

Panduit Press Conference EMEA

Next Generation, Intelligent Rack UPS

**Digital Infrastructure Solutions for Cloud,
Enterprise & Edge**

PANDUIT™

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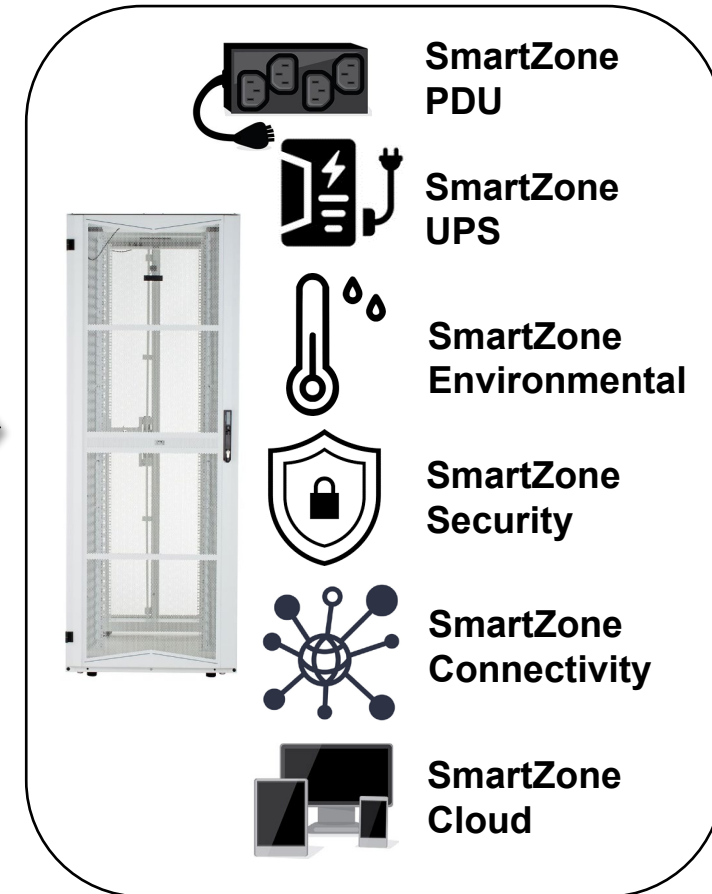


Little Background



Digital Infrastructure Solutions for Cloud, Enterprise & Edge

smartzone™
Intelligent Power



Our Approach
“Focus on Customers challenges & needs to provide best solutions”

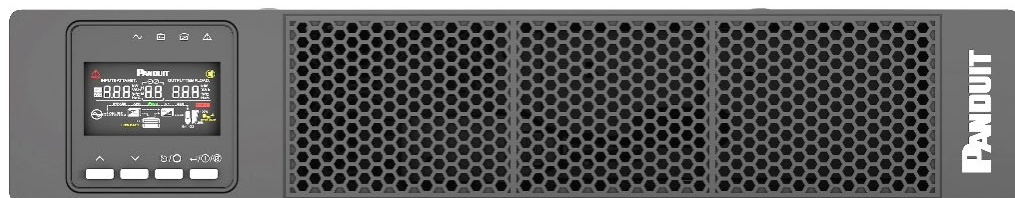


Data Center Digital Infrastructure Solutions
“One-Stop-Shop”

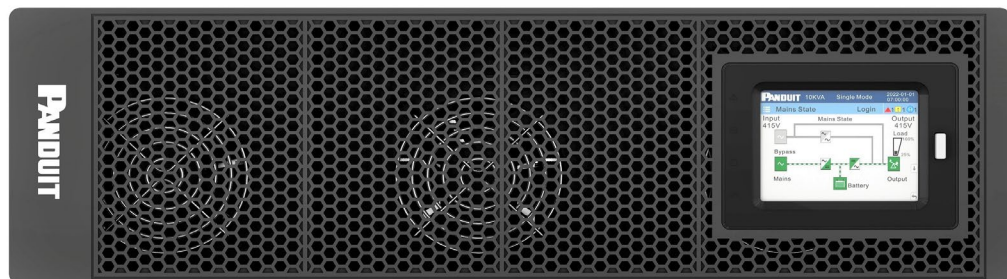
Extensive Rack UPS Portfolio

Intelligent Rack UPS (42 SKUs)

- ✓ 1-3 kVA Double Conversion VRLA
- ✓ 1-3 kVA Double Conversion Lithium Ion
- ✓ 1-3 kVA Line Interactive Lithium Ion

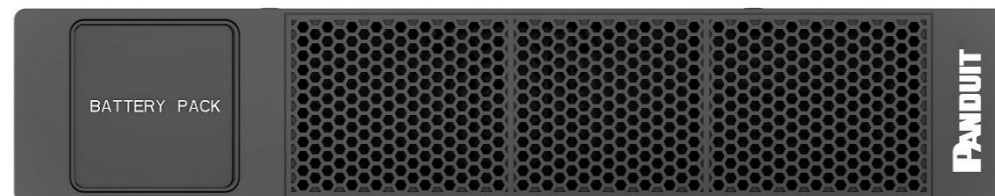


- ✓ 5-10 kVA Double Conversion VRLA (Single Phase)
- ✓ 10/15/20 kVA Double Conversion VRLA (3-Phase)



UPS Batteries (24 SKUs)

- ✓ Replacement Battery Pack
- ✓ Replacement Battery Cartridge
- ✓ External Battery Pack (EBP)



UPS Accessories (20 SKUs)

- ✓ Intelligent Network Management Card
- ✓ Environmental Sensors
- ✓ Security Devices
- ✓ Relay Card
- ✓ Maintenance Bypass PDU PODs



1-3 kVA UPS

Colorful Rotatable Display



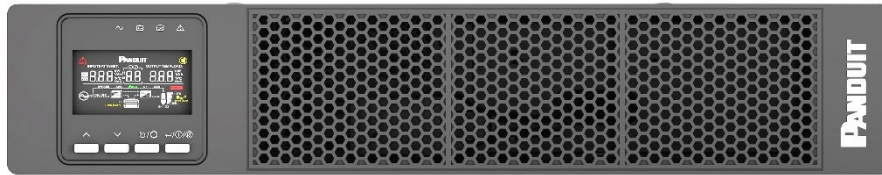
High Efficiency
ECO

Wide Input Range

Double Conversion Pure Sinewave

Output Unity Power Factor

Comprehensive Power Protection



Lithium Batteries: 5x Energy Density in 1/3 Space, 3x Lifespan & Faster Charging than VRLA

Intelligent Battery Management

Intelligent Fan Speed Control

Programmable Outlet Group & Smart Load-Shed

Hot-Swappable & Expandable Battery

Intelligent Network Management Card

SmartZone Cloud Ready with Quick Connect

5-20 kVA UPS

Colorful Touchscreen Display



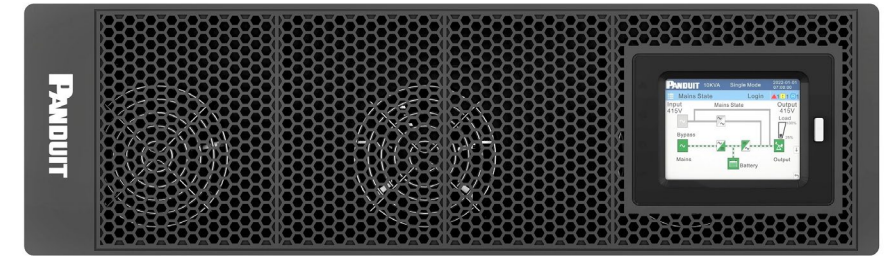
High Efficiency
ECO

Wide Input Range

Double Conversion Pure Sinewave

Output Unity Power Factor

Comprehensive Power Protection



Single Phase & 3-Phase Configurations

Intelligent Battery Management

Programmable Outlet Group & Smart Load-Shed

Outlets & Terminal Block Configurations

Intelligent Fan Speed Control

Hot-Swappable & Expandable Battery

Intelligent Network Management Card

SmartZone DCIM Ready with Quick Connect

Feature Rich!

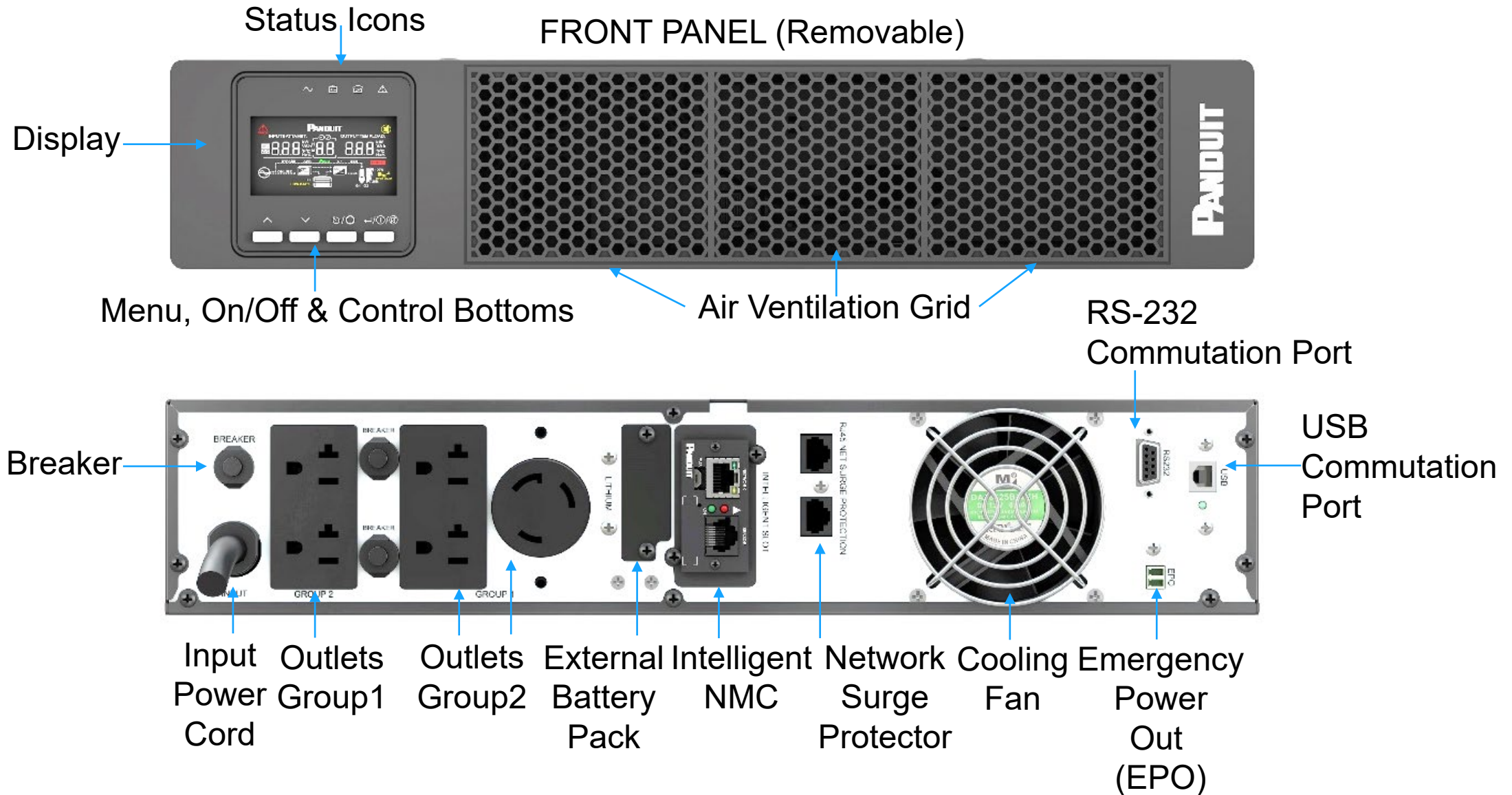
Product Overview

- 1-3 kVA Family



<p>1-3kVA 230V VRLA EMEA</p>	<ul style="list-style-type: none"> • On-line double conversion • External Battery pack (EBP) • IEC outlet & TUV certificated
<p>1-3 kVA 120V VRLA North America</p>	<ul style="list-style-type: none"> • On-line double conversion • External Battery pack (EBP) • NEMA outlets & UL Certificated
<p>1-3kVA 230V Lithium-Ion EMEA</p>	<ul style="list-style-type: none"> • On-line double conversion • Internal Battery • IEC outlet & TUV certificated
<p>1-3kVA 120V Lithium-Ion North America</p>	<ul style="list-style-type: none"> • Line-interactive • Internal Battery • NEMA outlet & UL certificated

1-3 kVA Interfaces Overview (One Configuration)



1-3 kVA Display – Enhanced User Experience

Colorful High Contrast Display



LED Indicators

LCD Display

Function Button

LED Icon Indicators



Yellow: UPS alarm information

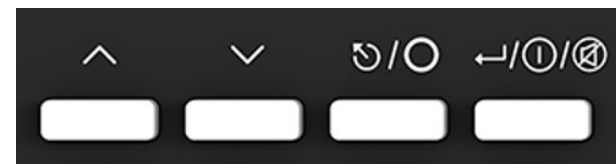
Red: UPS fault information

Blue: UPS in bypass mode

Yellow: UPS in battery mode

Green: UPS works normally

Function Button



ON /ENTER Button

OFF/ESC Button

DOWN Button

UP Button

Product Overview

- 5-20 kVA Family



**6-10kVA 230V
Single phase VRLA
EMEA**

- On-line double conversion
- External Battery pack (EBP)
- IEC outlet & TUV certificated

**5-10 kVA 208V
Single phase VRLA
North America**

- On-line double conversion
- External Battery pack (EBP)
- NEMA outlets & UL Certificated

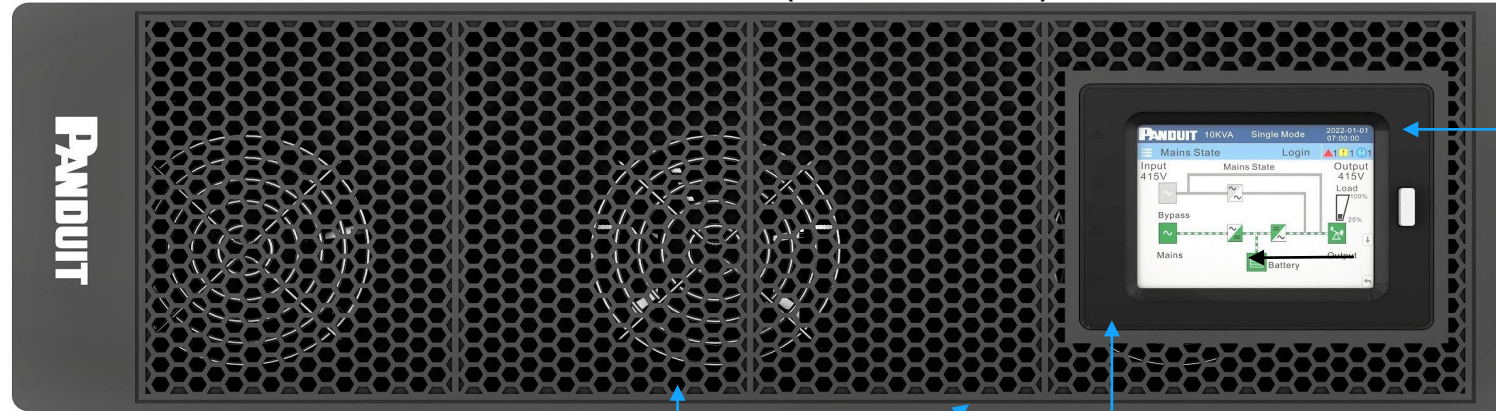


**10-20kVA 230/400V
Three Phase
VRLA
EMEA**

- On-line double conversion
- External Battery pack (EBP)
- IEC outlet & TUV certificated

5-10 kVA Interfaces Overview (One Configuration)

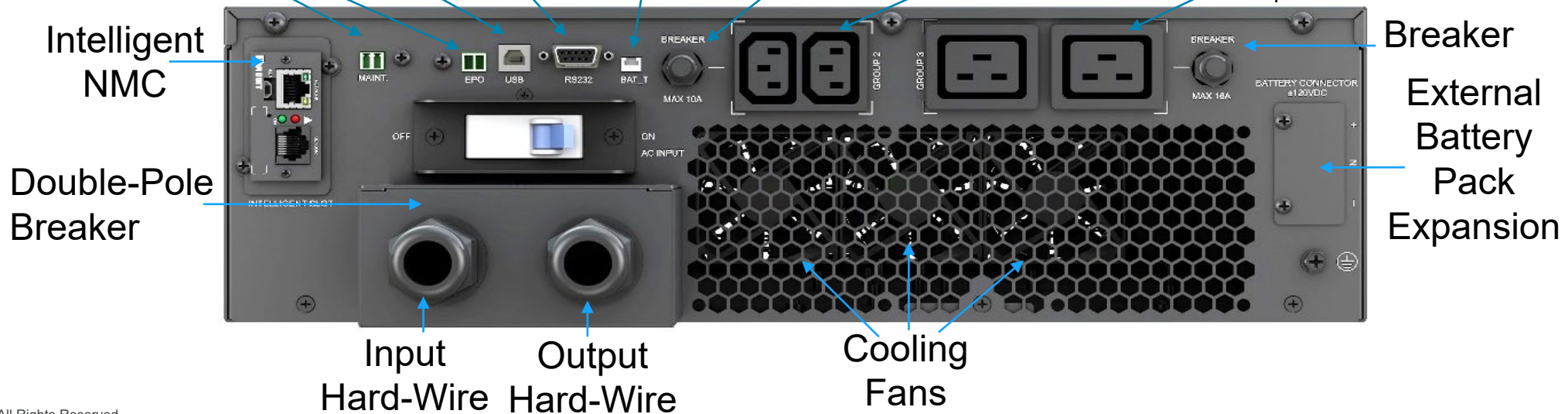
FRONT PANEL (Removable)



Display
Power
On/Off

Air Ventilation Grid Status Icons

Bypass EPO USB RS-232 BAT-T Breaker Outlets Group2 Outlets Group3



Intelligent
NMC

Double-Pole
Breaker

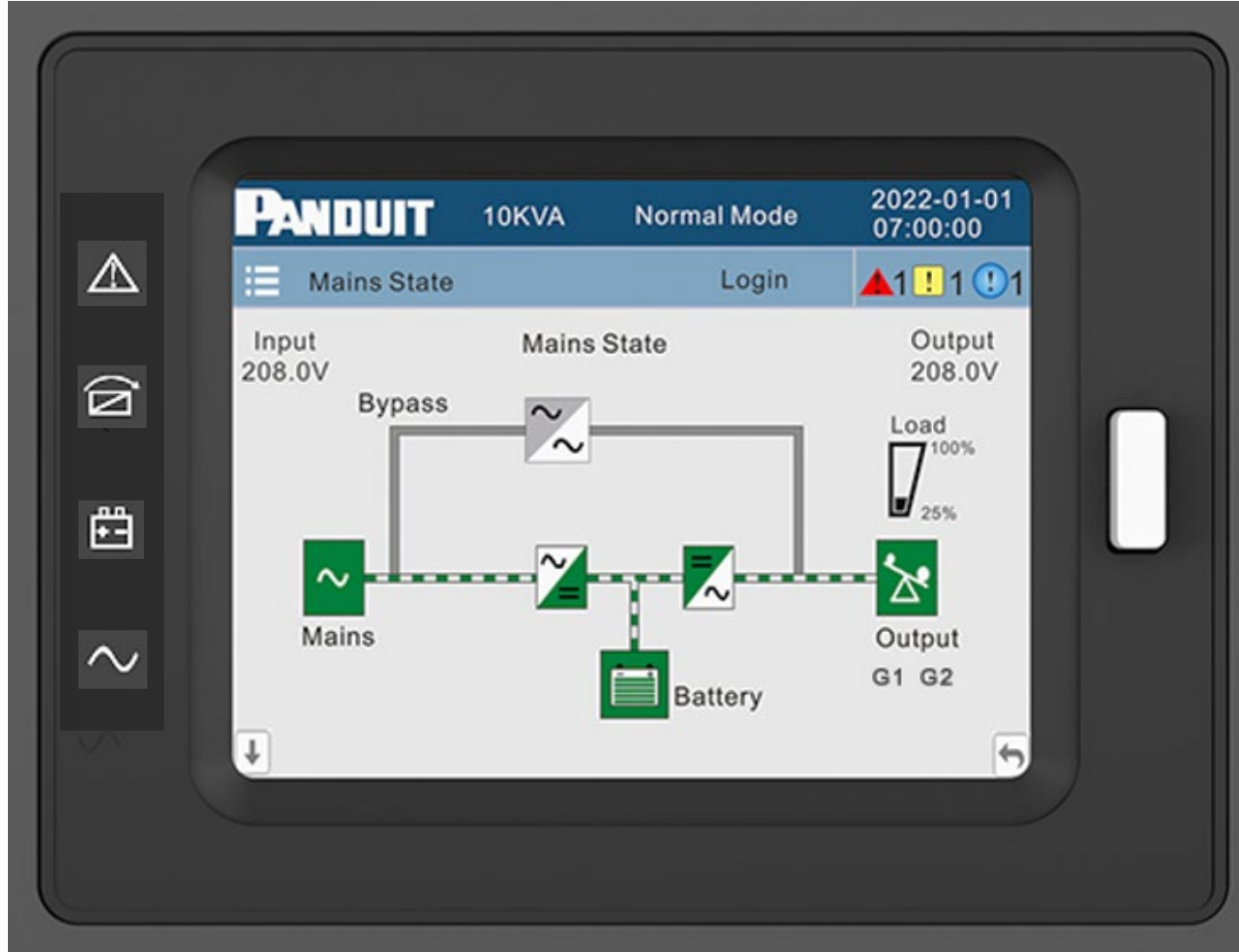
Input
Hard-Wire Output
Hard-Wire

Cooling
Fans

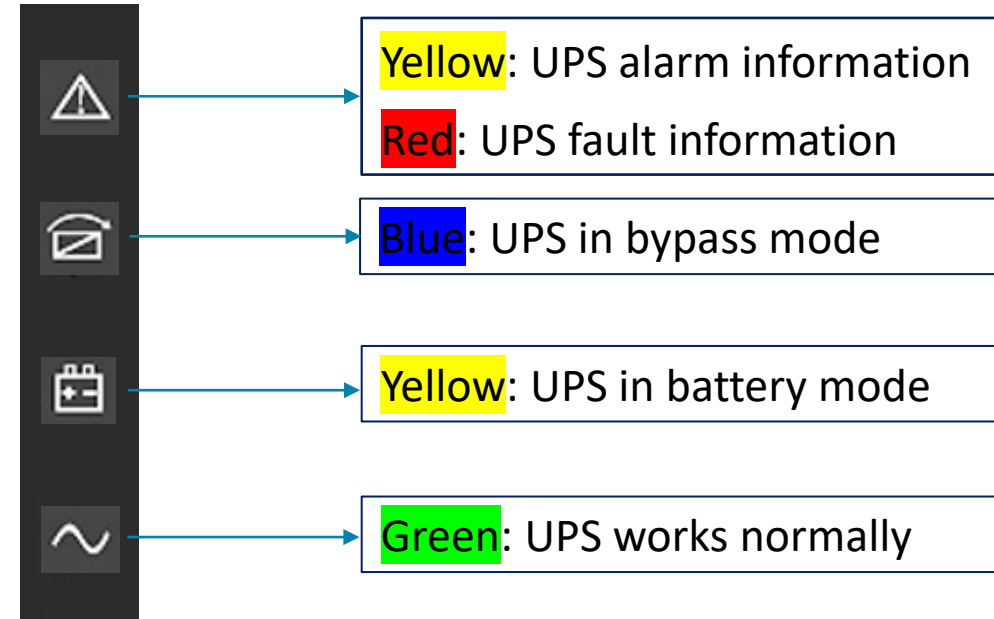
Breaker
External
Battery
Pack
Expansion

5-20 kVA Display – Enhanced User Experience

Color Touchscreen Display



LED Icon Indicators



Intelligent Network Management Card

SmartZone Intelligent NMC



Intelligent Accessories

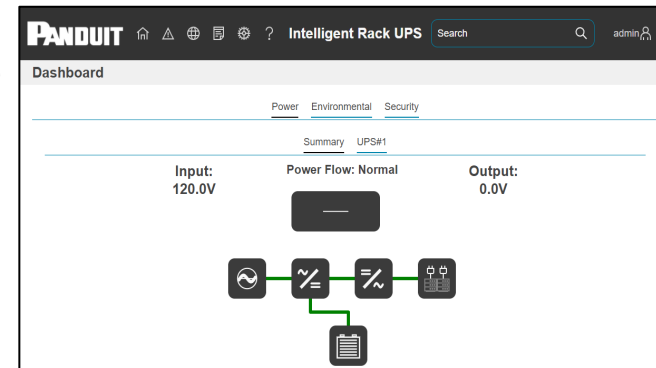
- ✓ Utilizing High-Performance SoC (System-on-Chip)
- ✓ High Speed Ethernet, Micro-USB and RS-485 Ports
- ✓ Firmware Upgrade via USB, WebGUI & Ethernet
- ✓ **PEN Security Certified with Crypto Accelerator**
- ✓ Secure Boot with Root of Trust & Role-based Password
- ✓ Remote User Mgmt via Secure LDAP & RADIUS Server
- ✓ **SNMPv3 Secure Communication & HTTPS Secure Ciphers**
- ✓ WebGUI Accessible w/ Chrome, Edge, Firefox & Safari
- ✓ **Events Reporting via SNMP, Traps, Emails & Syslog**
- ✓ **Automatic & On-Demand Battery Self Test**
- ✓ **Programable Smart Load-Shed/Shutdown**
- ✓ Environmental & Security Sensors
- ✓ **RESTful APIs & IPv6 Support**
- ✓ **Wireless WiFi & Wireless Bluetooth Capable**
- ✓ **QR Code Cloud Connect to SmartZone Cloud (Phase2)**
- ✓ Battery Predictive Failure & Lifespan Reporting (Phase2)

Web GUI



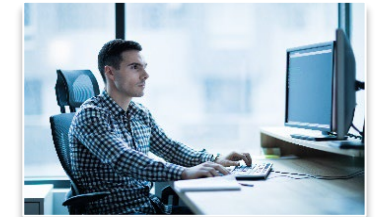
Login

One-Click
Power, Environmental & Security
Viewing



- ✓ Graphical Dashboard
- ✓ Quick Search Window
- ✓ One-Click Alarm Viewing

Multi-Device Access



Desktop



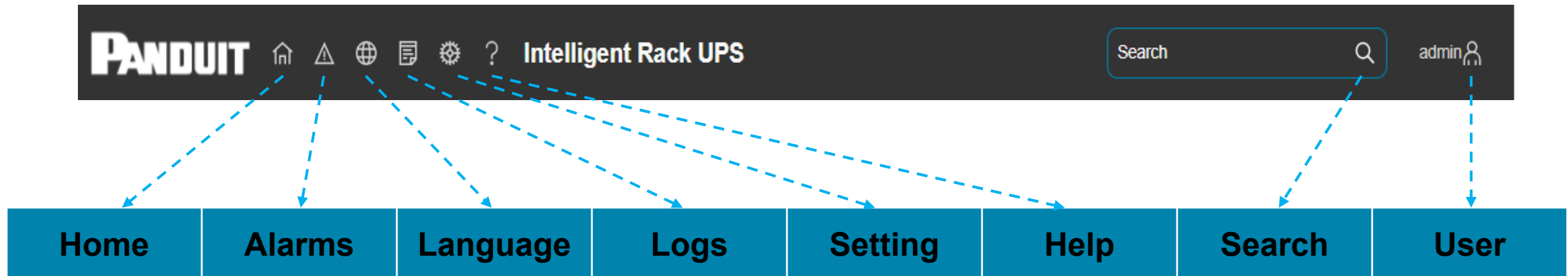
Tablet



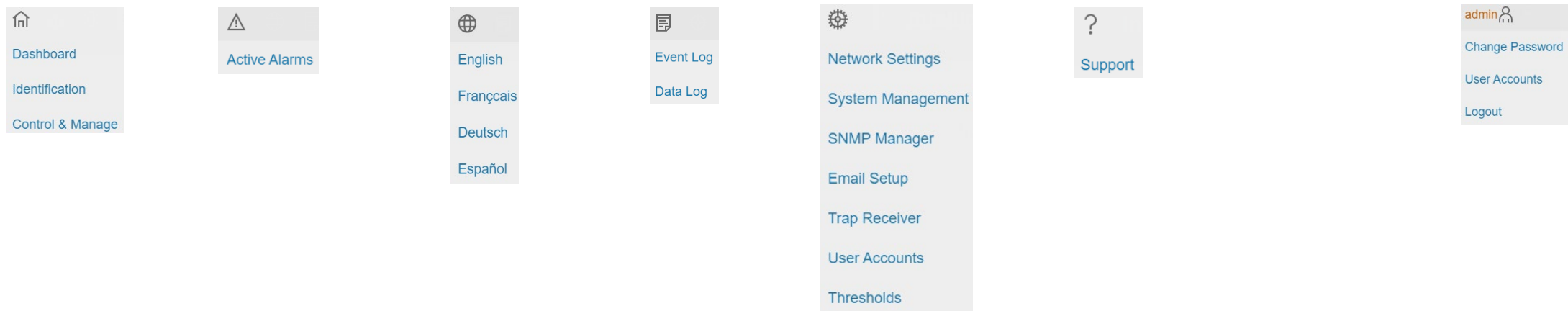
Smartphone

iNMC – Web User Interface – Ease of Use

- Menu Bar

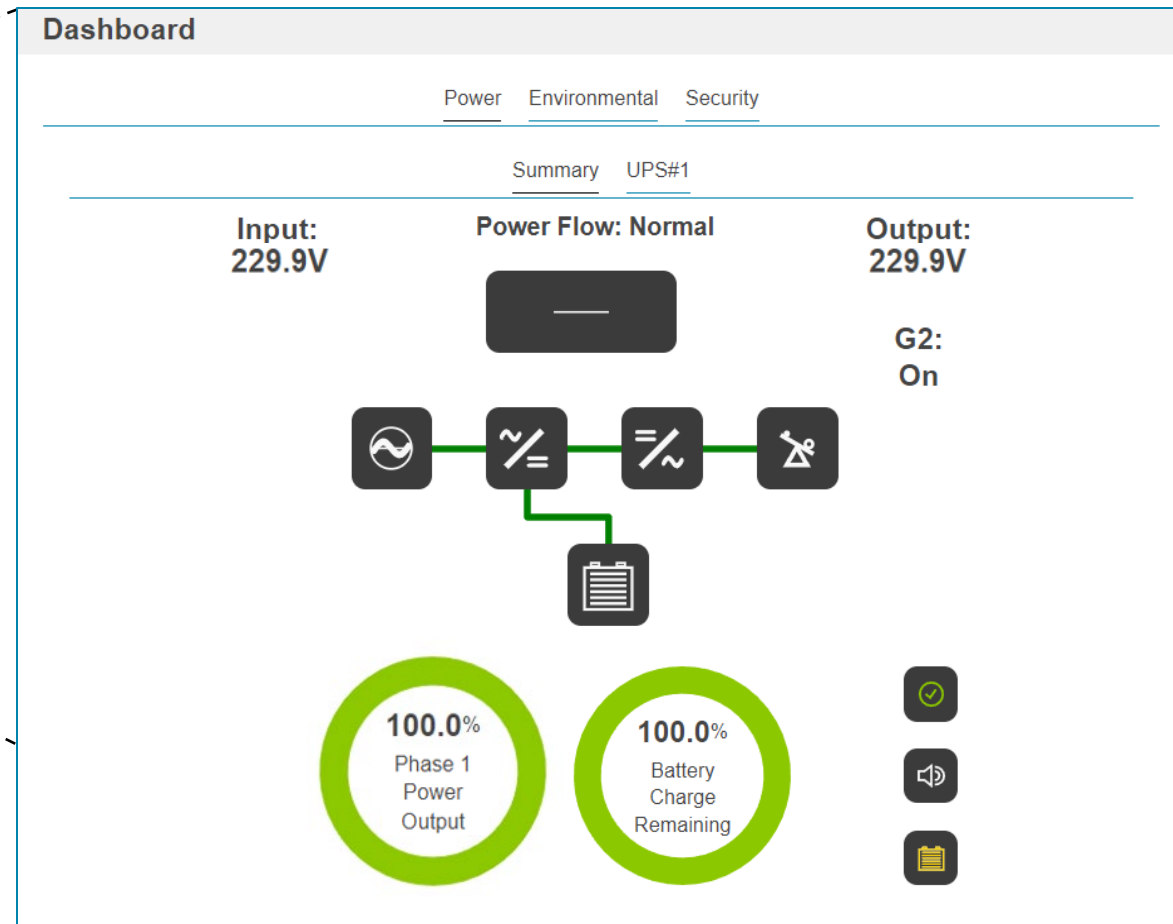
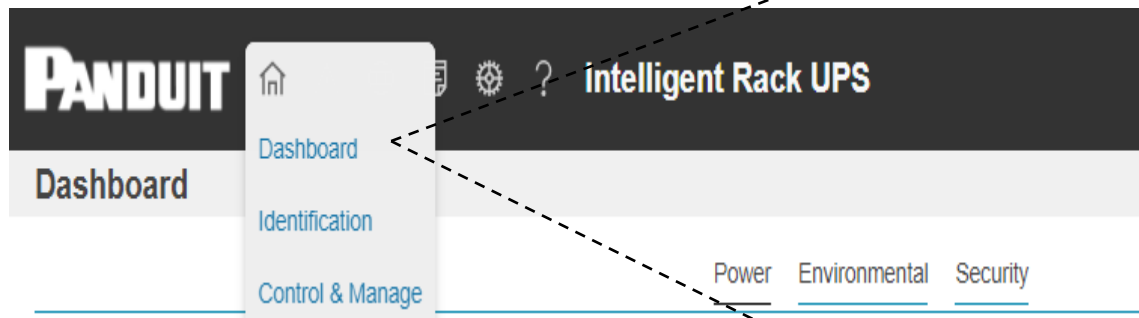


- Menu Bar dropdowns



iNMC – Web User Interface – Ease of Use

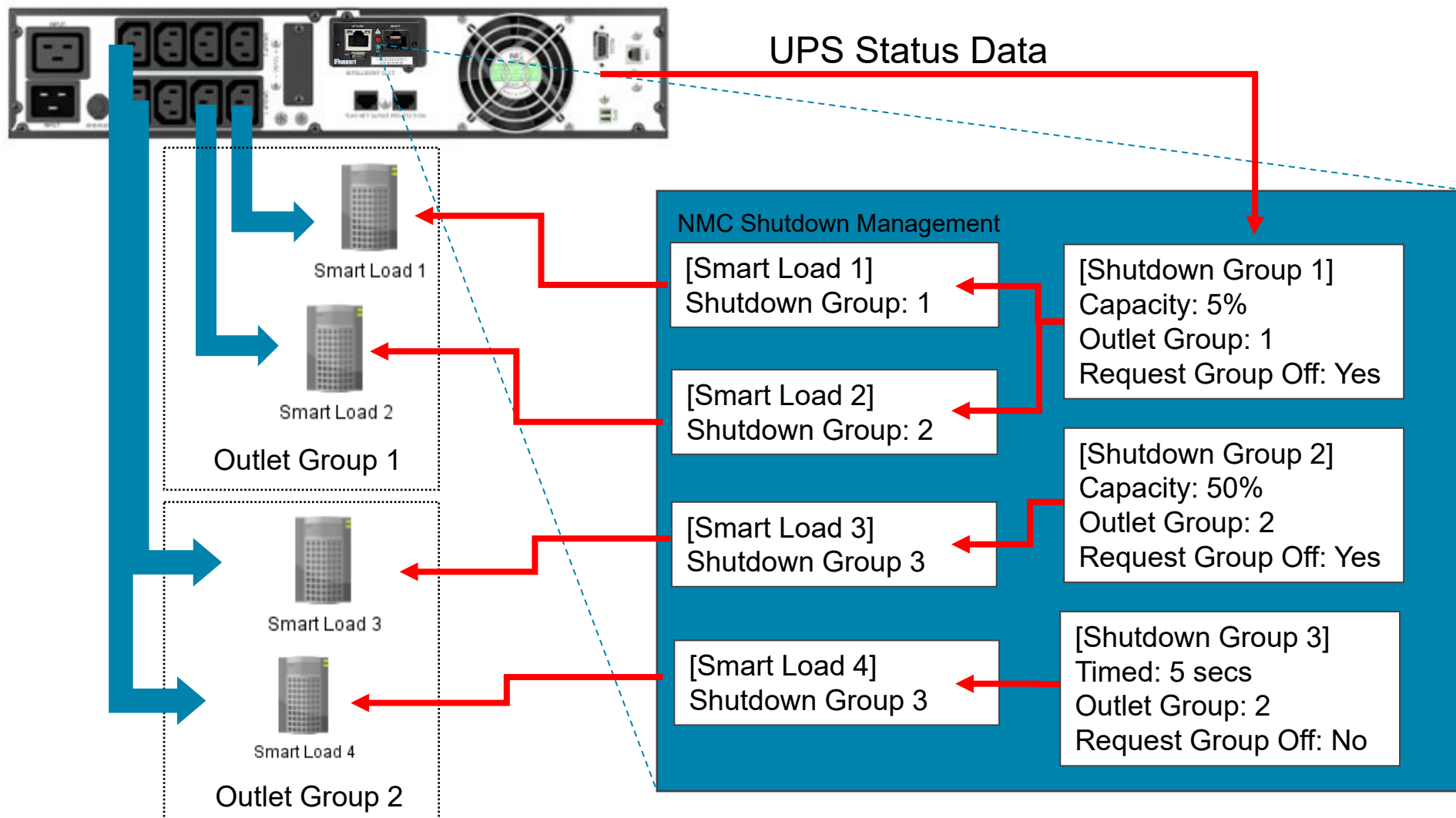
- Dashboard / Power / Summary (landing page)



- The Power Flow Diagram is typical of UPS Units
- The Power Flow Diagram is the same as the UPS Displays

iNMC – Smart Load-Shedding Extending Run-time

Smart Load-Shedding & Shutdown Example

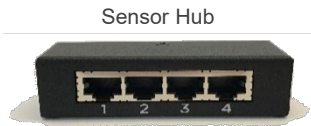


SZ UPS Accessories Key Features

Plug & play style digital sensors (self-identifying electronics design)

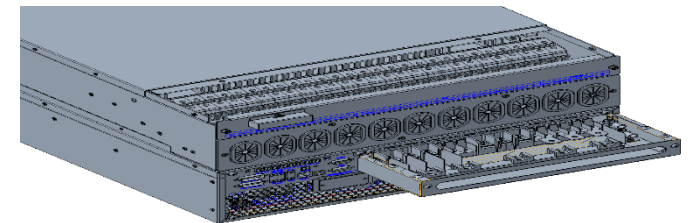
Environmental

- Temperature
- Temp + Humidity
- 3Temp + Humidity
- Rope Leak
- Spot Leak
- 3 Sensor Input Hub
- Dry Contact Input



Security

- Door Contact Switch
- Intelligent handle (Phase2)



Bypass PDU PDO Maintenance Bypass Panel & Rails



Panduit Confidential Information - not for Distribution

Management Software

Small – Medium Deployment (1 UPS)

- UPS Manager runs on UPS network card
- Simple configuration through WebUI

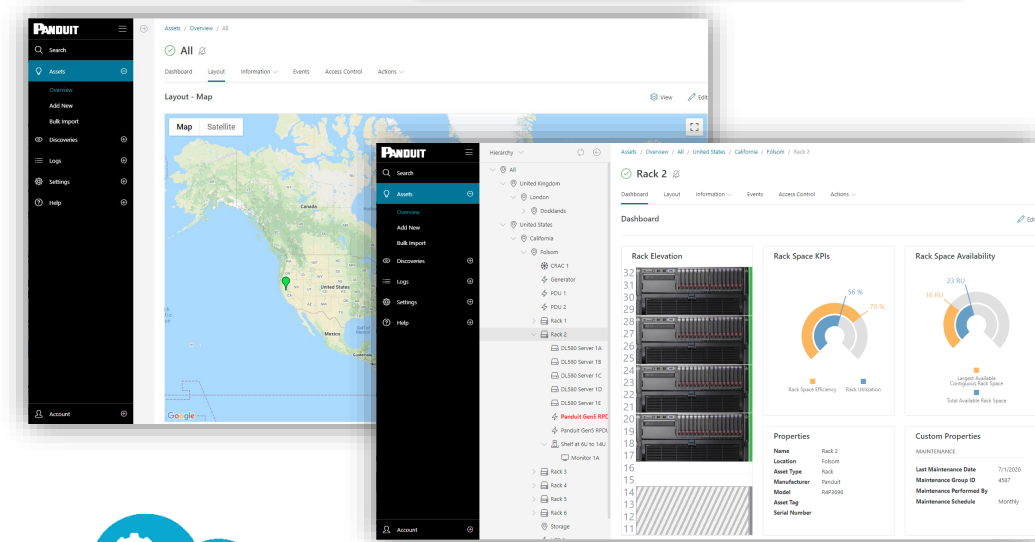
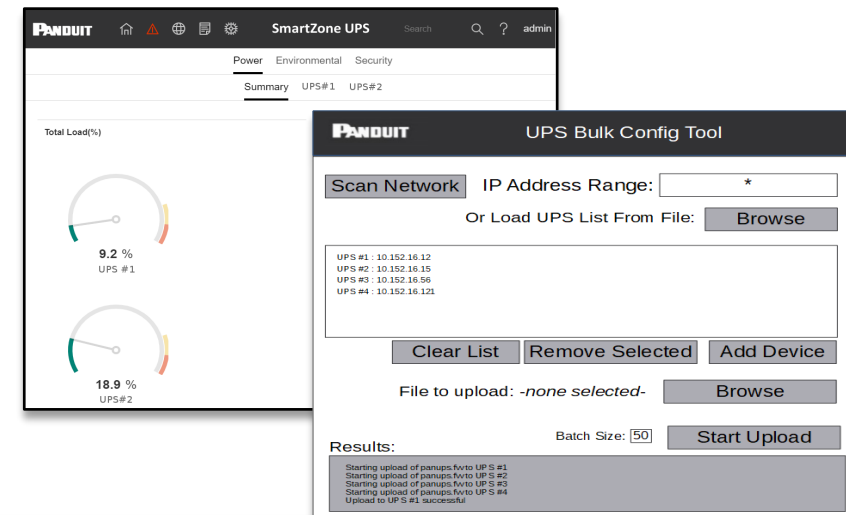
Medium Deployment (1 to 100 UPS)

- SmartZone *mPower* MCU
 - MCU – Monitor, Configure & Upgrade SW
- UPS MCU runs on customer server
 - Minimal additional development required
- Familiar experience as installation scales

Large Deployment (1 to 1000+ UPS)

- SmartZone Cloud – Next Generation DCIM
- SaaS Subscription – based running in MS Azure
- Power, Environmental, Cooling, Security, Connectivity & IT Asset (Physical & Logical) Mngmt
- Optional Virtual Private Cloud (VPC) Offering

Smartzone™ *mPower* MCU



Smartzone™ *cloud* DCIM

Thank You!

For more information visit: www.Panduit.com/UPS

Smartzone™ UPS

Panduit Intelligent Power