



SANTAK® CASTLE SERIES ON-LINE UPS

# CASTLE UPS

Rack 1-3kVA



# Castle Rack 1-3kVA UPS Introduction

Castle Rack 1-3kVA UPS is on-line double conversion topology uninterruptible power supply with outstanding performance and provide reliable power to the critical equipment of customer. It can work perfectly in harsh utility environment, eliminate all kinds of disturbances in utility power and provide high quality and precise pure sinewave output to protect the precious equipment of customer. It is ideal solution for small power protection needs.

## HIGH RELIABILITY DESIGN IMPROVE THE PRODUCT COMPATIBILITY WITH DIFFERENT KIND UTILITY ENVIRONMENT, AND REDUCE THE FAILURE MAY OCCUR TO MINIMUM

- Wide input voltage and frequency range design is compatible with harsh power environment and reduce the use of battery and extend battery lifetime
- Enhance UPS reliability with high quality components and excellent control design in firmware



Wide  
Input voltage  
range  
115-300VAC

Adaptable  
to  
Harsh  
environment

Compatible  
with  
Generator

Ultra-low  
noise  
<40 dB

Configurable  
Backup time

## TYPICAL APPLICATION

- Network closet
- Telecom Rack
- Precise equipment
- Process control
- Security and monitoring
- IT equipment in medical and industry

## USER FRIENDLY & INTELLIGENT MANAGEMENT

- Provide various intelligent monitoring solution for IT and industrial environment to help user to realize the remote control and central monitoring easily
- Short depth save installation space
- Auto-restart when utility power is recovery, and support start-on-battery function
- WINPOWER software is compatible with virtualization platform



# Product Performance

## HIGH POWER DENSITY AND GREEN DESIGN

- 2U x 570mm depth delivery up to 3kVA backup power
- Green design with high output power factor, high efficiency and low input harmonic

## EASY USE, EASY EXTENSION

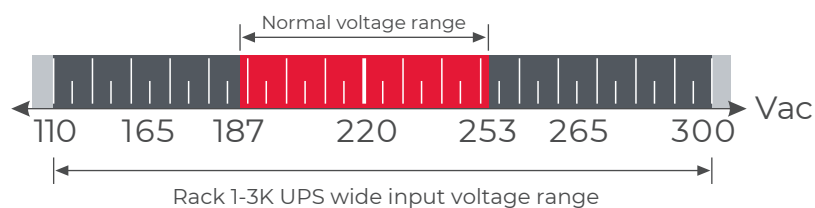
- 19inch standard cabinet or non-standard cabinet compliant
- Extendable backup time with EBM to meet long backup time needs from customer
- Resettable input circuit breaker
- Can start without mains
- Standard RS232 communication, NMC card, MODBUS card, Relay card optional

## HIGH ADAPTABILITY AND RELIABILITY

- Wide input voltage and frequency range, to minimize battery use and extend battery lifetime
- Online double conversion technology assure reliable high quality backup power to customer equipment
- Adapted to remote area with poor grid power
- Adapted to middle and big cities under power supply shortage pressure

Up to **0.9** output power factor

**Providing more power supply**



# RACK 1-3kVA UPS Product Specification

Model		Rack 1K	Rack 1KS	Rack 2K	Rack 2KS	Rack 3K	Rack 3KS
Power rating		1kVA		2kVA		3kVA	
Input	Input Voltage Range	(110-300)VAC					
	Frequency Range	40-70Hz					
	Input Power Factor	≥0.98					
Battery and charger	Rated Battery Voltage	24V	36V	48V	72V	72V	96V
	Type	Maintenance-free Sealed Lead-acid UPS Batteries					
	Number of Internal Battery	2PCS	-	4PCS	-	6PCS	-
	Recharge Current	1A	6A	1A	6A	1A	6A
Output	Nominal Output Voltage	220*(1±2%)VAC					
	Frequency Range	sync with line of +/-4Hz(Line mode)					
		50±0.05Hz (Battery mode)					
	Output Power Factor	0.9@30°C and 0.8@40°C;					
	Overload capacity	105%-150%, 47s-25s; 150%-200%, 25s-300ms; >200%, 200ms (0.8PF)					
	Outlet	IEC C13*6 pcs		IEC C13*3 pcs + C19*1 pc			
Transfer Time	Battery Mode<-->InverterMode	0ms					
	Inverter Mode<-->BypassMode	4ms (typical)					
Backup time (80% load, 0.8PF)		>4.5 min	depends on customer configuration	>4.5 min	depends on customer configuration	>4.5 min	depends on customer configuration
Indicator	LED	Load, battery capacity, UPS working mode					
Alarm	Battery Discharge	Battery full: 1buzzing/4s; Battery empty: 1buzzing/1s					
	UPS Alarm	Buzzing continue					
Auto restart		Auto restart while mains recover					
Interface	USB	Monitoring					
	Optional Parts	NMC Card, Modbus Card, Relay Card					
Environment	Temperature	0°C-40°C					
	Humidity	0-95%, non-condensing					
Net Weight	UPS	11	7.2	17.5	8.9	21.6	9.0
	EBM	-	20.0	-	20.0	-	24.8
Dimension (W*D*H)	UPS	438*420*87	438*420*87	438*570*87	438*420*87	438*570*87	438*420*87
	EBM	-	438*420*87	-	438*420*87	-	438*420*87

## Note:

\* All internal batteries are default as STK brand, any other battery brand might be applied without prior notice;



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SANTAK® CASTLE SERIES ON-LINE UPS

# CASTLE UPS

Rack 6-10kVA





# Crucial moment, Powering your business

## SANTAK UPS PROVIDE RELIABLE PROTECTION FOR CRITICAL EQUIPMENT AND DATA

- Higher power density, more power output
- Wider input range, higher efficiency
- Ultra low noise, multiple configurable options
- High quality LCD with wide view

### PRODUCT INTRODUCTION

Castle Rack 6-10K (S) UPS is a new generation smart UPS that can perfectly fit with the advanced modern IT equipment, specifically designed to efficiently address the high quality power needs for IT equipment, network communication and other applications.

Castle Rack 6-10K (S) product provides high adaptability and flexible configuration, and it is applied with leading DSP control technology and offer multiple and extendable options to meet the increasing customized application demand.



### TYPICAL APPLICATION

- Critical server and network device
- IT enclosure
- Equipment related to telecommunications and VoIP etc
- Banking and security system
- Healthcare system
- Manufacturing / control system
- Laboratory equipment, precision instruments etc

### PROVIDE SECURE AND RELIABLE POWER PROTECTION

- Output power factor of up to 1, meeting the protection requirements of the new generation IT equipment
- 95% online mode and 98% ECO mode. The green and environment-friendly design complies with new power source and reduces the operating costs for customers as well
- On-line double conversion technology, zero transfer time offering reliable power protection
- Built-in paralleling function to provide the highest level of power protection for the most critical system, thus ensuring the reliability >99.99%
- Compact size fits for rack, the height of 10KW UPS is only 2U with 600mm depth



## EBM (EXTENDED BATTERY MODULE)

UPS	Voltage	Battery Configuration
Rack 6K (S)	192VDC	16 x 12V, 7Ah
	240VDC	20 x 12V, 7Ah
Rack 10K (S)	192VDC	16 x 12V, 9Ah
	240VDC	20 x 12V, 9Ah

\* EBM default configuration is 192VDC

\* 240VDC EBM need confirmation before ordering

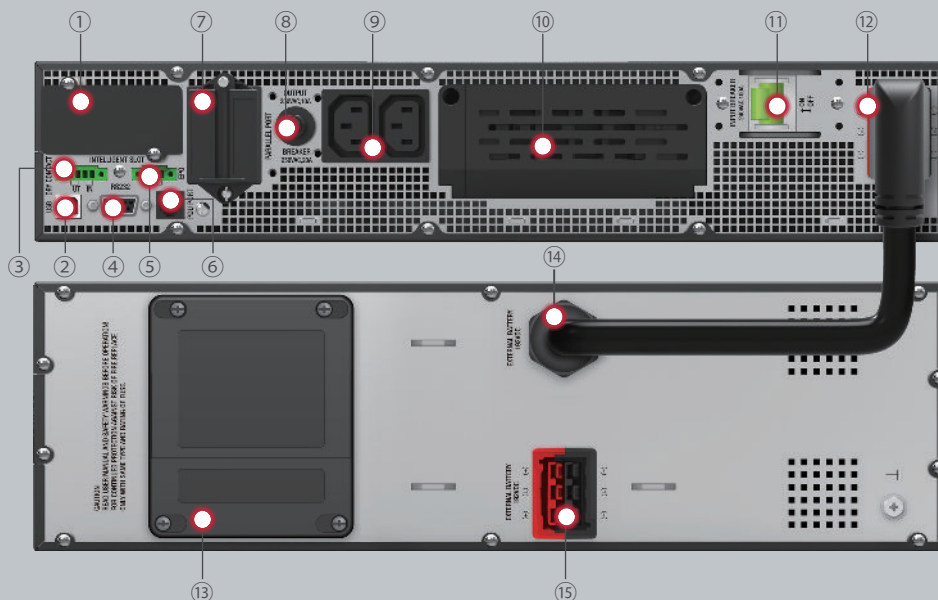
## FLEXIBLE CONFIGURATION, OFFERING CUSTOMIZED SOLUTION

- Adjustable recharge current, helpful to improve battery life based on different customer requirements
- Flexible battery configuration, 16/17/18/19/20 consequently adjustable
- Connect to 3U Battery PACK or extend to external battery group, easy configuration backup time
- RACK design and fits for standard RACK installation, meanwhile support tower installation

## EASY MANAGEMENT

- LCD Display
- Standard RS232,USB, EPO, configurable dry contacts communication port Provide intelligent slot card for NMC card, MODBUS card, Relay card optional

## REAR PANEL LAYOUT



- |                         |   |                                       |
|-------------------------|---|---------------------------------------|
| ① Intelligent slot      | ⑦ Parallel card (optional)              | ⑬ Fuse board cover (replace EBM fuse) |
| ② USB                   | ⑧ Output breaker                        | ⑭ EBM plug                            |
| ③ Dry IN/OUT            | ⑨ Output socket                         | ⑮ EBM connector                       |
| ④ RS232                 | ⑩ Input/Output terminal                 |                                       |
| ⑤ EPO                   | (4pole IPL, IPN, OPL, OPN. PE is screw) |                                       |
| ⑥ RJ11 (connect to PDU) | ⑪ Input breaker (optional)              |                                       |

# Rack 6-10kVA UPS Product Specification

Model		Rack 6K	Rack 6KS	Rack 10K	Rack 10KS
Power rating	VA/W	6000VA/6000W			10000VA/10000W
Input	Input voltage range	110~275VAC			
	Input frequency range	40Hz-70Hz			
	Input wiring	Single phase with ground			
	Input power factor	≥0.995			
Output	Output voltage	208/220/230/240 VAC			
	Output voltage tolerance	±1%			
	Output wiring	Single phase with ground			
	Output connection	2*IEC, 1*Terminal Block			
	Output frequency range	50/60Hz±0.1Hz (battery mode)			
	Output THDV	<1% (linear load) <5% (non-linear load)			
	Output waveform	Pure sinewave			
	Overload capability	10min @ 105~125% load 30S @ 125~150% load 0.5S @ >150% load			
Efficiency	Line mode	Up to 95%		Up to 95%	
	ECO mode	Up to 98%		Up to 98%	
Battery and charger	Battery quantity	16PCS default, 16/17/18/19/20 adjustable			
	Recharge time to 90% battery capacity	3 hours	depends on customer configuration	3 hours	depends on customer configuration
	Backup time	>4min @ 100% load >11min @ 50% load		>2.1min @ 100% load >8min @ 50% load	
	Recharge current	1.4A default, 0-4A adjustable	4A default, 0-12A adjustable	2A default, 0-4A adjustable	4A default, 0-12A adjustable
Display	LCD+LED	load rating/battery capacity/input/output/operating mode			
Communication and monitoring	Communication port	RS232, USB+EPO, Dry in/Dry out configurable.			
	Extendable communication card	Dry Contact Card, MODBUS Card, NMC Card are optional			
	Software	Winpower			
Physical parameters	Product dimension (W*H*D) mm	438* 86.3* 573mm (UPS) 438*129* 593mm (EBM)	438* 86.3* 573mm	438* 86.3* 573mm (UPS) 438*129* 593mm (EBM)	438* 86.3* 573mm
	Product weight (Kg)	14 (UPS) 46 (EBM)	14	16 (UPS) 52 (EBM)	16
Environment	Operating temperature	0-40℃			
	Operating humidity	0-95% (non-condensing)			
Standard		IEC62040, IEC60950			

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