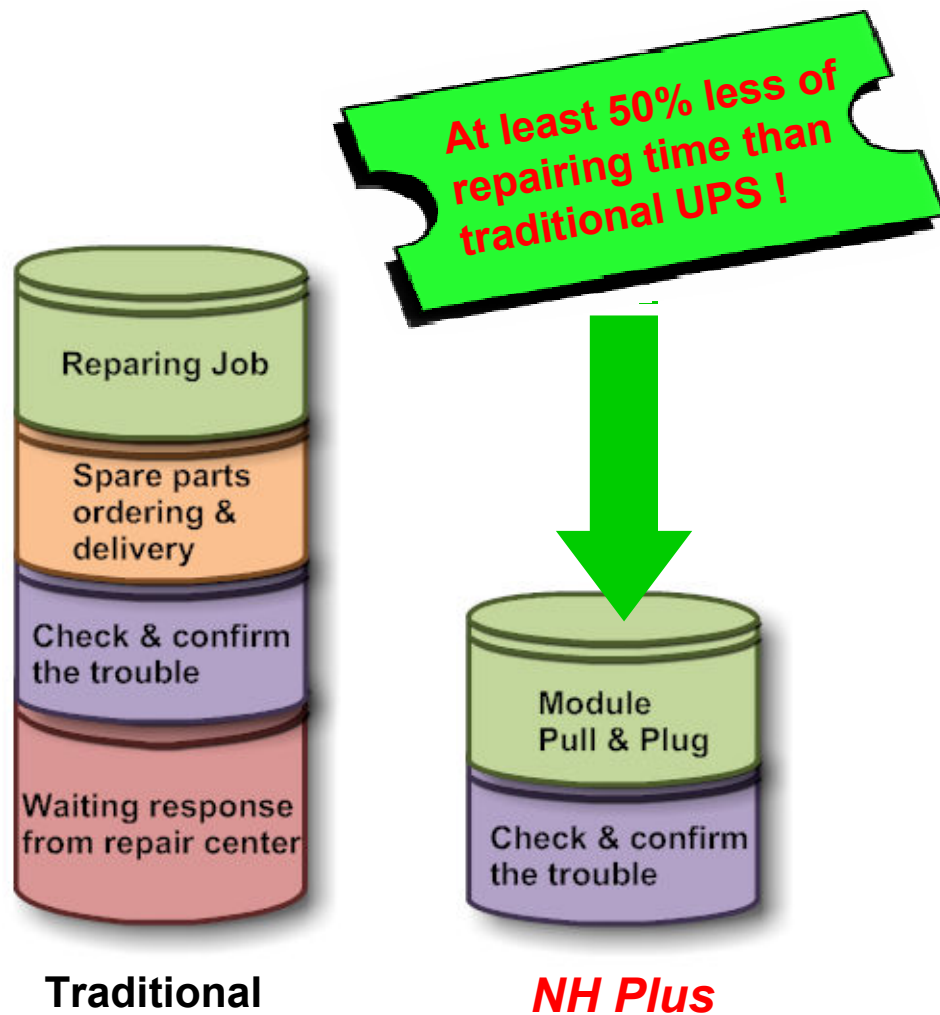
- Low iTHD

Base on patented topology, NH Plus has advance performance in iTHD & <3%.



- Benefits**
- Investment savings.
 - Installation cost savings.
 - Optimize the UPS sizing with gensets.

- Hot-swappable Design

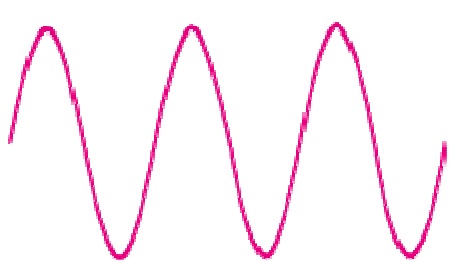


- Benefits**
- Reduce MTTR and increase the availability.
 - Easy maintenance.
 - Zero downtime.

Availability

- **On-line Double Conversion**

- **Wide input voltage range:**
208~477Vac, reducing the chance of using the battery.
- **Low O/P VTHD:**
Base on patented topology, NH Plus has advance performance in VTHD <3%. Offer better power to the loads.
- **Wide I/P frequency range:**
Ranged from 45~65Hz.



- Over voltage
- Frequency variation



Pure sine wave

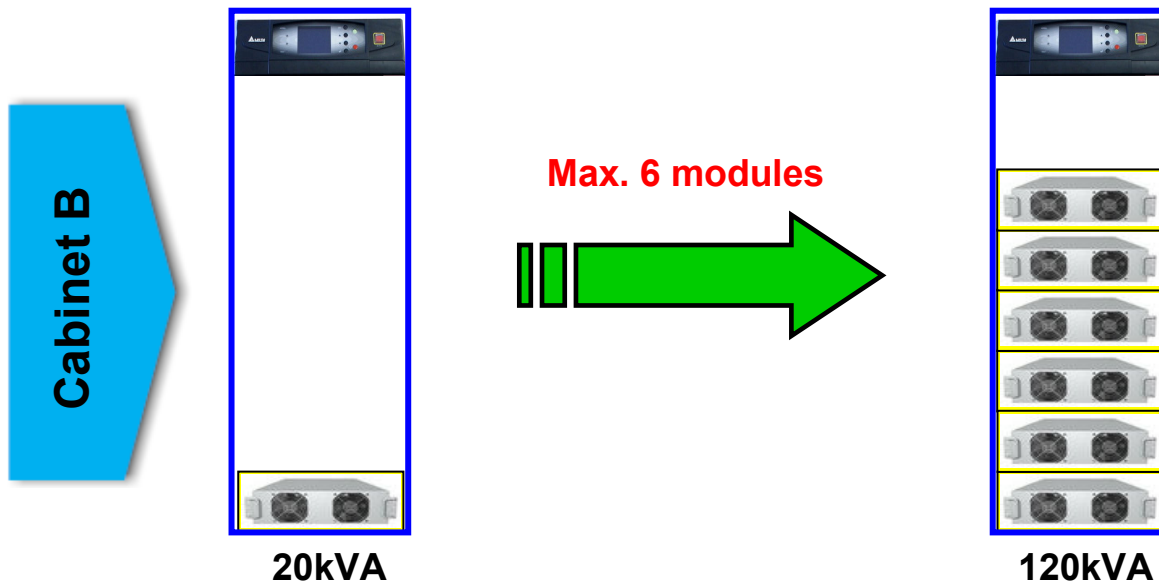
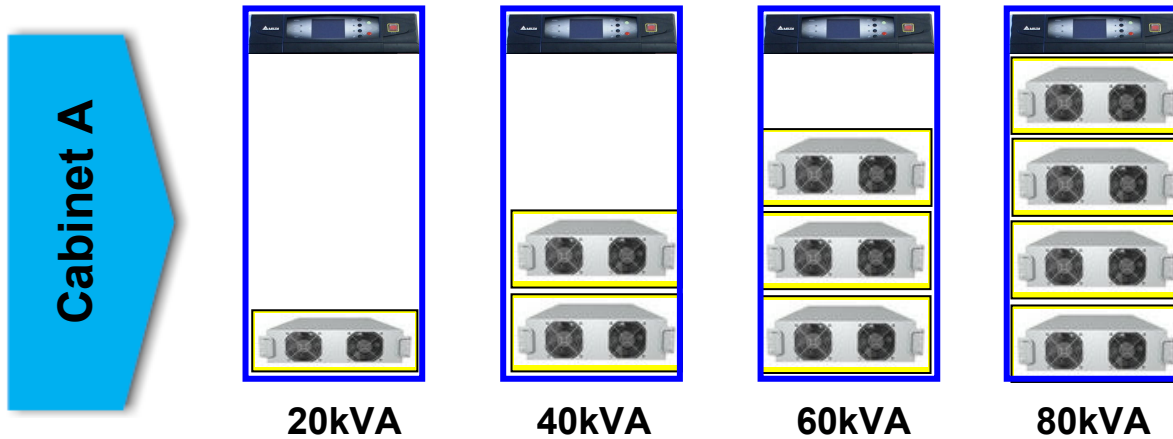


Benefits

- Compatible with poor mains and gensets.
- Extend battery lifetime.
- 24/7 full time protection.

Availability

- Easy Parallel Expansion : Module Expansion



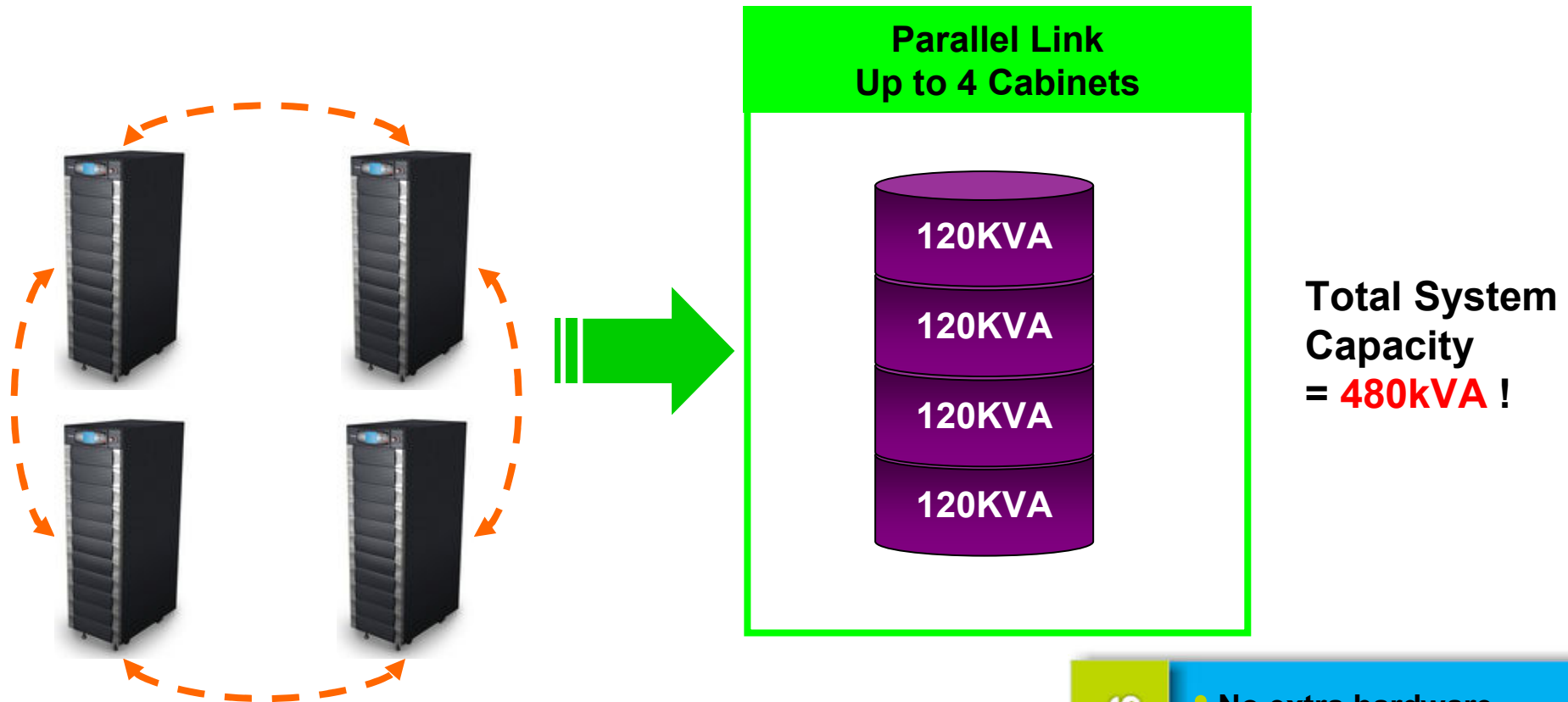
Remarkable high power density
: 20kVA module in 3U size cabinet

Benefits

- Expand as system grows.
- Spare parts management.
- Hot-swappable capability without any downtime.
- Easy installation.

Availability

- Easy parallel expansion - Cabinet expansion

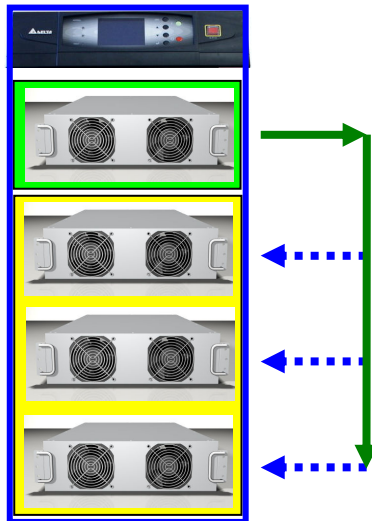


Benefits

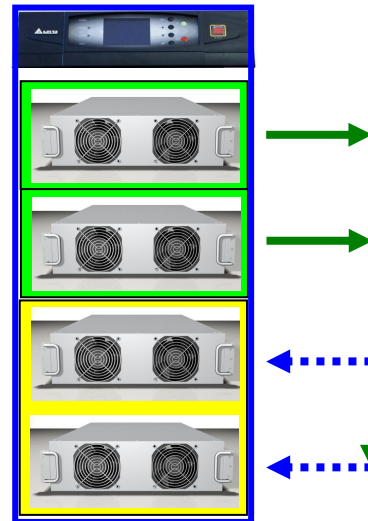
- No extra hardware needed for installation.
- Expand as system grows. Maximum 480kVA.

Availability

- Redundancy – Module Level



One module in redundancy



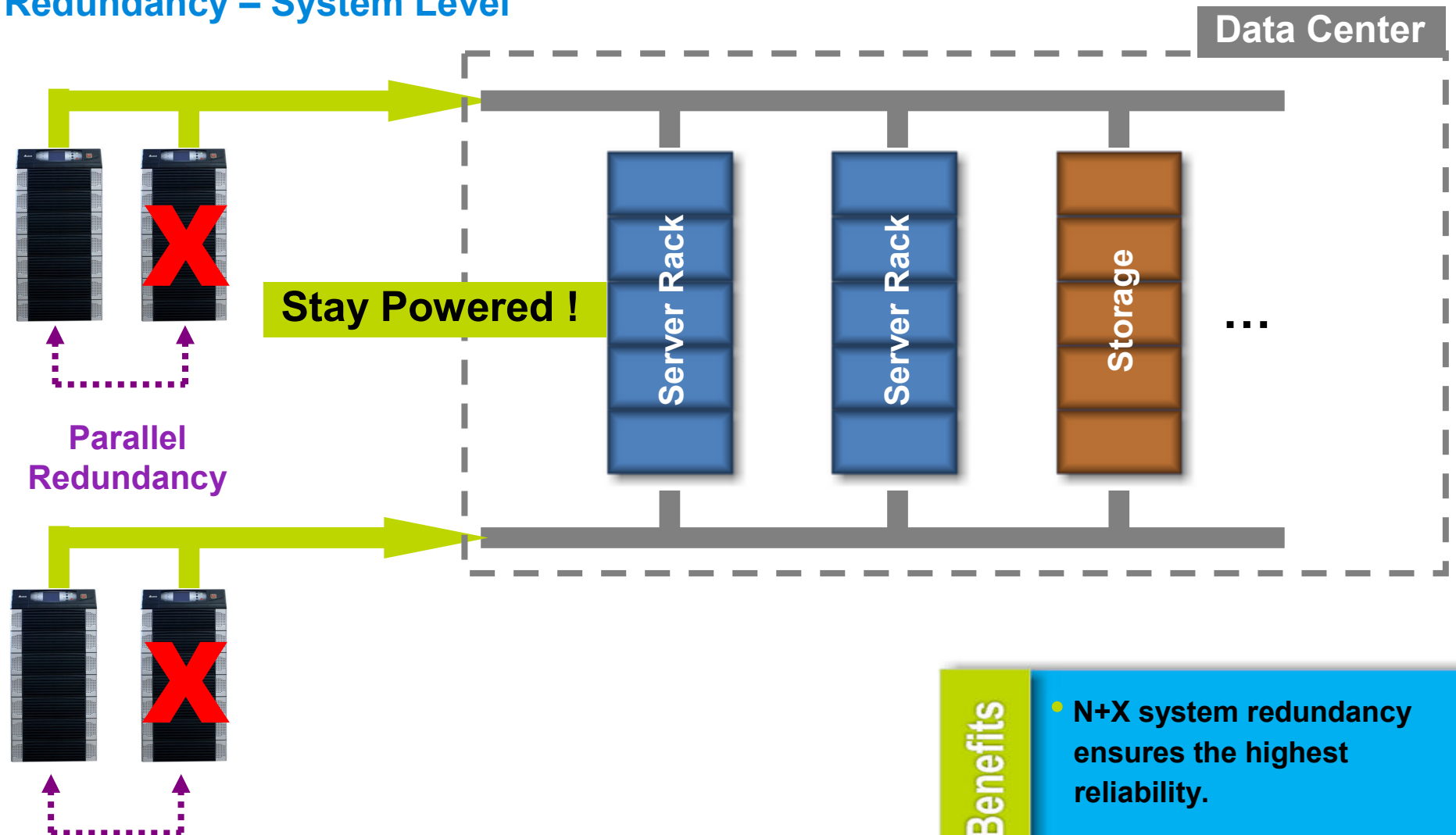
Two modules in redundancy

Benefits

- Guarantee the highest reliability.
- Zero downtime.

Availability

- Redundancy – System Level

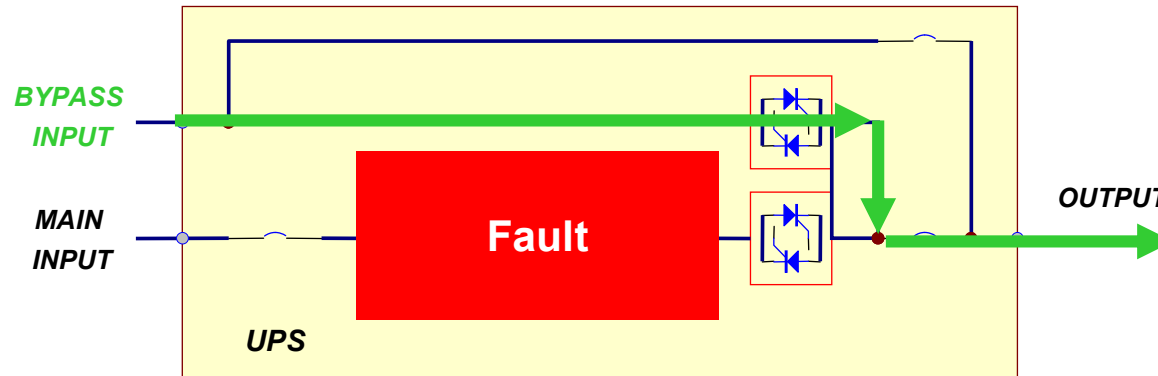


Benefits

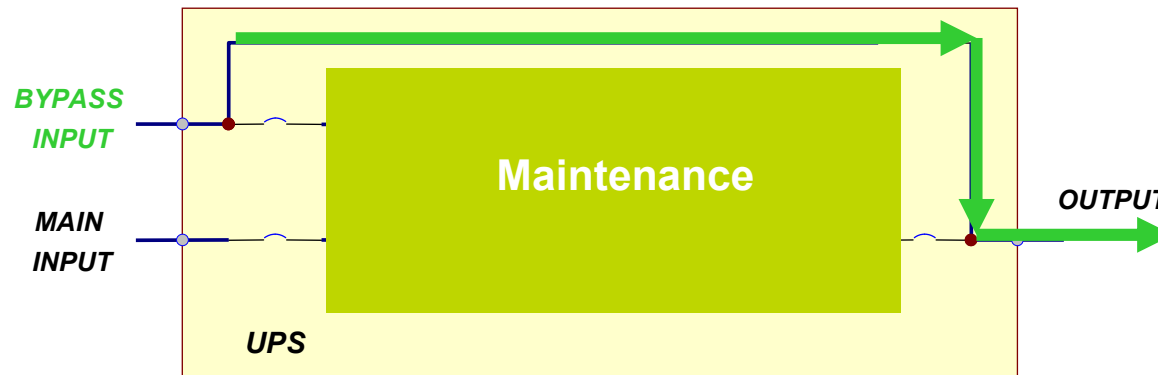
- N+X system redundancy ensures the highest reliability.

Availability

- Static & Manual Bypass



Automatically switch to bypass source when fault condition occurs.



Manual bypass switch enables “zero downtime” when service commissioning.

Benefits

- No interruption.
- Safe for service personnel.
- Easy maintenance.

Availability

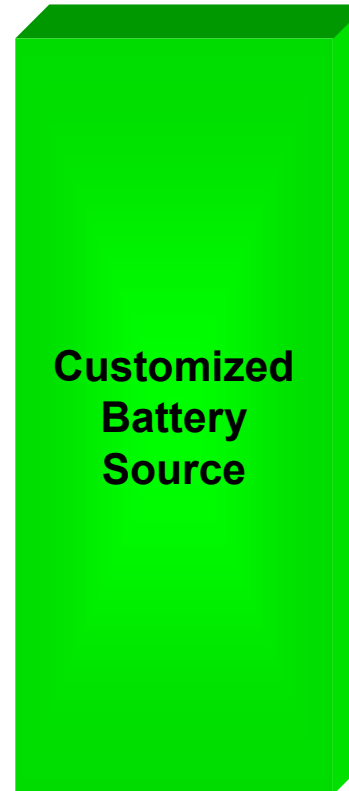
- External Battery Cabinet



TypeA:
26Ahx2x20pcs



TypeB:
40Ahx2x20pcs



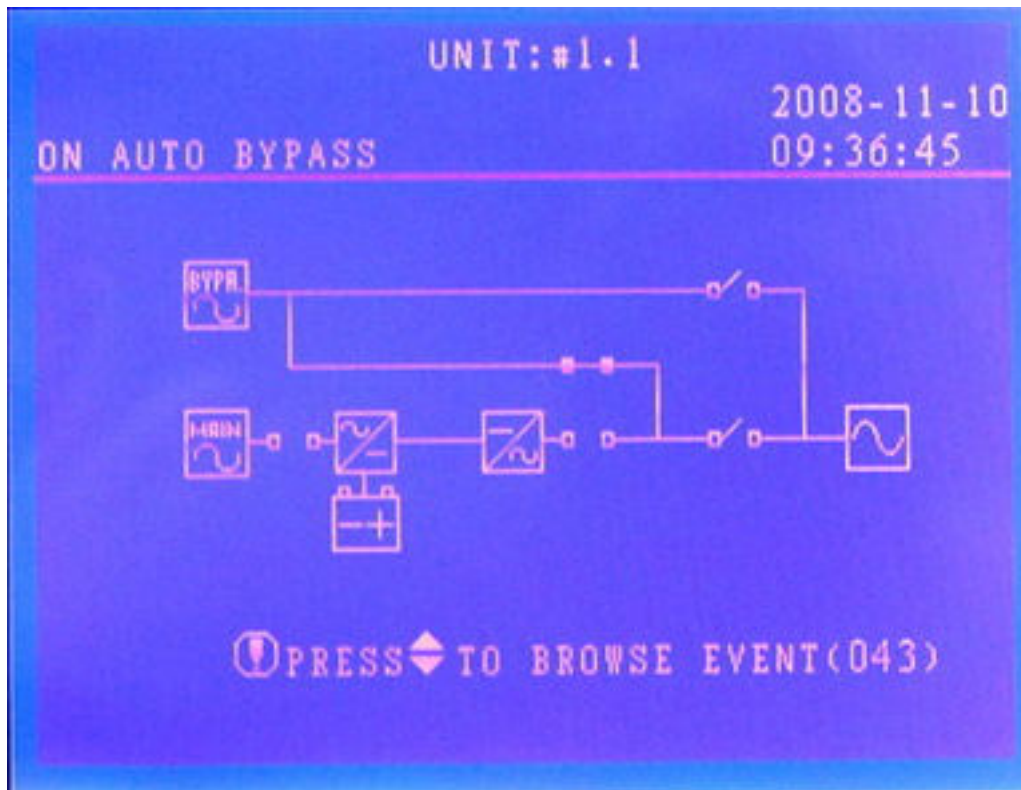
Custom:
12Vx ?Ahx2x20pcs

Benefits

- Unity with standard battery cabinet.
- Accept customized source.

Flexibility

- Multi-language



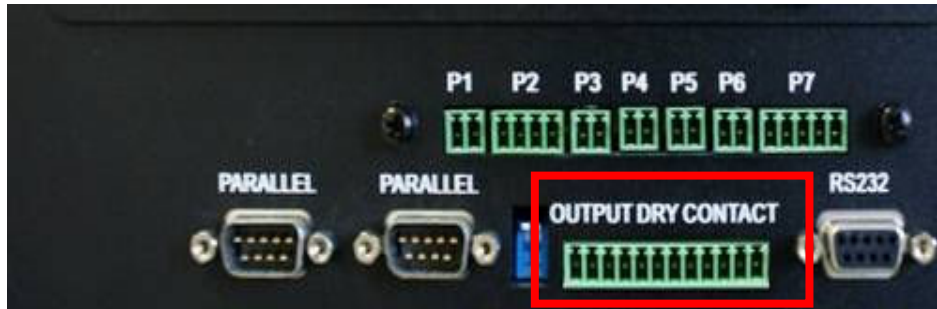
- English
- Traditional Chinese
- Simplified Chinese
- Russian
- Customized language

Benefits

- User friendly.
- Easy to operate.
- Customization.

Flexibility

- **User Programmable Status Output**



- 6 output dry contacts.
- 19 status choices.

- | | |
|---|--|
| <input type="checkbox"/> Load on inverter | <input type="checkbox"/> EPO activated |
| <input type="checkbox"/> Load on auto bypass | <input type="checkbox"/> Load on manual bypass |
| <input type="checkbox"/> Mains 1 input fail when load on inverter | <input type="checkbox"/> Battery cabinet over temperature warning/shutdown |
| <input type="checkbox"/> Battery low | <input type="checkbox"/> Output voltage abnormal |
| <input type="checkbox"/> Bypass input abnormal | <input type="checkbox"/> Battery need replace |
| <input type="checkbox"/> Battery test failure | <input type="checkbox"/> Bypass over temperature warning/shutdown |
| <input type="checkbox"/> Internal communication failure | <input type="checkbox"/> Battery ground fault |
| <input type="checkbox"/> External parallel communication failure | <input type="checkbox"/> Bypass static switch fault |
| <input type="checkbox"/> Output overload warning/shutdown | |
| <input type="checkbox"/> Power module fault shutdown | |
| <input type="checkbox"/> Power module warning | |

Benefits

- User programmable.
- Easy to setup.



Manageability

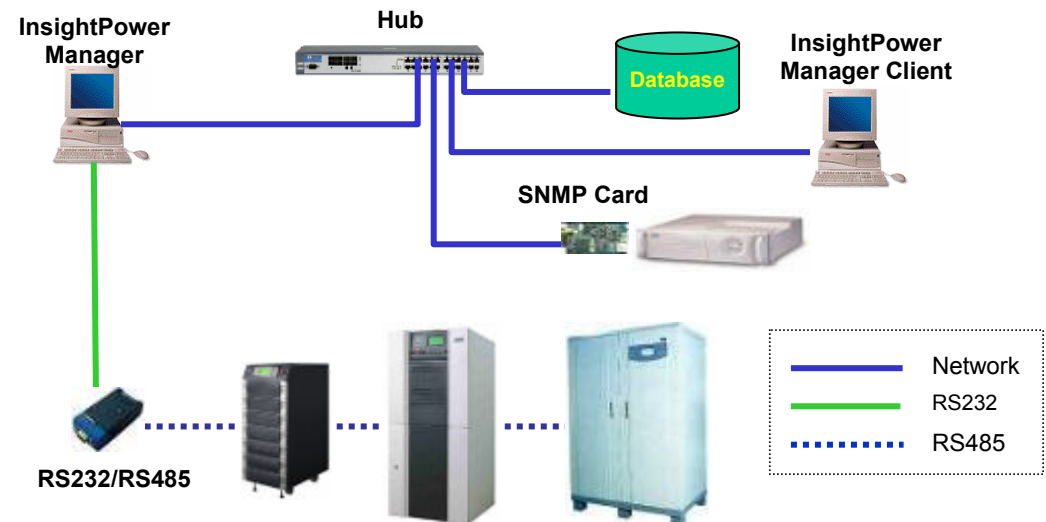
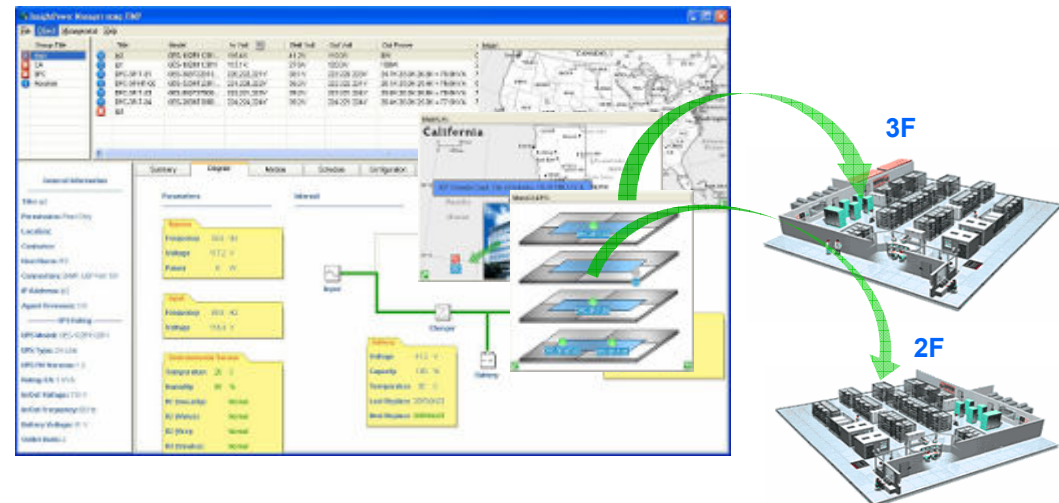
Centralized Management

Advantages

- Centralized UPS management system.
- Supports RS232, RS485 and SNMP connections.
- Supports database connection through ODBC.
- Hierarchical design, allows unlimited nodes.
- Client/Server design, multiple remote Monitor programs can connect to a service program.
- Programmable actions(FlexAction).
- Batch SNMP configuration.
- Remote and local UPS real-time management.
- Generate routine reports.
- Schedule shutdown/restart and test UPS.
- Able to save the users operation log, UPS event log and historical parameters in database.

Operating System supported

- Microsoft Windows 95, 98, Me, NT4, 2000, XP, 2003, Vista



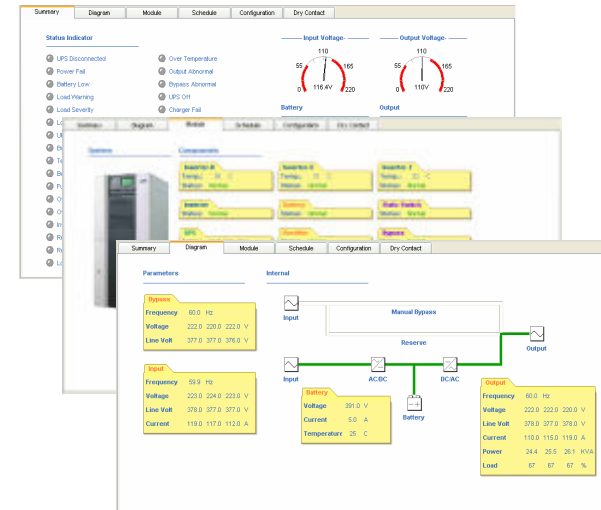


Manageability

InsightPower Manager

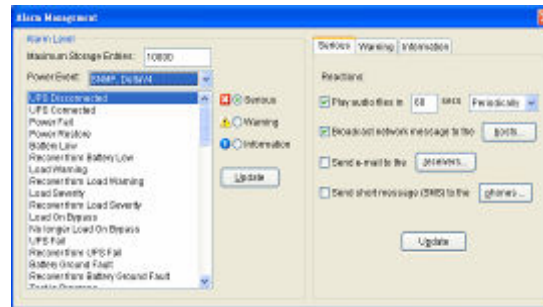
Display

- Real-time monitoring
- Multiple views formats: Meters, block diagram, lamp alarms, graph chart



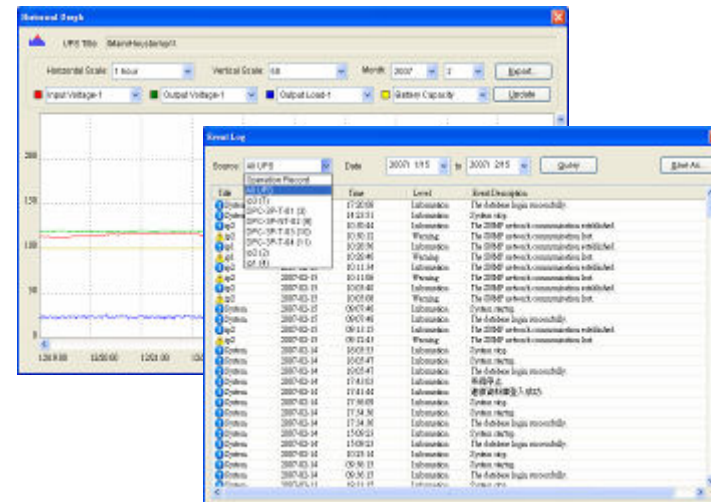
FlexAction

- Event log
- Network broadcast
- Audible alarm
- E-mail
- SMS



Event Tracking

- Records of date/time/description of power events
- Data logging for analyzing power quality
- Generate reports





Typical Applications



Typical Applications

Data center
Telecom

Industry
Transportation

Banking
Health Care

Security
Process Control



NH Plus focuses on :

- **Optimize the investment** when planing your business for now and future.
- Installation and operation **cost savings**.
- Highest **reliability** to secure your business.
- **Zero downtime** for comminssioning.



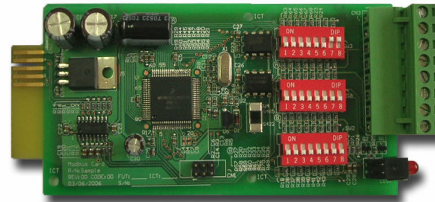


Optional Accessories

Smart Cards



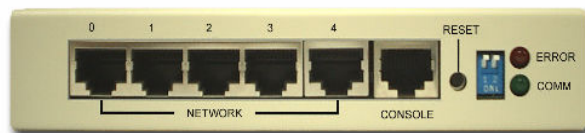
SNMP Card



ModBus Card



Relay I/O Card



SNMP+5 Ports Switching Hub

This is a special SNMP device with hub function. It is connected to UPS RS232 port.



Environmental Sensor Box

Sensor box must combine with SNMP card to monitor the environment condition.

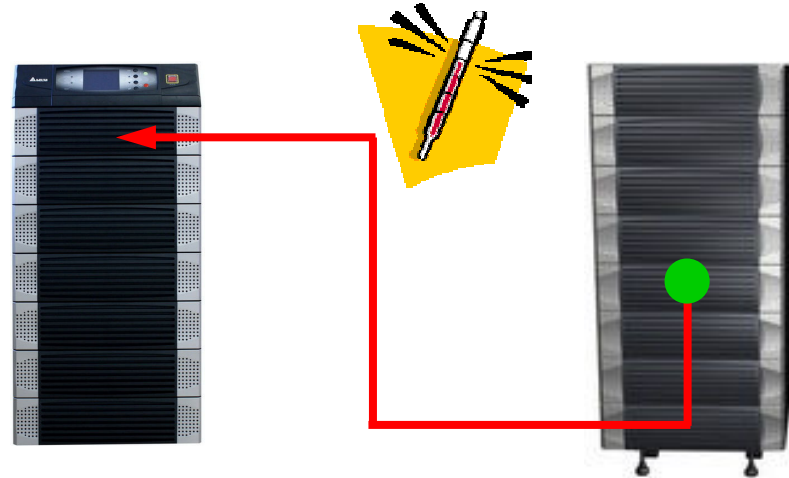


EBC Kits



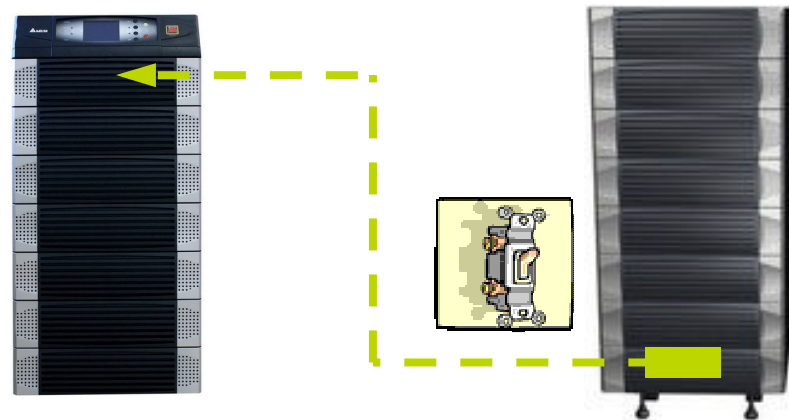
Battery temperature kit

Detect the temperature of external battery cabinet and displayed on the LCD screen.



Battery cabinet status

Detect the status (On/Off) of breaker on external battery cabinet.





NH Plus Summary

- Power rating:
 - Cabinet A : 20/40/60/80kVA.
 - Cabinet B : 100/120kVA.
- Maximum 4 cabinets in parallel (**Max. 480kVA**).
- Parallel redundancy and expansion.
- **Hot-swappable** and **scalable** modular design.
- High input **power factor(> 0.99)** and low **iTHD(<3%)**.
- High AC – AC **efficiency > 94%**.
- Built-in manual bypass switch.
- Smart fan speed control.





**Provide innovative,
clean and efficient
energy solutions
for a better
tomorrow.**

Thank You