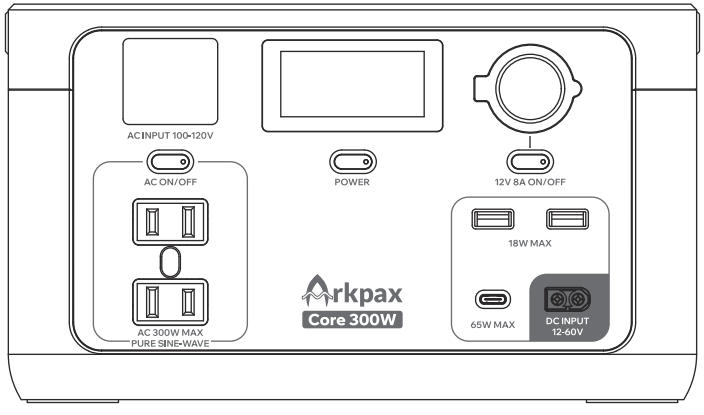
Arkpax®

Model: C300-US

Core 300W
Portable Power Station



USER MANUAL

V1.0

ABOUT THIS PRODUCT

Thank you for choosing the Arkpax Core 300W Portable Power Station. Engineered for convenience and reliability, this multifunctional energy storage system provides dependable power during emergencies, outdoor activities, or off-grid adventures.
The Arkpax Core 300W provides a pure sine wave AC output of 300W (120V~, 60Hz), and supports a wide range of DC voltage outputs (5V ⎓ 9V ⎓ 12V ⎓ 15V ⎓ 20V)—compatible with USB-A, USB-C, and 12V carport. It also features an integrated 3W LED light and a real-time LCD display for battery and power status monitoring.
The Core 300W is designed to supports a wide range of applications, including but not limited to: Small refrigerators and electric fans, TVs, drones, smartphones, tablets, laptops, and desktop PCs, Lamps, photographic equipment, aquariums, and electric scooters.
Please read this manual carefully before use and retain it for future reference.
WARNING: This electronic device must comply with all applicable local laws and regulations in the region where it is installed and operated. It is the user's responsibility to ensure compliance. If the product casing, ports, or display appears damaged, do not continue using the device. Immediately disconnect all devices and contact Arkpax Customer Support for further instructions.

⚠ CAUTION

Read all safety notes and instructions before operating the device. Failure to observe these may cause serious injury to yourself or others, or cause product damage and property loss.
Keep all safety notes and instructions accessible and close to the equipment.
Arkpax is not liable for any loss caused by the user's failure to use the product in compliance with the product document.
In compliance with laws and regulations, Arkpax reserves the right to the final interpretation of this document and all documents related to the product.

⚠ Safety Precautions

a) Do not short-circuit the product. Avoid storing it alongside metal objects (e.g., coins, jewelry, keys).
b) Do not expose the product to fire, water, or any other liquids.
c) Avoid placing the product in direct sunlight or environments with high heat, humidity, or dust.
d) Do not disassemble, modify, or tamper with the product.
e) Do not drop, crush, or subject the unit to strong impacts.
f) Keep out of reach of children and individuals lacking the ability to operate the product safely unless under supervision.
g) This device is not a toy. Do not allow children to play with it.
h) Do not cover the unit with fabric or other materials during operation.
i) The casing may become warm during use. This is normal.
j) Avoid touching the AC output port during operation to prevent electric shock.
k) Dispose of the product responsibly. Do not treat the built-in battery as household waste.
l) This product is intended for emergency power supply only, and should not be used as a long-term substitute for standard household AC or DC power.

BATTERY INFORMATION

This device contains a built-in, non-removable lithium iron phosphate battery. Do not attempt to open the device or remove the battery. Doing so may result in injury or damage to the product.

a) The Arkpax Core 300W uses a high-quality $LiFePO_4$ battery with no memory effect and long lifespan. For best performance, operate within 50°F to 86°F.

b) When charging, avoid placing the unit near televisions, radios, or other sensitive electronic equipment.

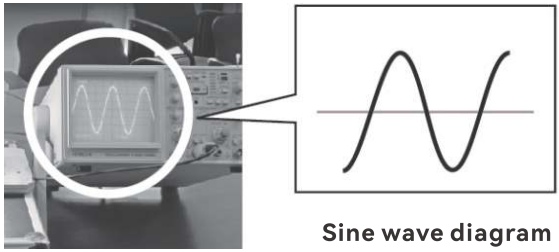
c) If stored for long periods, disconnect all cables and recharge the unit every 3 months to keep the battery level above 80%.

COLD WEATHER USE

In cold environments (below 32°F), battery performance may be reduced due to chemical limitations. For best results: Place the unit in a temperature-insulated area, keep it connected to a charging source (e.g., solar panel or AC adapter) The heat generated during charging will help maintain functional battery capacity.

PURE SINE WAVE OUTPUT

This portable power station delivers pure sine wave AC output, identical to household electricity. It is capable of powering most appliances rated under 300W.
Note: This unit is designed for occasional emergency use, and should not serve as a permanent replacement for grid electricity.



Sine wave diagram

▲
The sine wave waveform displayed on the oscilloscope

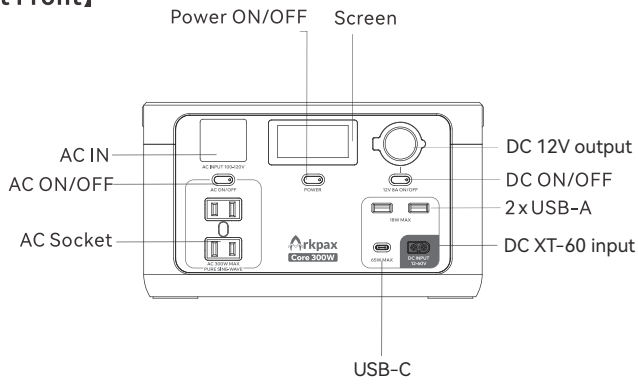
SPECIFICATIONS

Model: C300-US

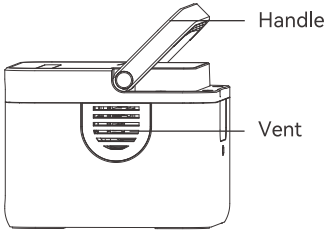
Battery Capacity	192Wh / 15000mAh, 12.8VDC
Product Size	5.43 × 9.45 × 7.28in / 138 × 240 × 185mm
Net Weight	Approx. 8.8lb / 4Kg
Built-in Battery	Grade A Lithium iron phosphate battery $LiFePO_4$
Charge	AC Input: 100-120V~, 60Hz (180W Max) DC Input: 12-60V⎓12A (180W Max) with MPPT
Output	USB-C: Output: 5V⎓3A, 9V⎓3A, 12V⎓3A, 15V⎓3A, 20V⎓3.25A (65W Max) USB-A: Output: 5V⎓3A, 9V⎓2A, 12V⎓1.5A Carport Output: 12V⎓8A (96W Max)
AC Output	120V~, 60Hz, 300W (Pure Sine Wave)
Surge Power	600W
Battery Status	LCD Display
Charging Temperature	32 ~104°F (0 ~40°C)
Discharging Temperature	14~113°F (-10 ~45°C)
Cycle Life	≥3000 Times (More Than 80% Capacity)
Accessories	1*Portable Power Station, 1*AC Charging Cable, 1*User Manual

DEVICE DESCRIPTION

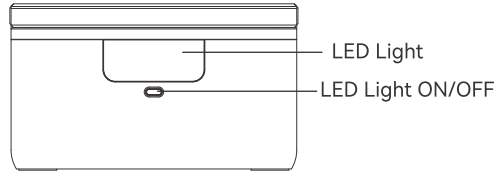
【Product Front】



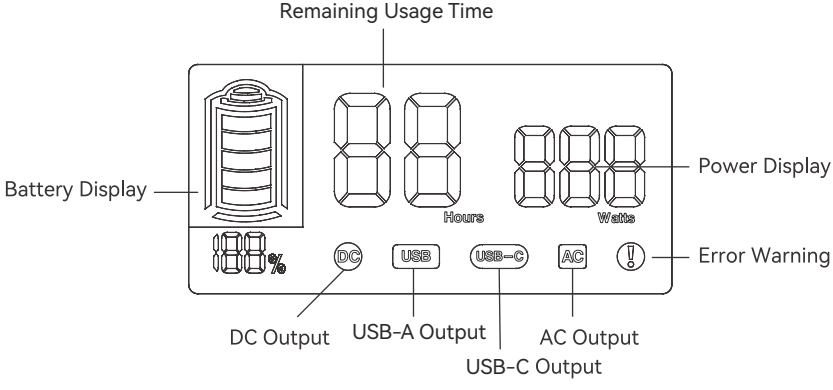
【Side】



【Rear】



【Display】



BUTTON DESCRIPTION

BUTTON OPERATION	CURRENT STATE	CORRESPONDING ACTION
POWER Button	Power ON/OFF	Long press: Long press 1.5s to power ON or OFF. (USB－C and USB-A can be use after power ON)
AC ON/OFF Button	Power ON and the screen is on	Short Press: Turns the AC output ON or OFF. A beep will confirm the action. Long Press: Enables or disables the beeper sound (default: ON). A beep will sound to confirm the change.
DC Button	Power on and the screen is on	Short press to turn on or off the DC12V output, and the beeper will sound.
LED Button	Power on and the screen is on	Short Press: Cycles through the following modes: Glare → Low Light → Strobe → SOS → OFF Long Press: Immediately turns off the light. A beep will sound to confirm the action. Auto-Off: If no buttons are pressed for 2 hours, the light will turn off automatically to preserve battery life.
Power Button + LED Button	Power on and the screen is on	Long press: The system is not in charging mode, long press for 3s and the system will automatically reset.
Power Button + AC ON/OFF Button	Power on and the screen is on	Long press: Power button and AC ON/OFF button to start, short press the AC ON/OFF button to switch the AC output voltage and frequency after the display voltage flashes.
AC ON/OFF Button +LED Button	Power on and the screen is on	Long press to view the system software version number
Other Function Description	/	Short Press: Cycles through the following modes: Glare → Low Light → Strobe → SOS → OFF Long Press: Immediately turns off the light. A beep will sound to confirm the action. Auto-Off Function: If no buttons are pressed for 2 hours, the light will turn off automatically to preserve battery life.

Note: Press the button when the screen backlight is turned off.
Turn on the backlight of the screen before performing the corresponding function.

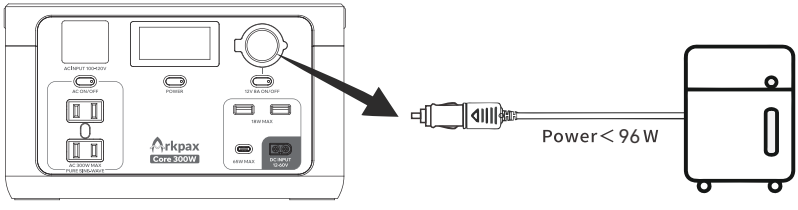
SYSTEM FAULT CODE

E 01	DC OOCP – Overcurrent detected on DC or car charger output.
E 02	DC OSCP – Short circuit detected on DC or car charger output.
E 03	AC Error – Internal exception in the AC output module.
E 04	PD Error – Malfunction in one-way USB Type-C PD port.
E 05	NTC Error – Temperature sensor (NTC) abnormality detected.
E 06	BAT Error – Battery temperature abnormality. System unable to operate safely.
E 07	USB-A ERR – USB-A port malfunction.
E 08	DC COVP – Input DC charging voltage is too high.
E 09	BAT OTP – Battery temperature exceeds safe limits.
E 10	BAT OCP– Battery overcurrent detected. Please reduce output load; if ignored, system protection will be activated.
E 11	BAT UVP – Battery undervoltage warning.
E 12	BAT LOW – Low battery level warning.
E 13	CAP CAL – Calibration required. Please perform a full discharge and recharge cycle.

OPERATING INSTRUCTIONS

Using the DC 12V Output (Carport)

To power DC appliances using the 12V output: Turn on the main power switch. Press the DC output button to activate the 12V carport. Connect your DC appliance to the port. The device will begin receiving power once connected.
Note: Ensure the appliance is compatible with a 12V DC input and does not exceed the rated current (8A)

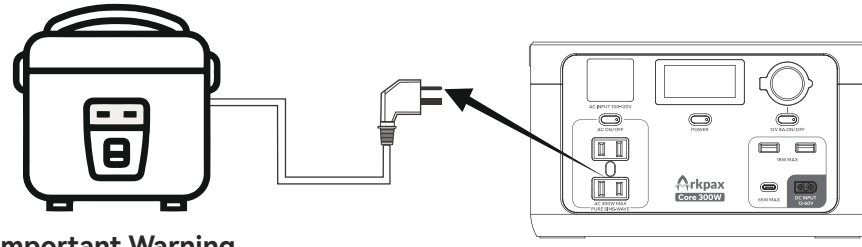


DC Output Protection Features

Short Circuit / Overload Protection: If a short circuit is detected or the connected load exceeds 96W, the DC output will automatically shut off for safety. After resolving the issue, press the DC output button again to resume operation.
Output Specifications: Voltage Range: 11.4V – 12.6V Maximum Output Current: 8A

Using the AC Output to Power Electrical Appliances

To power AC devices using this product: Turn on the main power switch. Connect your appliance's power plug to the AC output port of the portable power station. Press the AC ON/OFF button to activate the AC inverter. The appliance will now receive power. Note: When AC output is not in use, it is recommended to turn off the AC output to conserve energy.



Important Warning

The AC output of this product complies with specific regional voltage and plug standards. Before use, verify that:

- The voltage and frequency of the AC output match your appliance's requirements.
- The plug type is compatible.

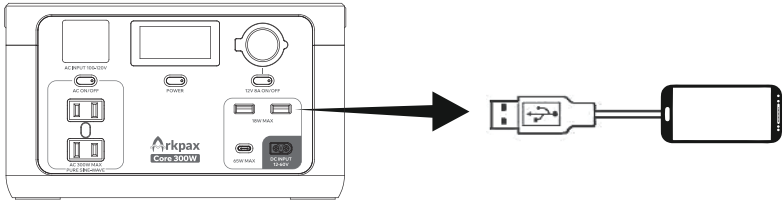
Failure to do so may result in malfunction or hazardous conditions.

AC Output Protection Features

Short Circuit / Overload Protection: If the AC output experiences a short circuit or exceeds 300W load, the system will shut down the AC output for safety. After resolving the issue, press the AC ON/OFF button again to restore operation.

Using the USB Output to Power Digital Devices

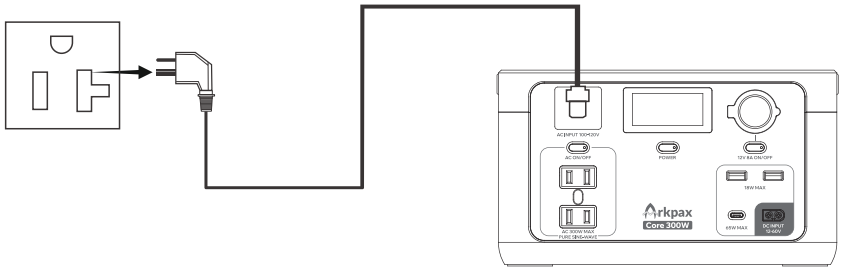
To charge USB-compatible devices using this product: Turn on the main power switch. Connect the digital device using its standard USB cable to one of the USB ports on the unit. Press the power button again to activate the USB output. If the USB output does not automatically supply power, try unplugging and reconnecting the USB cable to initiate charging.



Charging the Power Station

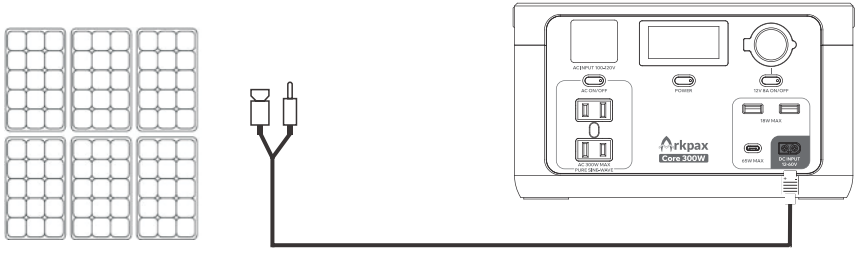
Charging via AC Power Outlet

Connect the product to a standard household AC wall socket using the supplied AC charging cable. When the battery icon on the display begins flashing, charging is in progress. Once the LCD shows 100%, the unit is fully charged. Unplug the AC cable promptly after charging is complete.
Note: This unit supports up to 180W of maximum AC input power.



Charging via Solar Panel (Optional Accessory)

Position the solar panel in a location with strong, direct sunlight. Connect the panel's output to the DC input port on the power station. A flashing battery icon on the LCD screen indicates that the unit is charging. When the LCD shows 100%, the battery is fully charged.
This product is equipped with MPPT (Maximum Power Point Tracking) technology. MPPT actively tracks and optimizes the voltage and current output of the connected solar panel in real time, allowing the power station to maximize energy harvest from varying sunlight conditions. This ensures faster and more efficient charging, especially in fluctuating environments.
Note: Actual charging efficiency may vary depending on sunlight intensity, ambient temperature, battery condition, and solar panel specifications.



Bypass Mode (UPS mode)

When the unit is charging and discharging simultaneously, it will automatically switch to battery-powered inverter mode in 10ms if grid power is interrupted. This provides basic backup power, ideal for regions with unstable electricity supply. Bypass mode maximum ampere 3.18A.

Charging via 12V Carport Socket

To charge the power station using your vehicle. Connect the 12V car outlet to XT-60 converter to charge the unit at 8A Max to the unit's XT-60 port. Plug the other end into your vehicle's 12V carport socket. A flashing battery icon on the display indicates that charging is in progress. When the LCD shows 100%, the battery is fully charged.
Note: To avoid draining your car's battery, it is strongly recommended to only charge this product while the vehicle engine is running.

MANUFACTURER'S DECLARATION

Declaration of conformity

Arkpax hereby declares that the Arkpax Core 300W portable power station complies with all applicable international safety and environmental standards, including but not limited to:

CE (Conformité Européenne)
FCC (Federal Communications Commission)
RoHS (Restriction of Hazardous Substances)
UN 38.3 (Transport of Lithium Batteries)

This declaration confirms that the device meets the essential requirements and other relevant provisions of the applicable directives.
Note: This declaration becomes void if the device is modified in any way that affects its electromechanical properties or safety features.

WEEE Declaration / Disposal



The Arkpax Core 300W is marked with the symbol of a crossed-out wheeled bin, indicating that it should not be disposed of with regular household waste. To prevent potential environmental harm and health risks, please dispose of this product at designated collection points for the recycling of electrical and electronic equipment.
Note: The integrated battery modules should only be removed by qualified personnel. Improper handling may lead to health hazards or environmental damage.

Licenses and Copyrights

All trademarks, product names, and company names mentioned in this manual are the property of their respective owners. The Arkpax Core 300W and its associated documentation are protected by copyright laws. Any unauthorized reproduction, distribution, or modification is strictly prohibited.

CONTACT

For assistance with your Arkpax Core 300W, including technical support, warranty claims, user manuals, FAQs, and product registration, please visit our Support Center (https://arkpax.com/pages/support).

Warranty Information

Arkpax warrants that the Core 300W is free from material and manufacturing defects. The Limited warranty period for the Core 300W is two (2) years, commencing from the date of original retail purchase. This warranty does not cover damage resulting from: accident, misuse, abuse, neglect, unauthorized modification, improper installation, use with incompatible accessories, exposure to liquids or extreme environments, or acts outside manufacturer's control. This warranty is not transferable.
For detailed warranty terms, including coverage periods, claim procedures, and exclusions, please refer to: https://arkpax.com/pages/warranty-policy

Customer Support

Email: info@arkpax.com
Live Chat: Available on our website at: www.arkpax.com

Warranty and Returns

To file a warranty claim, please prepare and provide the following information:

- Order number
- Purchase channel and date
- Contact information (email and phone number)
- Detailed description of the issue
- Relevant photos or videos demonstrating the problem

Send this information to our customer service team through our Support Center (https://arkpax.com/pages/support). We will review your claim and provide instructions on how to proceed.