



[www.apexmobilepower.com](http://www.apexmobilepower.com)

# Comprehensive Battery Solution



**Apex Mobile Power, LLC.**

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*Always Current* ⚡

***Always Current ⚡***



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# Who we are ...

Apex Mobile Power (AMP) is a U.S.-based supplier in high-performance Li-ion battery packs and chargers. We specialize in custom 1-24S battery packs that go beyond the basics—think ingress protection, intrinsic safety, and extra ruggedized design. Our cutting-edge designs and uncompromising quality set us apart, making AMP the go-to for devices that demand reliable, ruggedized power. If you need batteries that can handle anything, we've got you covered.



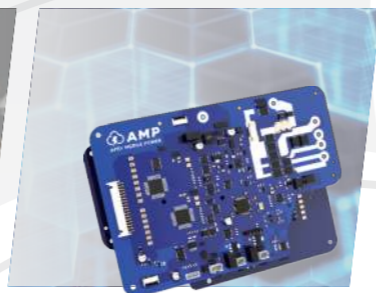
■ Custom Battery Packs



■ Energy Storage Solutions



■ Custom Smart Chargers



■ Battery Management Systems (BMS)



# Why choose us ...

- Over a Decade of Expertise in Lithium Battery Pack Development.
- A Robust and Reliable Supply Chain System.
- Ensuring Product Reliability, Safety, and Consistency with Premium Materials and Automated Production.
- Comprehensive Battery Solutions, Covering Hardware Protection, AFE, and MCU Control.



Energy Storage Solution ▶

**14** years

Expertise in Customized Lithium Battery Development

**2**

Battery Manufacturing Bases



Headquarters



Atlanta

Vietnam Manufacturing Base



Hai Duong, Vietnam

China Manufacturing Base



Zhuhai, China

Headquarters

R&D Center

Manufacturing Base

Global Presence



## 01 Portable & Home Electronics

- Wireless Communication Devices
- POS & Handheld Computers
- Vacuum Cleaner
- Speakers



## 02 Power Stools

- Electric Screwdriver
- Electric wrench
- Electric Cutting Saw
- Punkt-und Linienlaser



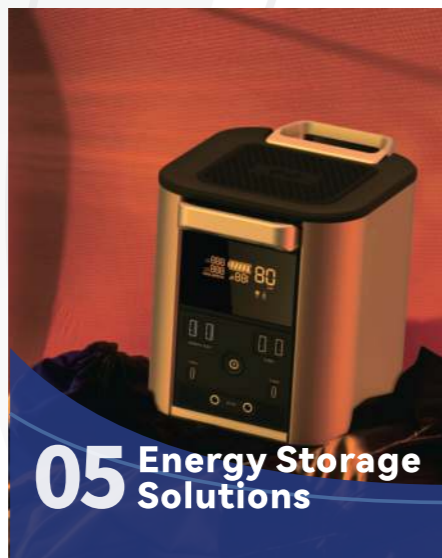
## 03 Medical & Healthcare

- Portable Ultrasound Device
- Portable ECG/EKG Machine
- Massage Gun
- Pulse Oximeter



## 04 Robotic Solutions

- Drones & Underwater Robots
- Household Robots: Cleaning & Gardening
- Industrial Robots: Logistics & Warehouse
- Service Robots



## 05 Energy Storage Solutions

- Portable Outdoor Power Station
- Compact Home Backup Power
- Emergency Backup Power



## 06 Low-Speed EV

- E-bike
- Electric Scooter
- Electric Wheelchair
- Golf Carts



## R&D Team

⚡ Our R&D team consists of over 60 skilled engineers with extensive experience in developing ingress protection, intrinsically safe, and extra ruggedized batteries and complex battery module solutions.

### Key roles:

- Battery design engineer
- Electrical engineer
- Thermal management specialist
- Mechanical engineer
- Safety engineers
- Hardware engineer
- Software engineer
- Chemical engineer
- Testing engineer
- Quality engineer
- Prototype technician



## Technical Capabilities

⚡ Comprehensive design capabilities: software design, hardware design, structural design, product testing, etc.

### Adaptability to extreme environments:

Professional structural design and hardware design capabilities ensure that the batteries are safe, reliable and efficient.

### Smart battery development:

TI, MAXIM, HYCON, Liqi, SV, etc.

### Failure mode analysis:

DFMEA.



## Software Development Capabilities

⚡ 5-24 string BMS development and design.

⚡ Real-time communication, protection function, charge and discharge management.

⚡ Battery SOC,SOH.

⚡ RS232, RS485, I<sup>2</sup>C, SMBUS,CAN and other communication functions.

## Special Lithium Battery Solutions Technical Capabilities



### IPX7 / IPX8

Waterproof & dust-proof battery pack structure design



### Hazloc/ Intrinsically Safe/ Non-Incendive

ATEX(Ex ia/ib), IECEx



### Low Temperature Discharging

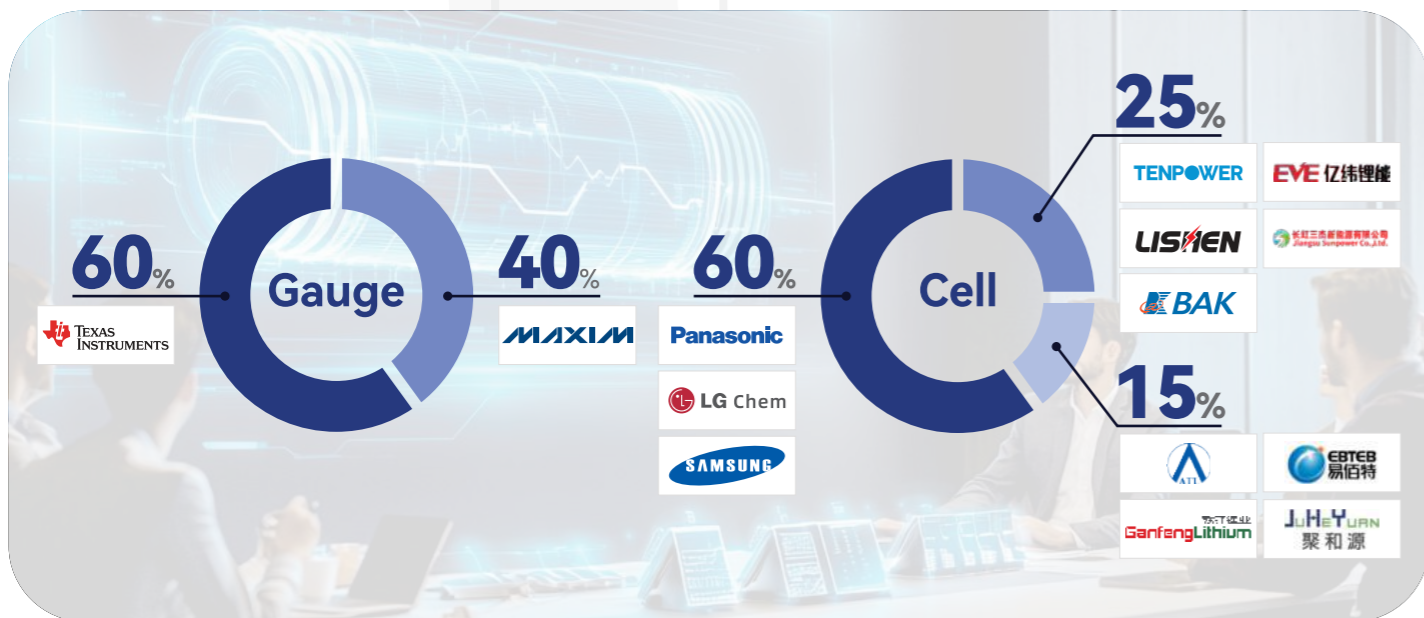
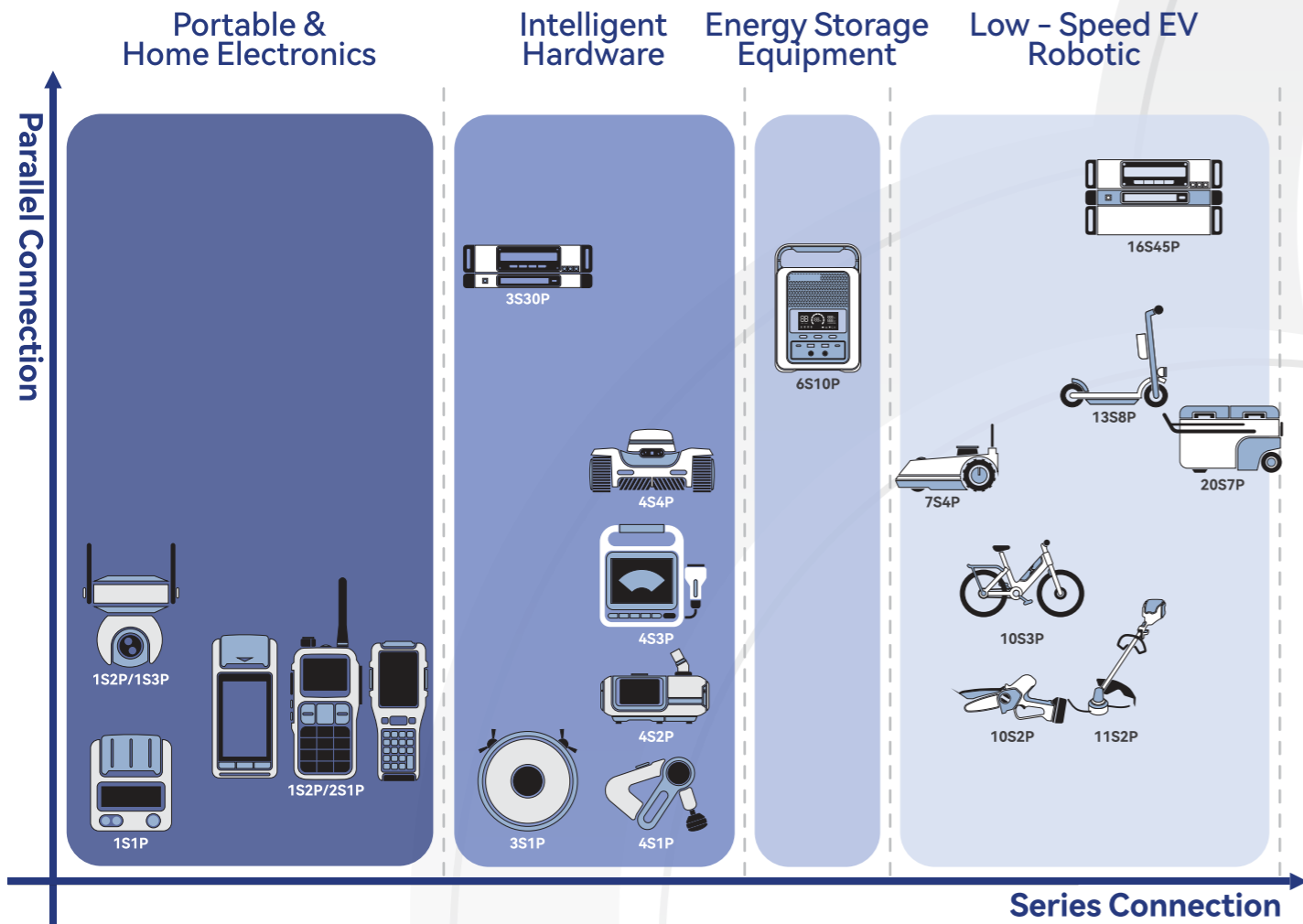
Low temperature battery discharge at -40°C to meet more than 70% discharge



### Smart Battery

Power monitoring & display/ Charging management/ Real-time communication & remote monitoring

# Module Design Outline



# Reliability Test



We follow MIL-STD-810G and UL standards in our reliability and environmental labs, conducting thorough tests throughout the battery development process to ensure safety and reliability.



**RELIABILITY TESTING LABORATORY**



Standards	Safety Tests		Reliability Tests	Performance Tests
	Cell	Pack	Cell / Pack	Cell / Pack
MIL-STD-810G	Impact Test	Over Charge Protection	Humidity	Rated Capacity
UL 1642	Thermal Shock	Over Discharge Protection	Vibration	Charge Retention
UL 2054	Over-charging	Short Protection	Shock	Cycle Life
IEC 62133	Short	Static Shock	Free Drop Test	
IEC60079			High Temp Performance	
JIS C 8714	Puncture		Low Temp Performance	
FM3610				
UN 38.3			Waterproof Test	

RoHS UL CE PSE IEC UN38.3

# Manufacturing Capabilities

AMP operates production bases in China and Vietnam, supported by a well-established supply chain system. This enables us to offer high-quality, cost-competitive customized lithium battery solutions to our clients.



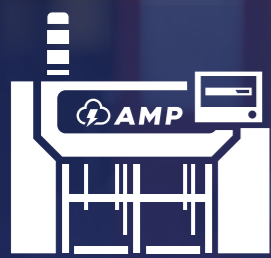
## China Manufacturing Base

- Employees: 600+
- Engineers: 60+
- Base Area: 18000m<sup>2</sup>
- Building Area: 37000m<sup>2</sup>
- Annual Production Capacity: 3.7million Packs / Month

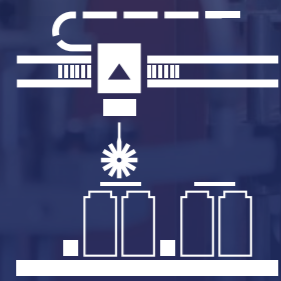
## Vietnam Manufacturing Base (Begin production in Q3, 2025)

- Employees: 200+
- Engineers: 40+
- Base Area: 22000m<sup>2</sup>
- Building Area: 29000m<sup>2</sup>

## Modern Lithium Battery Pack Production Line:



SMT smart production line



Automated key production steps



Flexible U-shaped production line



Strict finished product testing



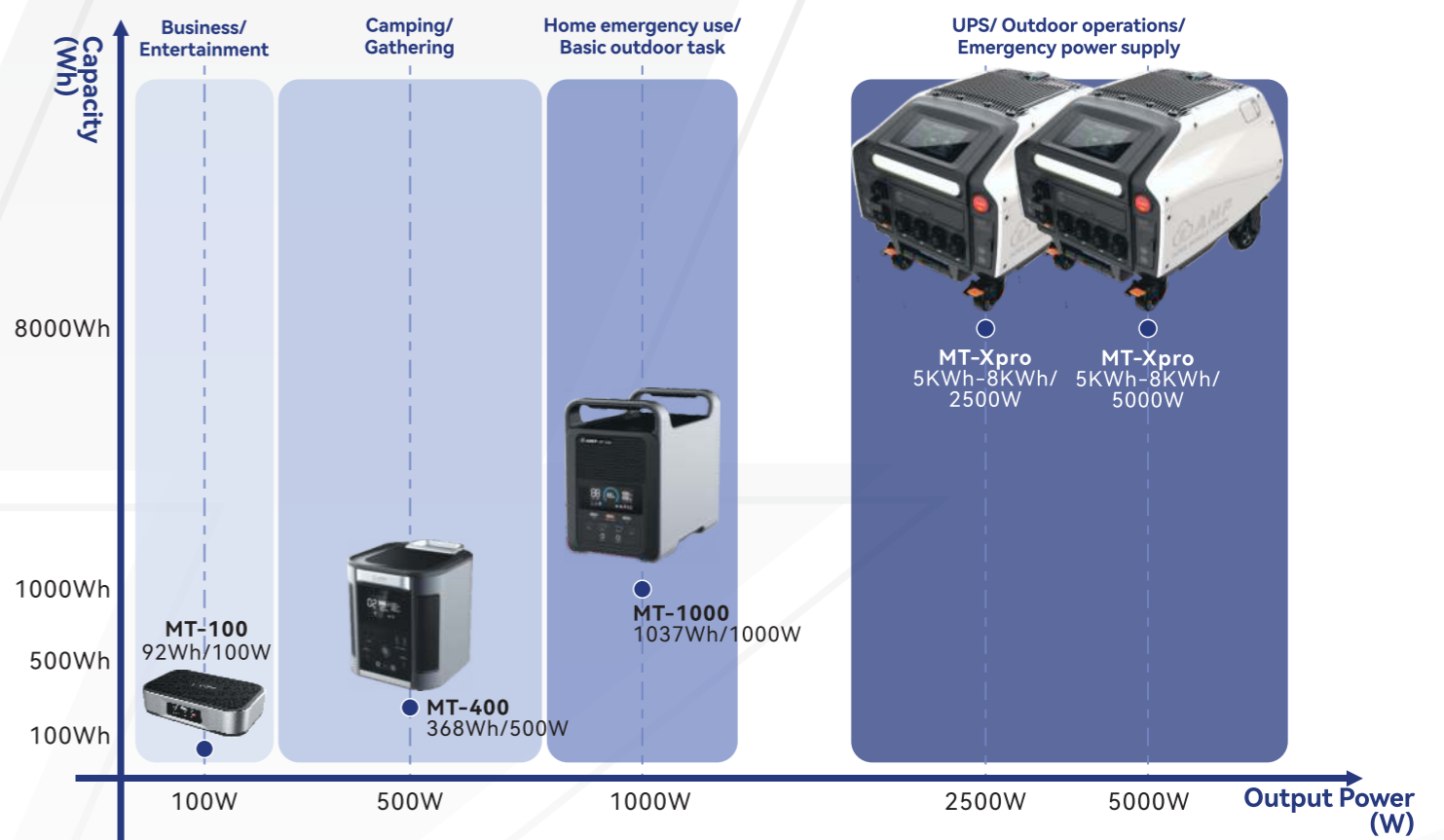
# Energy Storage Systems

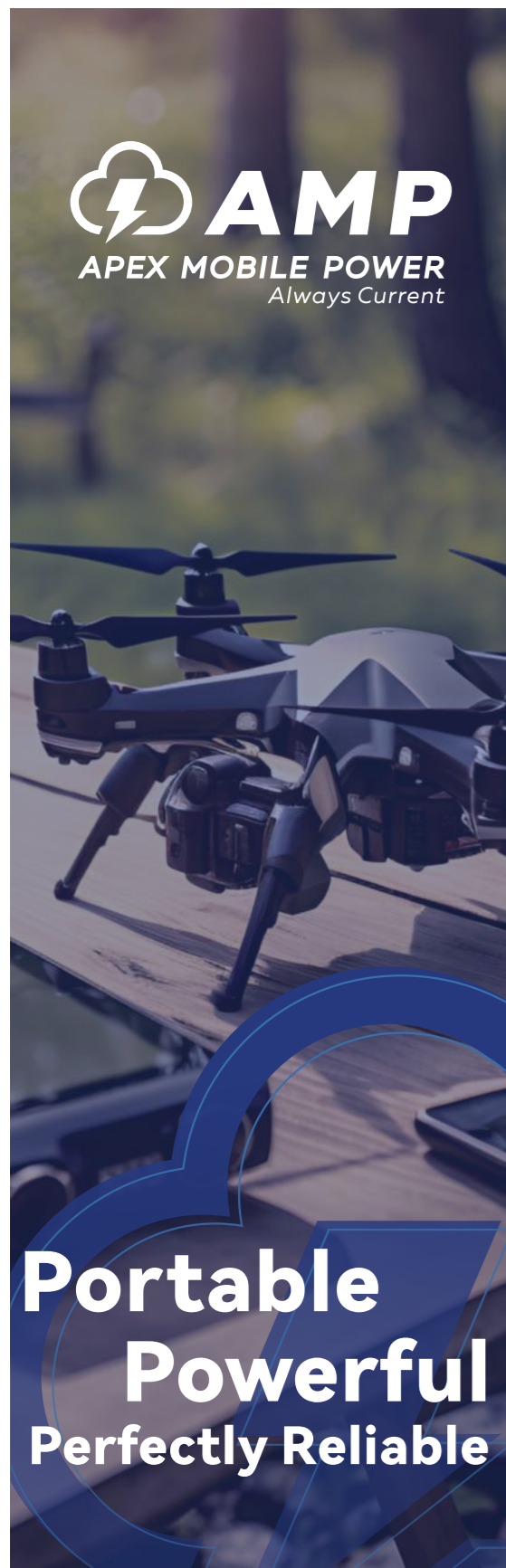


## MOUNTAIN Series Energy Storage Equipment



reddot design award winner 2022





MODEL		MT-100	MT-400	MT-1000
BASIC INFORMATION	Dimension	186×118×45mm	224×184×214mm	265×255×170 mm
	Weight	1.5kg	6.2kg	9.9kg
	Operating Temperature	Charge:0°C~+45°C Discharge:-20°C~+60°C	Charge:0°C~+45°C Discharge:-20°C~+60°C	Charge:0°C~+45°C Discharge:-20°C~+60°C
	Long Duration Storage	-20°C~+50°C, <70%RH	-20°C~+50°C, <70%RH	-10°C~+50°C, <70%RH
PARAMETERS	Battery Type	18650 Li-ion Cell	18650 Li-ion Cell	21700 Li-ion Cell
	Capacity	92Wh,6.4Ah@3.6V	368Wh,25Ah@3.6V	1037Wh,48Ah@3.6V
	Lifecycles	≥500 cycles	≥500 cycles	≥500 cycles
	Shelf-life	1 year (after fully charged)	1 year (after fully charged)	1 year (after fully charged)
Inputs	TYPE-C: Max20V,60W Solar Panel(Optional): Max 60W (ideal weather)	DC 5521 (x2): 10V-20V, Max 100W total power input TYPE-C (X2): Max 20V, 60W per port Solar Panel(Optional): Max 100W(ideal weather)	AC (x1): 100V-120V, 50Hz/60Hz, Max450W Solar Panel(Optional): Max 120W (ideal weather)	
	Outputs	AC(x1):100V-120V,50Hz / 60Hz, continuous 100W, surge 120W TYPE-C(x1):DC 5V/3A; 9V/3A; 12V/3A; 15V/3A; 20V/3A;Max 60W USB-A QC3.0 (x2):DC 5V/3A; 9V/2A; 12V/1.5A; Max 18W per port	AC (x2): 100V-120V, 50Hz/ 60Hz, pure sine wave, total power output 500W, surge 550W USB-A (x2): DC 5V/2.4A, 12W per port USB-A QC3.0 (x2): DC 5V/ 3A; 9V/ 2A;12V/ 1.5A; Max 18W per port TYPE-C (X2): DC 5V/3A; 9V/3A; 12V/3A; 15V/3A; 20V/3A; Max 60W per port	AC (x2): 100V-120V, 50Hz/ 60Hz, pure sine wave, total power output 1000W, surge 1050W USB-A QC3.0 (X2): DC 5V/ 3A; 9V/ 2A; 12V/ 1.5A; Max 18W per port TYPE-C(x2): DC 5V/ 3A; 9V/ 3A; 12V/ 3A; 15V/ 3A;20V/ 5A; Max 60W per port DC 5521(x2): 12V/ 6A, total power output 120W Max LED Light: Standard 3W, Max 5W
OTHERS	Certification	PSE; FCC; ROHS; CE; UN38.3, ※ Depends on the requirements of each sales area;		

※ As the products are constantly upgraded, the above parameters are for reference only. The detail parameters in products are subject to the corresponding user manual.



## MT-X Pro

### 8025Wh AC 2500W

### Key Features



**Energy that moves with you**

Host Battery: 4.8kWh  
Detachable Battery Packs: 1.1kWh (x3)



**Reliable Sustainable Power**

Easy Battery Replacement  
UPS(Response time < 20ms)



**Retractable Power Strip**

1.5m for Easy Access and Flexibility



**Quiet & Clean In Any Scene**

Emission-free /  
Whisper-Quiet Operation /  
IP54 Rating

### Application



**Outdoor Construction Work**



**On-location Filming**



**Post-disaster Relief**



**Uninterruptible Power Supply**

### Specifications

#### BASIC INFORMATION

Model	MT-X PRO 2500
Dimension / Weight	550x 670 x 560mm / ≈100kg
Operating Temperature	Charge:0°C-+40°C / Discharge:-20°C-+45°C
Environmental Humidity	10%-90% RH
Battery Type	LiFePO4
Capacity	Host Battery: 4800Wh Detachable Battery Packs: 1075.2Wh (x3)
Nominal Voltage	48V DC

#### FUNCTION

Detachable Battery Packs	Hot Swapping: Supported; Independent Charging: Supported (Optional)
Retractable AC Output Module	AC x2, Cable Length 1.5m;
UPS	20ms
Wi-Fi / Bluetooth	Supported
Operating noise	< 40dB
Product protection	IP54, 96-hour Salt Spray, Class B Shock Resistance, and Flame-retardant Housing.
Battery protection	Short circuit, Overcharge, Over-discharge, Overcurrent, Over-temperature, etc.

#### INPUTS

AC Input	AC 102V-132V/ 15A Max, 50Hz/ 60Hz, Max1800W
AC Input ( Bypass Mode )	Supported, Max 1000W
Battery Replacement	Hot Swapping Supported (3 Detachable Battery Packs)
Solar Panel(Optional)	DC 12V-150V, Max 1200W/ 12A , x2, Input
Car Input	12V/ 24V, 8A, 96W Max
EV Input	Enabled with Optional Accessories

#### OUTPUTS

AC Output	x4, AC Output 100V-120V / 20A, 50Hz/ 60Hz x2, AC Output (Retractable Power Strip) 110V-120V / 20A, 50Hz/60Hz  Total Output 2500w, Pure Sine Wave; Efficiency: 92%
DC 5521 Output	x6, DC 12V / 10A
Aviation Plug Output	Supports Customization, 2-4 Output Ports
USB-A Output	x4, DC 5V / 2.4A (12W Max Per Port )
USB-C Output	x4, DC 5V / 3A , 9V / 3A , 15V / 3A , 20V / 3A , 20V / 5A (100W Max Per Port)
Anderson output	x1, DC 12V / 30A

※ The Car Port and the DC5521 Ports ( x 2 ) in the parallel circuit share a current of 10A.

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## Portable Devices




**AMP 032B-RBA**  
Two-Way Radio

- Cell: NCM / ICP103450CA (LiPF6)
- Specification: 2S1P / 7.4V / 1800mAh / 13.32Wh
- Features: EX ib IIC T4 Gb / EX ib IIC T120°C Db  
-20°C ≤ Ta ≤ +50°C / IP68




**AMP 017B-RBA**  
Two-Way Radio

- Cell: NCM / INR-18650-P28A
- Specification: 2S1P / 7.2V / 2800mAh / 20.16Wh
- Features: IP67 / -40°C Discharge




**AMP YD010B-RBA**  
PDA

- Cell: LCO / Polymer Cell 655368
- Specification: 1S1P / 3.85V / 4000mAh / 15.4Wh
- Features: IP67



**AMP 014B-SBA**  
POS

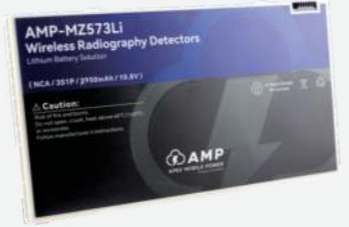
- Cell: NCM / UR1865ZM2
- Specification: 2S1P / 7.2V / 2470mAh / 17.8Wh
- Features: --

## Medical & Healthcare



**AMP 757Li**  
Portable Ultrasound Equipment

- Cell: NCA / UF103450PN
- Specification: 2S1P / 7.4V / 1880mAh / 13.91Wh
- Features: -



**AMP MZ573Li**  
Wireless Radiography Detectors

- Cell: NCA / NCA596080
- Specification: 3S1P / 10.8V / 3950mAh / 42.66Wh
- Features: -



**AMP XS001B-RBA**  
Portable Laptop Ultrasound Machine

- Cell: NCA / NCR18650GA6
- Specification: 4S2P / 14.4V / 6500mAh / 93.6Wh
- Features: Stable Power Output



**AMP QR005B**  
Fascia Gun

- Cell: NCM / LR18650LD
- Specification: 4S1P / 14.4V / 2500mAh / 36Wh
- Features: Peak Discharge Current: 20A ( 8C<sub>inst</sub>)

## Robotic Solutions



**AMP BL006B-RBA**  
Auto Cleaning Robots

- Cell: NCM / ICR18650 26HE
- Specification: 3S1P / 10.8V / 2600mAh / 28.08Wh
- Features: -




**AMP FY001B-BRA**  
Wireless Robotic Pool Cleaner

- Cell: NCM / INR18650 26E
- Specification: 7S3P / 25.55V / 7500mAh / 191.62Wh
- Features: Waterproof( 6m/ 24Hours )



**AMP MZ879Li**  
Security Monitoring

- Cell: NCM / INR18650F1L
- Specification: 3S6P / 10.89V / 19500mAh / 212.36Wh
- Features: Battery Gauge



**AMP LZ002B-BRA**  
Detection Equipment

- Cell: NCA / INR21700P42A
- Specification: 4S13P / 14.4V / 51Ah / 734.4Wh
- Features: Battery Gauge

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