



## Uninterruptible Power Systems

Chassis design of Sysgration is quite unique and sensational. Top quality materials and thermal management technology have been perfectly integrated without compromising the exterior.



### Company Profile

Sysgration provides a wide range of products and technology solutions to serve our customers, our main products includes computer peripherals, UPS (Uninterruptible Power Supply), Mobile Entertainment, VOIP Phone, Gaming Device, Air Purified Devices and Renewed Energy Products. With 30 years technical experience, flexible manufacturing and ISO-9001/ISO-14001/QS-9000 certificated capability; Sysgration offer ODM / OEM services to meet your unique requirements of custom-made, high quality, reliability and time to market.



### Milestone

1977	Sysgration Ltd. is founded in Taiwan Developed 1st product (Telephone Testing Equipment), made Sysgration the leading brand in the telephone testing field
1988	Launched Computer Peripherals (Mouse, Keyboard) and created the Agiler brand for its consumer products division
1993	Established Nan-Tou Factory 1 in Taiwan
1994	Established Nan-Tou Factory 2 in Taiwan Launched UPS (Uninterruptible Power Supplies) and created the UPGUARD brand
1996	Listed on the Taiwan OTC Launched modem products
1997	Established Sysgration (Cayman) Limited Established Sysgration (Shenzhen) Ltd. In China Established Nan-Tou Factory 3 in Taiwan
1998	Established Sysgration (B.V.I.) Limited Established Sysgration (Samoa) Limited
2000	Established Pinghu Factory in Shenzhen, China
2002	Attained ISO-9001 certification in Pinghu Factory
2003	Restructured management and development teams Established OED (Optical Electronic Devision), launched Mobile Entertainment products (Overhead roof mount, Travel bag LCD TV/DVD combination, Head Rest Monitor/DVD combination, LCD Car Back Monitor, Sunvisor monitor, Water Drip proof monitor, SPA monitor, Kitchen, Hospital, Marine and Hotel LCD TV/DVD combination) Established Sysgration USA INC. Established OED Taoyuan R&D Division
2004	Attained QS-9000 certification in Nan-Tou Factory Attained ISO-14001 certification in Pinghu Factory
2005	Established GPD (Gaming Peripheral Devision), launched Gaming Devices (Gamepad, Wheel, Game Mouse and Joystick) Established Taipei R&D Division Launched Renewed Energy Products (PV Inverter) Launched VoIP Phone (Skype Phone) & MouseFone (Mouse phone) products
2006	Attained ISO-9001 certification in Nan-Tou Factory MouseFone win iF product design award 2007 Launched Environmental Products (Air Purifier, Air cleaner)



### Head Office

Address: 10FL., No. 868-3, Chung Cheng Rd,  
Chung Ho City, Taipei, Taiwan  
Tel: 886-2-8221-7111  
Fax: 886-2-8221-7112 & 8221-7113  
**Space: 35,560 square feet**

### Pinghu Office

Address: E-Gong-Ling Village, Pinghu Town,  
Longgang, Shenzhen City, China  
Tel: 86-755-28451111  
Fax: 86-755-28455599  
**Space: 1,080,000 square feet**

### Nan Tou Factory

Address: No.28-2, Industrial N. Road,  
Nan-Kang Industrial Park, Nan-Tou City, Taiwan  
Tel: 886-49-226-3627  
Fax: 886-49-226-3628  
**Space: 200,000 square feet**

### Sysgration USA Inc.

Address: 1961 Miraloma Ave., Suite C,  
Placentia CA 92870, USA  
Tel: 1-714-986-9816  
Fax: 1-714-986-9856

### Certifications:

Pinghu Factory: ISO9001 & ISO140001 & RoHS certificate  
Nan Tou Factory: ISO9001 & QS9000



### PV Inverter

Soleil 2000 UL 1741 Certificate  
Soleil 2000 Isolating Transformer Certificate (120v and 240v)  
Soleil 2000 listed in California Energy Commision (CEC) Eligible Inverter List  
Line Inverter CE Mark

# The Power Equipment You Can Rely on

Sysgration offers power products designs which are unique and exciting. The company combines top quality engineering and power management technology to ensure high frequency magnetic and microelectronics switching in order to satisfy your requirements of data and equipment protection.

Sysgration is a leading innovative power manufacturer providing excellent quality, fast service, low cost, and more value to our ODM/OEM partners.

Sysgration continues to stress top quality and reliability in its full range of power products. We strive to stay one step ahead of our competition in an effort to offer our clients a technological edge. We support our business partners and assist them in being leaders in every vertical market they may enter.





Products:

- Fox Series
- Smart RM Series
- Smart Tower Series
- Pro+ Series
- Hornet Series
- Office Series
- SM Series
- SL Series :
- SG Series (PV Inverter)
- DC UPS Series
- Car Inverter Series



**FOX Series:**

- Double Conversion UPS ( On-Line UPS )
- VA : 1k ~ 10kVA
- Voltage : 110/115/120/127/208/220/230/240Vac
- Communication : RS-232 / USB / SNMP(optional)



**Smart RM Series:**

- Line-Interactive Sine-wave UPS ( Smart UPS )
- VA : 1k ~ 3kVA
- Voltage : 110/120/127/ 220/230/240Vac
- Communication : RS-232 / USB / SNMP(optional)



**Smart Tower Series :**

- Line-Interactive Sine-wave UPS ( Smart UPS )
- VA : 700 ~ 3kVA
- Voltage : 110/120/127/ 220/230/240Vac
- Communication : RS-232 / USB / SNMP(optional)



**Pro+ Series :**

- Line-Interactive Step-wave UPS
- VA : 500 ~ 1500VA
- Voltage : 110/115/120/ 220/230/240Vac
- Communication : RS-232 / USB (optional)



**Pro+ Series:**

- Line-Interactive Step-wave UPS
- VA : 1000 ~ 2200VA
- Voltage : 110/115/120/ 220/230/240Vac
- Communication : RS-232 / USB (optional)



**Hornet Series:**

- Line-Interactive Step-wave UPS
- VA : 500 ~ 1500VA
- Voltage : 120/ 230Vac
- Communication : USB



**Office Series:**

- Passive Standby UPS ( Off-line UPS )
- VA : 350 ~ 900VA
- Voltage : 120/ 230Vac
- Communication : USB



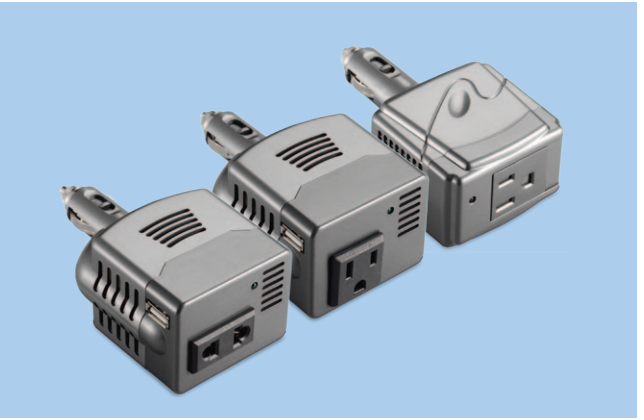
**SM Series :**

- Modify Sine-wave Inverter / Charger
- Watt : 1000 ~ 3600W
- Voltage Input : 12/24Vdc
- Voltage Output : 120/ 230Vac
- Max. Charging Current : 100A



**SL Series :**

- Pure Sine-wave Inverter / Charger
- Watt : 1000 ~ 3000W
- Voltage Input : 12/24Vdc
- Voltage Output : 120/ 230Vac
- Max. Charging Current : 80A



**Car Inverter Series :**

- Mobile Inverter
- VA : 75 ~ 175VA
- Voltage Input : 12Vdc
- Voltage Output : 120/ 230Vac + 5Vdc USB Power



# The Fox LCD Series On-Line UPS

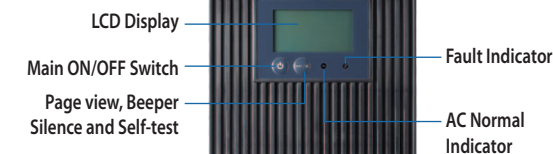
The On-Line UPS are the most updated microprocessor-based digital controlled sine wave online uninterruptible power systems which are designed to provide the high efficiency in normal mode operation and prevent any spikes, surges, sags and blackouts from reaching your sensitive equipment, ranging from computer and telecommunication systems to computerized instruments.

The monitoring software delivers data of the UPS operation, saves vital files automatically on unattended shutdown, schedules on or off the O/S on a daily or weekly basis and logs in the status of the UPS for future reference. It can support multiple operating systems. The optional SNMP/HTTP card allows your MIS department to monitor and control and control the UPS in real time via a LAN system or Web Browser.



- Double Conversion Design Provides High Reliability and Efficiency.
- High Frequency Designs to Lower the Size and Weight.
- Intelligent Microprocessor Control.
- True Sine Wave Output.
- User Configurable Output Voltage.
- Smart Battery Reminder.
- Self-Diagnostic Function can Provide Information for Troubleshooting Reference.
- RJ11 Data/Fax Modem Connection Provides Surge Protection from Telephone.
- 100 Base T RJ45 Connection Provides Surge and Spike Protection for Network.
- True RS232 Signal for Power Management Software.
- Optional SNMP/HTTP Card Connectivity for Remote Monitoring.

## Overview



## Fox 1k/2k/3k/6k/10kVA Tower Series

The Uninterruptible Power System of Fox LCD series provides you with the advanced technology in the modern world to protect computer, telecommunication instrument, electrical facilities, medical equipment, and any other important equipment from corruption or loss of data due to power line disturbance. The philosophy of design in power stage is through the combination of a Double-Conversion circuit to create continuous power for the load. It offers complete protection against a variety of power problems, such as blackout, brownout, electrical noise, spikes, sags, surges, voltage transient, and frequency variation.

## Specification

Model	1000	2000	3000	1000L	2000L	3000L
Capacity (VA/W)	1000VA/700W	2000VA/1400W	3000VA/2100W	1000VA/700W	2000VA/1400W	3000VA/2100W
Rated Power Factor	0.7					
AC Input						
Number of Phase	Single phase					
Voltage Range	160~276Vac for 220Vac (It can extend to 120Vac, if the output load is less than 40% load. ) 80~138Vac for 120Vac (It can extend to 60Vac, if the output load is less than 40% load.)					
Frequency Range	50/60Hz 60/50Hz					
AC Output						
Number of Phase	Single Phase					
Nominal Voltage	208/220/230/240Vac 110/115/120/127Vac					
Waveform	True Sine Wave					
Voltage Regulation	@ Resistive Load ±2%, @ Non-linear Load ±3%					
Harmonic Distrotion	THD<3% of at full Linear Lad, <5% at Full Non-linear Load					
Load Crest Factor Ratio	3:1					
Frequency Regulation	± 0.3Hz (Free Running)					
Over Load Capacity	105~125% ±10% for 1 minute, 126~150% ±10% for 10 seconds, > 150% ±10% Shutdown Immediately.					
Transfer Time	0 ms (Zero Transfer)					
Output Receptacles	4pcs IEC NEMA 5-15R x 4	6pcs IEC NEMA 5-15R x 6 + NEMA 5-20	6pcs IEC NEMA 5-15R x 6 + NEMA L5-30	4pcs IEC NEMA 5-15R x 4	6pcs IEC NEMA 5-15R x 6 + NEMA 5-20	6pcs IEC NEMA 5-15R x 6 + NEMA L5-30
DC start	Yes					
Battery						
Quantity	2	6	8	NA	NA	NA
Battery Voltage	24	72	96	24	72	96
Battery Type	Sealed, Maintenance-free lead acid)					
Run Time	3 Minutes	4Minutes	4.5 Minutes			
Recharge Time	8 hours to 90%(STD models)			Depends on the External Battery		
Interface						
Communications	RS232/USB (Optional)					
Protocol	Megatec Protocol					
Compatibility of Bundled software	UPSilon 2000 for Novell Netware, Windows series Operation Systems, Linux and Free BSD ( Basic Version)					
SNMP Capability	External SNMP Adapter( Optional)					
Features						
Protection	Overheat, Overload, Short-circuit, Surge,					
Noise Suppression	Complies with EN50091-2					
Spike Suppression	Complies with EN61000-4-5					
Display	LCD display the UPS status, & Green LED indicate Normal model, Red LED indicate Fault model					
Audible and Visual	Line Failure, Battery Low, Transfer to Bypass, Over Load, System Fault Condition					
Agency						
Marks	CE, BN60950, EN 50091-1-1					
Other						
Operating Temperature	0 ~ 40°C					
Altitude	0~3000m					
Humidity	95% RH Maximum, Non-Condensing					
Audible Noise	<50 dBA @1m					
Dimensions (WxDxH)mm	160 x 225.5 x 438	194 x 351 x 457	194 x 351 x 457.5	160 x 225.5 x 438	194 x 351 x 457	194 x 351 x 457.5
Weight (Kg)	12.6	27.5	31.4	8.3	15.8	16

Technical Specifications subject to change without notification.



# Fox 6/10kVA

The Uninterruptible Power Systems of Fox series provides you with the advanced technology in the modern world to protect computer, networking equipment, telecommunication instrument, electrical facilities, and any other important equipment from corruption or loss of data due to power line disturbance. By using the DSP technology, the Fox On-Line UPS not only can quickly monitor variable output conditions but also continuously offers pure sinewave power to critical equipment with real time sampling technique.



- DSP Control Guarantees High Reliability
- PWM Technology with IGBTs
- Wide Input Voltage Range
- Communication Ports Selectable : Smart RS-232 / USB and Intelligent Slot for AS-400, and SNMP Card
- Optional External Battery Socket Available for Extended Backup Time
- Cold Start Function
- Auto Self-testing System while Turning on the UPS
- Tower and Rack Mount Available
- Modular Design Available
- Maintenance Bypass Switch.
- Three-Step Intelligent Charging Mode Available
- N+X Parallel Redundancy and Capacity Expansion

## Specification

Model	Fox - 6k	Fox - 6kL	Fox - 10k	Fox - 10kL	Fox - 10k3
Capacity	6kVA / 4200W		10kVA / 7000W		10kVA / 7000W
Input					
Voltage Range	176 ~ 276Vac ± 3%				304 ~ 478Vac ± 3%
Frequency Range	46 ~ 54Hz / 56 ~ 64Hz ± 0.5Hz				
Phase	Single Phase with Ground				3 Phase with Ground
Rate Power Factor	0.7				
Output					
Voltage Range	Single Phase 200/220/230/240Vac ( Select by Vender )				
Voltage Regulation	± 1%				
Frequency Synchronize Range	46 ~ 54Hz / 56 ~ 64Hz, 50/60Hz Automatic, Cold start : 50Hz±0.5%				
Frequency ( Battery mode )	50Hz ± 0.1Hz				
Crest Factor	Yes				
No. of Outlets	3 : 1				
T.H.D.	Linear load < 3%, Non-linear < 5%				
Overload Capacity	105~130% for 10min, >130% 1min, >150% 200ms				
Waveform	Pure Sine Wave				
Efficiency	> 88%				
Battery					
Type	12V / 7Ah	Depending on the capacity of external batteries	12V / 9Ah	Depending on the capacity of external batteries	12V / 9Ah
Numbers	20		20		20
Backup Time ( 100% load )	8 minutes		5 minutes		5 minutes
Recharge Time	8 hrs. to 90%		8 hrs. to 90%		8 hrs. to 90%
Charge Current	1A	4A	1A	4A	1A
Chargeing Voltage	274Vdc ± 1V				
Transfer Time					
AC to DC	0 ms				
Inverter to Bypass	0 ms				
Indicator	LCD + LED display				
Redundancy	Yes				
Communication Inter-face	RS-232 ; SNMP card ( Option )				
Safety	CE , UL				
EMC	EMI (Conduction):CLASS A, EMI (Radiation):CLASS A, IEC61000-4-2(ESD):Level 4 IEC61000-4-3(RS):Level 3, IEC61000-4-4(EFT):Level 4, IEC61000-4-5(Surge):Level 4				
Environment					
Temperature	0 ~ 40°C				
Humidity	20 ~ 95% ( Non-condensing )				
Altitude	0 ~ 1500 meter, ( Add 500 Meter de-rating 10% power )				
Noise Level	< 55 dB @ 1 meter				
Dimension					
Unit (WxDxH)	260 x 570 x 717				
Packing (WxDxH)	375 x 670 x 800				
Weight					
Unit Net	89 kg	34 kg	91 kg	36 kg	92 kg
Gross Weight	104 kg	48 kg	107 kg	51 kg	108 kg

Technical Specifications subject to change without notification.



# Smart RM Series

## with Extended Backup Time

### Reliable Power Protection for Office, Workstation and Server

*The Smart Long Backup Time UPS Series is a cost effective solution for computer server protection. The True Sine Wave output and Boost & Buck function makes the UPS a better choice than Off-Line or On-Line UPS. The monitoring software delivers data of the UPS operation, saves vital files automatically on unattended shutdown, schedules on or off of the O/S on a daily or weekly basis and logs in the status of the UPS for future reference. It can support multiple operating systems. The optional SNMP/HTTP card allows your MIS department to monitor and control the UPS in real time via a LAN system or Web Browser.*



- Pure sine wave output.
- Automatic Voltage Regulation (AVR)
- Advanced equipment & data protection from blackouts, brownouts, sags, AC line noise and surges.
- Telephone Transient Protector guards your telephone, fax, modem machine from surges.
- Start-on-battery capability allows you to power up the UPS even if utility power is not available.
- Expansion slot is for the optional SNMP CARD for the network management / monitor.
- Full analytical high performance micro-processor control with true RMS synchronous calculation.
- Intelligent battery management for battery status, battery power saving & battery replacement control.
- True RS232 & Contact Closure Signal for UPS management Software..

#### Specification

Model	Smart 1000	Smart 1500	Smart 2200	Smart 3000
Topology	Line Interactive			
Type	Tower / Rack			
Capacity	1000VA/800W	1500VA/1200W	2200VA/1760W	3000VA/2400W
Input				
Nominal Voltage	110V/120V/127V for LV / 220V/230V/240V for HV			
Voltage Range	0~170VAC for LV / 0~320VAC for HV			
Frequency Range	50/60Hz (auto sensing)			
Output				
Nominal Voltage	110V/120V/127V for LV , 220V/230V/240V for HV			
Voltage Regulation	Line Model: Nominal ± 10%; Battery Model: Nominal ± 5 %			
Frequency Regulation	50/60Hz±0.5Hz			
Waveform	Sine wave			
Transfer Time	4-6 ms ( Max. 10 ms )			
Overload Protection	Yes			
No. of Outlets	6 IEC 320-C13		8 IEC 320-C13 + 1 IEC 320-C19	
Battery				
Battery Voltage	48V	48V	72V	72V
Battery Type	Sealed, Maintenance-free lead acid)			
Backup Time	> 5 minutes	> 5 minutes	> 3 minutes	> 3 minutes
Cold Start	Yes			
TEL/FAX Surge Suppression	RJ11/45 (1in/1out)			
Indicators				
Display	LED type or LCD			
Audible Alarms	Overload, On battery, Low battery and Bad battery			
Communication				
Interface	USB/RS232			
SNMP Card Slot	Yes			
Physical				
Dimensions(W×D×H)mm	89×500×432		89×625×432	
Net Weight	18kg	25kg	36kg	40.8kg

Technical Specifications subject to change without notification.



# Smart Series

## Reliable Power Protection for Office, Workstation and Server

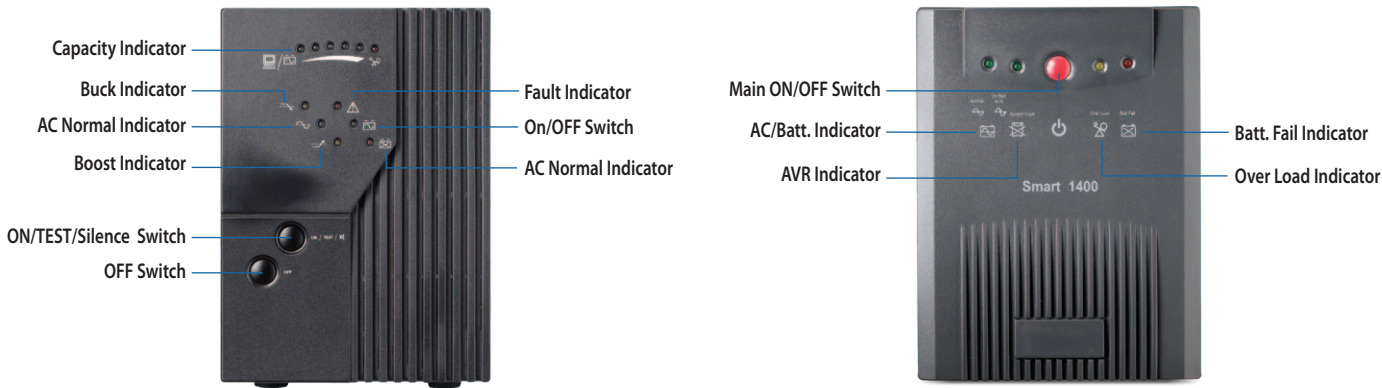
The Smart Series uninterruptible power system (UPS) protects your sensitive electronic equipment from basic power problems such as power failures, power sags, power surges, brownouts, and line noise. Power outages can occur when you least expect it and power quality can be erratic. These power problems have the potential to corrupt critical data, destroy unsaved work sessions, and damage hardware causing hours of lost productivity and expensive repairs.

With the Smart Series UPS, you can safely eliminate the effects of power disturbances and guard the integrity of your equipment. The Smart Series UPS's flexibility to handle an array of network devices makes it the perfect choice to protect your LANs, servers, workstations, and other electrical equipment.



- Pure sine wave output.
  - Automatic Voltage Regulation (AVR)
  - Advanced equipment & data protection from blackouts, brownouts, sags, AC line noise and surges.
  - Telephone Transient Protector guards your telephone, fax, modem machine from surges.
  - Start-on-battery capability allows you to power up the UPS even if utility power is not available.
- Expansion slot is for the optional SNMP CARD for the network management / monitor.
  - Full analytical high performance micro-processor control with true RMS synchronous calculation.
  - Intelligent battery management for battery status, battery power saving & battery replacement control.
  - RJ48 port for Rs232 & USB communication interface.

Overview



Specification

Model	Smart 750	Smart 1000	Smart 1500
Topology	Line Interactive		
Type	Tower		
Capacity	800VA/550W	1100VA/700W	1500VA/1000W
Input			
Nominal Voltage	100/110/120Vac for LV 200/220/240Vac for HV		
Voltage Range	0 ~ 160Vac for LV 0~288Vac for HV		
Frequency Range	50/60Hz		
Output			
Nominal Voltage	100/110/120Vac for LV 200/220/240Vac for HV		
Voltage Regulation	13%		
Frequency Regulation	50/60Hz		
Waveform	True sine wave		
Transfer Time	3~6ms (Max 12ms)		
Overload Protection	Yes		
No. of Outlets	NEMA5-15 x 6 or IEC 320 x 6		
Battery			
Battery Voltage	24V		
Battery Type	Sealed, Maintenance-free lead acid)		
Backup Time	>3 min.		
Cold Start	Yes		
TEL/FAX Surge Suppression	RJ11/45 (1 in/1 out)		
Indicators			
Display	LED indicator		
Audible Alarms	Overload, On battery, Low battery and Bad battery		
Communication			
Interface	USB/RS232		
SNMP Card Slot	Yes		
Physical			
Dimensions (WxDxH)mm	140×311×178	140×311×178	140×311×178
Net Weight	13.3kg	14.8kg	16.1kg

Technical Specifications subject to change without notification.



# Pro+ Series

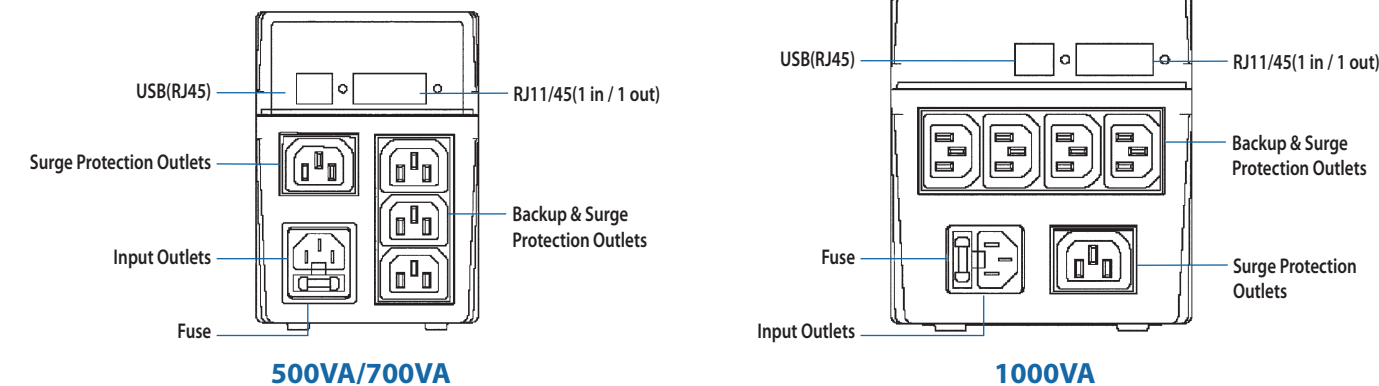
## Reliable Power Protection for Office, Workstation and Server

*The UPS is a extremely reliable standby uninterruptible power system designed to keep computers and peripheral devices such as computer, storage subsystems, fax, modems, etc. performing from utility line failures which could result in damage of data. In the event of utility failure, the UPS supplies power to your equipment derived from a battery within the UPS and provides visual and audible indicators which alert you to utility line failures therefore the user has ample time to save file and close operations. Whenever the UPS is plugged in, the UPS maintains the battery in a charged condition and serves to protect your equipment from surges and noise brought from utility.*



- Automatic Voltage Regulation (AVR stabilization automatically corrects the deepest brownouts and overvoltage condition without draining the battery thereby preserving battery power).
- Total microprocessor control (PIC)
- Automatic battery test and indicator for low battery & bad battery
- Step wave output in battery operation with RMS value compensation
- Automatic Diagnostic Testing (Biweekly testing of all internal components, including the battery, ensures your unit is ready when you need it.
- Selectable threshold for switch to battery operation
- DC start (User can power on the UPS without any input power for temporary emergency power)
- Replace Batt Indicator (Proactively warns the user that the battery needs to be charged or replaced)
- RS232 interface plus intelligent UPS software for Win9X/Me/2000/XP/NT 4.0/Linux (optional) Software file-saving, auto-shut-down, load capacity, battery level and input/output voltage indication.
- Fax/modem/data line protection (optional)
- 2-year warranty plus life-time service

### Overview



### Specification

Model	Pro+500	Pro+700	Pro+1000	Pro+1500
Capacity Rating	500VA/300W	700VA/420W	1000VA/600W	1500VA/900W
Rated Power Factor	0.6			
AC input				
Nominal Input Voltage	110/115/120Vac for LV, 220/230/240Vac for HV			
Voltage range	80 ~ 150Vac / 165 ~ 288Vac			
Frequency Rang	50/60Hz±5Hz ( auto sensing)			
AC output				
Nominal Voltage	+10%~-15%			±10%
Waveform	Simulated sine wave			
Voltage regulation	±5% (Battery Mode)			
Load Crest Factor Ratio	3:1			
Frequency Regulation	50/60Hz±1%			
Over Load Capacity	110% warning and UPS shut off after 10seconds,120% turn off at once			
Transfer Time	4ms typical, 10ms Max			2ms typical, 8ms Max
DC start	Yes			
Battery	12V/7Ah	12V/9Ah	12V/5Ah	12V/9Ah
Quantity	1pcs	1pcs	2pcs	2pcs
Battery Voltage	12V	12V	24V	24V
Battery Type	Sealed, Maintenance-free lead acid)			
Run Time	5~10 min typical			
Recharge time	8 hours typical, 12 hours Max			
Interface				
Communications	RS 232, USB			RS 232
Features				
Protection	Over load, Over heat, surge, short-circuit			
RJ 11/45 Protection	RJ-11 Telephone Cable and RJ-45 Network Cable Surge Suppression			
Display	LED			
Agency				
Marks	UL, CE			
Other				
Operating Temperature	0-40°C			
Altitude	0~3000m			
Humidity	95% RH Maximum, Non-Condensing			
Audible Noise	<50 dBA @1m			
Dimensions (W×D×H)mm	97×320×140	97×320×140	122×398×145	160×420×216
Weight	5.6kg	6.5kg	8.9kg	16kg

Technical Specifications subject to change without notification.



# Hornet Series

## Reliable Power Protection for Home, Office and Workstation

The Hornet Series uses line Interactive technology to fully protect your personal computers, internetworking equipment and other sensitive electronics.

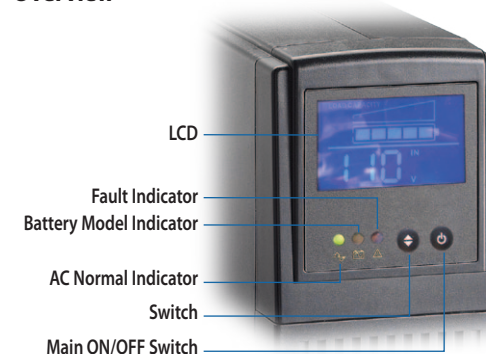
With built-in AVR function (220V version), the Hornet Series can operate under a wide range of input utility power while maintaining steady output voltage. The wide input voltage range avoids frequent transfers to DC power (battery mode). Whenever the UPS is plugged in, the UPS maintains the battery in a charged condition and serves to protect your equipment from surges and noise brought from utility.

The Hornet Series is the compact design and well suited to the SOHO. With the USB connectivity with UPS monitor software, the Hornet Series supports real-time power & UPS status monitoring, automatic shutdown, schedule ON/OFF and many other advanced power management functions.



- Advanced equipment & data protection from blackouts, brownouts, sags, AC line noise and surges.
- Full analytical high performance micro processor control with true RMS synchronous calculation.
- Intelligent battery management for battery status, prevent over charge & deep discharge for longevity battery performance.
- DC start up capability, complete diagnostic indication and control.
- Overload / Replace Battery / On Battery / On Line indication.
- Automatic Voltage Regulation (AVR, for 220V version only)
- Telephone RJ11 & Network RJ45 protection for 1000VA.
- Advanced UPS Software Management for 1000VA.
- USB communication interface for 1000 / 1500VA.
- Smart Microprocessor Control.

### Overview



### Mini Tower Type 600/1000/1500VA UPS

With the advancement in the information technology, an increasing number of server or devices such as Modem, Hub and Router are susceptible to surge and spike from common utility coming through the telephone line or LAN line; therefore, this series also have added surge and spike protection for RJ11 and RJ45 connection.

### Specification

Model	Hornet 600	Hornet 1000	Hornet 1500
Topology	Line Interactive		
Capacity	600VA/300W	1000VA/500W	1500VA/900W
Input			
Nominal Voltage	120V/230V		
Voltage Range	96~138V/174~262V		
Frequency Range	50/60Hz±5Hz ( Auto sensing)		
Output			
Nominal Voltage	120V / 230V		
Voltage Regulation	±10% ( Battery Mode)		
Frequency Regulation	50/60Hz±1%		
Waveform	Simulated Sine Wave		
Transfer Time	4~6ms typical. 10ms Max		
Over load Protection	Yes		
No. of Outlets	<b>120V Version</b> 6pcs NEMA 5-15R <b>220V Version</b> 3pcs IEC-320	<b>120V Version</b> 6pcs NEMA 5-15R <b>220V Version</b> 6pcs IEC, 4pcs shuko	<b>120V Version</b> 8pcs NEMA 5-15R <b>220V Version</b> 8pcs IEC-320
Battery			
Battery Capacity	12V/5Ah	12V/9Ah	2 x 12V/9Ah
Battery Type	Sealed, Maintenance-free lead acid)		
Backup Time	2~ 3 min	3 ~ 5 min	4 ~ 7 min
Recharge Time	8 hours typical, 12 hours max		
Cold Start	Yes		
TEL/FAX Surge Suppression	No	RJ11/45 (1 in / 1 out)	
Indicators			
LEDs	On line, Over load, On battery and Bad battery, LCD display for 1500VA		
Audible Alarms	Overload, On battery, Low battery and self-test		
Communication			
Interface	No	USB	
Physical			
Dimensions (WxDxH)mm	154×110×210mm	180×152×240mm	86×410×275mm

Technical Specifications subject to change without notification.



Office Series

Reliable Power Protection for Home and Home Office Computer

*This series are specifically designed for personal computer and workstation applications. It offers dependable power protection in a light weighted, graceful and sleek design, fits nicely into today's modern office design.*

*With built-in Boost function, this series can operate under a wide range of input utility power while maintain steady output voltage. This is especially critical for equipments that require consistent backup power or working under high utility fluctuation. As the increasing of computer peripherals in a computer system, additional surge protected outlets are provided to protect your printer, scanner or other peripheral devices from surges, spikes, and electro-magnetic interference.*

*Besides providing power protection and EMI/RFI to output load, this series also provides surge and lightning protection for data/fax Modem line (RJ11) thus further enhancing the protection capabilities. With the outstanding cost-performance design, it is the best choice for home and office application all over the world.*



Flat Pack Style UPS

- High Frequency Design.
  - Resettable circuit Breaker.
  - LEDs Display function
  - Widely spaced outlets.
  - Compact design fit on/under your desk or mounts on the wall.
  - Surge protection for Modem / Fax / 10 Base T modular combinations.
- Three battery backup with surge protected outlets and three surge protected outlets.
  - Battery Hot Swappable, Easy TO Access and Replaceable With Wireless Connection.
  - Widely spaced outlets.

Specification

Model	Office Beetle 350	Office NT 300/500VA	Office Lighthouse 350/500
Capacity	350VA/200W	300VA/180W; 500VA/300W	350VA/180W ; 500VA/250W
Input			
Nominal Voltage	120Vac	120V	220Vac
Frequency Range	50/60Hz	50/60Hz	50Hz
Acceptable Voltage	98~135V	120±15V	187 ~ 253V
On line input freq. limits	±2Hz	±5%	±5%
Output			
Nominal Voltage	120V±15%	120V±10%	220V±12%
Frequency Regulation	50/60±1Hz		
Waveform	Stepped wave		
Typical back up time	5 min	10 ~ 15 min.	
Transfer Time	4 ms typical, 8ms max		
No. of Outlets	4pcs NEMA 5-15R	3 Rev. IEC (NEMA 5-15R)	4 x Shuko Outlets
Noise filter	Full time EMI/RMI filtering, 100KHz to10MHz		
Surge energy rating,	360 joules	877 joules	220 joules
Surge current capability	6500A		
Surge response time	0 ns normal mode, <5 ns common mode		
Surge voltage let through	0.7 subject to IEEE,686 Cat. At 6KV test		
Processor	RISC based micro processor		
Protection	Over current, short-circuit, overload, lightening, surge, noise, sages, brownout, blackout, input breaker, telephone line& 10 Base-T		
Alarm signals	audible signals, < 45dba at 1 meter		
Input socket	6 ft 16awg	Strain relief to 5-15P	Strain relief
Output socket		3 Rev. IEC (NEMA 5-15R)	
Operating environment	0~40°C, 0~95% RH, non condensing		
Battery			
Battery Type	Sealed and leak proof maintenance free lead-acid		
Backup Specification	1pcs 12V/3Ah	300VA:1pcs 12V/4.5Ah 500VA: 1pcs 12V/5Ah	350VA:1pcs 12V/4.5Ah 500VA: 1pcs 12V/5Ah
Recharge Time	8 hours to 90% (Typical)		
TEL/FAX Surge Suppression	RJ11/45( 1 in/ 1 out)		
Physical			
Dimensions (WxDxH)mm	280×115×70	120×80×300	335×130×85
Net Weight	2kg	3.0/3.0/3.2//3.2kg	3kg

# Office XP Series

## Reliable Power Protection for Home and Home Office Computer

*This series are specifically designed for personal computer and workstation applications. It offers dependable power protection in a light weighted, graceful and sleek design, fits nicely into today's modern office design.*

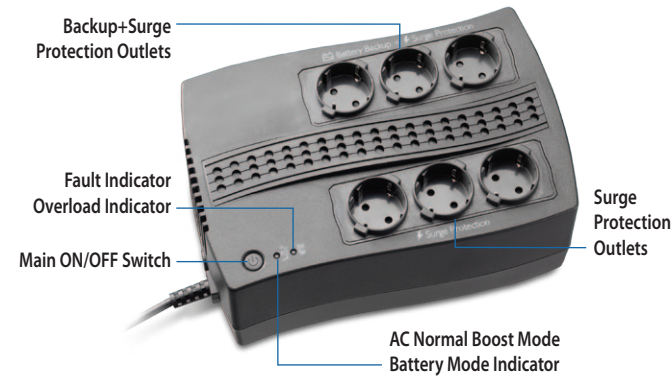
*With built-in Boost function, this series can operate under a wide range of input utility power while maintain steady output voltage. This is especially critical for equipments that require consistent backup power or working under high utility fluctuation. As the increasing of computer peripherals in a computer system, additional surge protected outlets are provided to protect your printer, scanner or other peripheral devices from surges, spikes, and electromagnetic interference.*

*Besides providing power protection and EMI/RFI to output load, this series also provides surge and lightning protection for data/fax Modem line (RJ11) thus further enhancing the protection capabilities. With the outstanding cost-performance design, it is the best choice for home and office application all over the world.*

- Smart Microprocessor Control.
- Smart AVR for Low Input Line.
- Overload Protection and alarm.
- Over Voltage Protection.
- Start on Battery Function (Cold Start).
- Easy Battery Replacement Mechanism.
- Intelligent Battery Management.

- EMI/RFI Noise Filter, Lightning and Surge Protection.
- Fax/Modem Surge Suppression Port.
- Compact design fit on/under your desk or mounts on the wall.
- Protection for cable / satellite inputs. (Optional)

Overview



Flat Pack Style 650VA AVR UPS

*With the advancement in the information technology, an increasing number of server or devices such as Modem, Hub and Router are susceptible to surge and spike from common utility coming through the telephone line or LAN line; therefore, this series also have added surge and spike protection for RJ11 and RJ45 connection.*

Specification

Model	XP-650UA	XP-650UAC
Topology	Line Interactive	
Capacity	650VA / 325 Watts	
Input		
Nomina	Voltage 230Vac	
Voltage Range	172Vac ~ 272Vac	
Frequency Range	50 / 60 Hz ± 6Hz (auto sensing)	
Output		
Nominal Voltage	230Vac ± 10%	
Voltage Regulation	230Vac ± 5% (Battery Mode)	
Frequency Regulation	50 / 60 Hz ± 0.5Hz (Battery Mode)	
Waveform	Simulated sine wave	
Transfer Time	< 4ms (Typical)	
Overload Protection	Battery mode: 130% Shutdown	
No. of Outlets	6pcs	
Battery		
DC Voltage	12Vdc, Sealed and Maintenance-free Lead Acid	
Backup Time	2 ~ 20 Minutes (Depends on load)	
Recharge Time	< 8 Hours to 80% (Typical)	
Cold Start	Yes	
TEL / FAX Surge Suppression		
Type	RJ11/45 (1 in / 1 out)	
Cable / Satellite Input Protection	No	1 in / 1 out
Indicators		
LEDs	On line, On AVR, On battery, Low battery, Replace battery, Overload	
Audible Alarms	On battery, Low battery, Overload	
Communication Interface	USB	
Physical		
Dimensions (WxDxH)	277 x 182 x 118 (10.9" x 7.2" x 4.6")	
Net Weight	6.2kg (12.6 lb)	

● The XP Series supply French, German and British outlets.

Technical Specifications subject to change without notification.



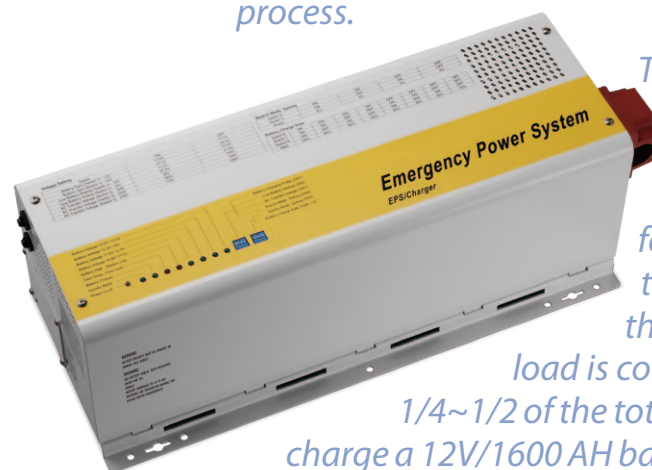
# Line Inverter Series

## Powerful Inverter with Smart Charger and long backup time

### SM Series

The SM power system not only is an inverter but also contains a powerful smart charger. Actually, it contains three modules in a single unit: inverter, charger and switch.

The SM Inverter is a heavy-duty, continuous working module generating a sinusoidal modified step wave from a 12V/24V - battery bank, which can supply energy to various loads such as resistive load (heater), inductive load (air conditioners, refrigerator), motors (vacuum cleaners), and rectifier load (computer). All SM INVERTER series are designed to work in heavy load condition. De-rating is not necessary. It provides a rapid and complete charging process.



The smart charger can be set with different charging profiles and battery capacities to match in various battery types and sizes. The switch module automatically diverts the energy transfer path between inverter and utility source. When the utility source is lower than the transfer level, the path switches to the inverter. Otherwise the load is conducted to the utility source. The transfer time is 1/4~1/2 of the total cycle time. The high power charger (120A) can charge a 12V/1600 AH battery bank in 14 hours. For example, a single unit of Inverter 2424 with a 1600 AH battery bank can supply a 2000W workload for over 8 hours after a charge of 14 hours.

- Continuous output inverter and high power battery charger included
- Three-stage charger with battery type selector
- High efficient, high surge capacity and low idle current
- Loading sensing adjustable
- Supply energy to various loads such as resistive load, inductive load, motors and rectifier load
- Long backup time to 10 hours( based on the battery bank and loads)

### For various loads such as Heater, Air Conditioner, Refrigerator, Vacuum Cleaner and PCs

With the advancement in the information technology, an increasing number of server or devices such as Modem, Hub and Router are susceptible to surge and spike from common utility coming through the telephone line or LAN line; therefore, this series also have added surge and spike protection for RJ11 and RJ45 connection.

#### Specification

Model	SM 1012	SM 1024	SM 1512	SM 1524	SM 2412	SM 2424	SM 3624
Continuous Power	1000 Watts	1000 Watts	1500 Watts	1500 Watts	2400 Watts	2400 Watts	3600 Watts
Efficiency	90% max.						
Output Waveform	Simulated Sine Wave						
Input Power at Rated Power	130 amps	65 amps	165 amps	82.5 amps	264 amps	132 amps	198 amps
Input Power at Short Circuit	350 amps	200 amps	400 amps	225 amps	720 amps	360 amps	540 amps
Nominal Input Voltage	12 VDC	24 VDC	12 VDC	24 VDC	12 VDC	24 VDC	24 VDC
Input Voltage Range	10.8 ~ 15.0 VDC	20.0~30 Vdc	10.0~15 Vdc	20.0~30 Vdc	10.0~15 Vdc	20.0~30 Vdc	20.0~30 Vdc
Auto Low Battery Protection (Heavy/Light Load)	10.0 Vdc	20.0 Vdc	10.0 Vdc	20.0 Vdc	10.0 Vdc	20.0 Vdc	20.0 Vdc
DC mode output Voltage Regulation	±10%						
Power Factor Allowed	0.8 to 1						
Frequency Regulation	± 1 Hz						
Standard Output Voltage	120 / 220 / 230 Vac						
Loading Sensing (Power Saving)	Selectable 0, 2%, 4%, 6%						
Transfer Time	1 Cycle						
Forced Air Cooling	Variable Speed						
Automatic Transfer Relay	15A				30A		
Adjustable Charge Rate	7 ~ 40 amps	7 ~ 30 amps	7 ~ 50 amps	7 ~ 35 amps	7 ~ 100 amps	7 ~ 50 amps	7 ~ 70 amps
Three Stage Charging	Yes						
Resistive Load	100%						
Inductive Load	Yes						
Motor Load	Yes						
Rectifier Load	Yes						
Wall Mounting	Yes						
Shipping Weight (kg)	22.5	22.5	22.5	22.5	24.5	24.5	25
Dimensions (mm)WxDxH	415x225x183				520x225x183		

Technical Specifications subject to change without notification.

# Line Inverter Series

## Powerful Inverter with Smart Charger and long backup time



### SL Series

The SL power system is an inverter but also contains a powerful smart charger. It provide a pure sine wave power to all equipments.

The SL inverter is a heavy-duty, continuous working module generating a sinusoidal wave from a 12/24V - battery bank, which can supply energy to various loads such as resistive load (heater),inductive load (air conditioners, refrigerator),motors (vacuum cleaners), and rectifier load

(computer).All SL series are designed to work in heavy load condition. Derating is not necessary. It provides a rapid and complete charging process.

The smart charger can be set with different charging profiles and battery capacities to match in various battery types and sizes. The switch module automatically diverts the energy transfer path between inverter and utility source. When the utility source is lower than the transfer level, the path switches to the inverter. Otherwise the load is conducted to the utility source. The transfer time is 1/4~1/2 of the total cycle time. The high power charger (40A) can charge a 24V/400 AH battery bank in 10 hours.

SL series is an extremely good choice for utility back up power. However, it also can be used as a UPS for computers.

An inverter, charger and switching box can be replaced with a single SL series unit.

- Pure sine wave output
- Continuous output inverter and high power battery charger included.
- Quiet, high-efficiency operation, high surge capacity and low idle current.
- Supply energy to various loads such as resistive load, inductive load, motors and rectifier load.
- Seamless transfer switching (grid / generator to battery and battery to grid / generator).
- Load sensing adjustable.
- Long backup time up to 10 hours (based on the battery bank and loads).

### For various loas such as Heater, Air Conditioner, Refrigerator, Vacuum Cleaner and PCs

With the advancement in the information technology, an increasing number of server or devices such as Mo-dem, Hub and Router are susceptible to surge and spike from common utility coming through the telephone line or LAN line; therefore, this series also have added surge and spike protection for RJ11 and RJ45 connection.

#### Specification

Model	SL 1012	SL 1512	SL 2012	SL 1024	SL 1524	SL 2024	SL 3024
Continuous Power	1000 Watts	1500 Watts	2000 Watts	1000 Watts	1500 Watts	2000 Watts	3000 Watts
Efficiency	85% max.			87% max.			
Output Waveform	Sine wave						
DC Power at Rated Power	120 amps	180 amps	240 amps	60 amps	90 amps	120 amps	180 amps
DC Power at Short Circuit	360 amps	540 amps	720 amps	180 amps	270 amps	360 amps	540 amps
Nominal Input Voltage	12 Vdc			24 Vdc			
DC Input Voltage Range	10.0 ~ 15 Vdc			20.0 ~ 30 Vdc			
Auto Low Battery Protec-tion (Heavy/Light Load)	10.0/11.0 Vdc			20.0/22.0 Vdc			
DC mode output Voltage Regulation	±10%						
Power Factor Allowed	0.8 to 1						
T.H.D.	< 5%						
Power Factor Allowed	0.8 to 1						
Frequency Regulation	± 1 Hz						
Standard Output Voltage	120 / 220 / 230 Vac						
Loading Sensing (Power Saving)	150W ~ 220W						
Transfer Time	12 ms Max.						
Forced Air Cooling	Variable Speed						
Automatic Transfer Relay	15A		30A	15A		30A	
Adjustable Charge current	4 ~ 40 A	5 ~ 50 A	8 ~ 80 A	2 ~ 20 A	2.5 ~ 25 A	4 ~ 40 A	6 ~ 60 A
Number of Charge Profiles	2						
Resistive Load	100%						
Inductive Load	Yes						
Motor Load	Yes						
Rectifier Load	Yes						
Wall Mounting	Yes						
Shipping Weight (kg)	16.12	18.45	23.21	15.79	18.56	20.21	25
Dimensions (mm)WxDxH	415x225x183		520x225x183	415x225x183			520x225x183

Technical Specifications subject to change without notification.



# Grid-Tied PV Inverter Series

## Powerful Inverter for home and industrial applications



*The design of this series inverter was advanced in close cooperation with universities and PV research specialists, and executed through constant communication with numerous PV system operators. This is the confidentiality of our products: the synthesis of ideas and requests that we get from people using photovoltaic's in practice. Complete customer satisfaction is our confidential key element.*

*The combination of forward-thinking originality and practical development makes this series inverter into one of the most powerful and user-friendly on the market. It is possible to realize consistently outstanding energy gains even when using them on situations with appropriate irradiance values.*

- Quiet, efficient operation, utilizing high frequency solid-state design.
- Compact size and high power density.
- Heat sink keeps the unit clear and more efficient over time.
- DSP-controlled based with sophisticated control and self-diagnostic algorithms.
- High speed MPPT operation for real time power tracking and improved energy harvesting.
- Front panel LCD display shows system status and power production information.
- Communication RS-232/485 interface for remote power monitoring.
- DC disconnect switch meet NEC standard, Article 690.
- Transformer-less operation for highest efficiency.
- High overload capability.
- Certified grid connected operation according to UL 1741-2005.

Specification

Model	Soleil-2000-120	Soleil-2000-240	SG-4000-240	SG-6000-240
Capacity				
Output Power	2000W		4000W	6000W
Input				
Maximum PV open Voltage	450Vdc		600Vdc	
MPPT Range	150~420Vdc		240~480Vdc	
Working Range	150~450Vdc		230~600Vdc	
System Start-up Voltage	180Vdc		200Vdc	
Maximum Input Current	15A		20A	30A
Output				
Operational Voltage	120Vac	240Vac		
Operational Voltage Range	106~132Vac	211~264Vac		
Operational Frequency	49.3~50.5Hz @ 50Hz / 59.3~60.5Hz @ 60Hz			
Power Factor	> 0.99 @ full load			
Current Distortion	< 4%			
Maximum Efficiency	> 92%		> 94%	
Anti-Islanding	Yes			
Environment				
Protection Degree	NEMA TYPE 3R			
Safety	UL1741			
EMI	FCC Class B			
Operation Temperature	-13 ~ +122°F(-25 ~ +50°C)			
Humidity	0 ~ 95% RH			
Heat Dissipation	Convection cooled without fan			
Acoustic Noise Level	< 45dB @ 1m			
Display	2-line , 16-character LCD and two LED			
Communication	RS232/RS485 & SNMP(Optional)			
Power Consumption(night)	< 7W		< 1W	
PV Disconnect	Eliminates need for DC disconnect. Complies with NEC requirement			
Mechanical				
WXDXH(mm)	382X398X175		570X392X112	580X450X150
Weight(kg)	15		25	35
Mounting	Wall Mount(mounting bracket included)			

*\*Specifications subject to change without notice.*

# DC UPS Series



*The DC series product provides wireless system ( WiMAX/Wi-Fi ) , cable telephony and fiber to the home (FTTH) providers with a dependable, cost effective local power supply. The DC series product provides the Multiple Service Operator (MSO) with a local powering solution that has lower installation costs, lower operational costs and lower service costs than competing power technologies.*

*The DC series product keeps network communications, including telephone, up and running during power outages. The unit functions as a battery backup supplying continuous 12Vdc to 56Vdc ( depends on your power system) to locally power network interface units, cable telephony modems, wireless base stations and fiber to the home interface modules or integrated access devices.*

**DC UPS Application :**

- Micro-PC / IPC Market
- Wireless Telecom ( Wi-Fi / WiMAX system )

**Feature :**

- Universal input voltage : 90 ~ 264Vac
- Microprocessor inside.
- Low power noise
- Optional extendable battery.
- Provide communication function ( Optional )

**Specification**

Model	DC-50	DC-100
AC Input		
Voltage	90 ~ 264Vac	
Frequency	45 ~ 70Hz	
Output		
Voltage*	12 / 24 / 36 /48Vdc ( DC voltage is depended on your request )	
Continuous Power*	50W	100W
Ripple Voltage	< 0.2Vp-p	
Efficiency	> 80%	
Battery		
Type	Maintenance free Lead-Acid Battery	
Capacity*	12V/7Ah x 1	12V/9Ah x 1
Run Time**	> 1.2 hrs.	> 40 minutes
Recharge Time	10 hours	
User Replaceable	Yes! Hot swappable.	
Indicator		
LED Indicator	Utility mode / Backup mode / Low battery / Unit fail	
Audible Alarm	Utility fail / Overload / System fail	
Environment		
Operating Temperature	0 ~ 40℃	
Operating Humidity	0 ~ 95% RH condensing	
Physical		
Unit Dimension*	190 x 240 x 90 mm	
Unit Weigh*	3kg	

Note :

\*: It can be changed by customer RFQ.

\*\*: It is depended on the load condition.

*\*Specifications subject to change without notice.*



# Car Inverter Series

## Powerful Inverter with Smart Charger and long backup time



Mobile Inverter is used for the office equipments and portable electronic products. Such as the notebook computers, video games, printers, and all rechargeable battery products. Transforming a vehicle's or any DC lighter socket into a standard 120 Voltage AC outlet and 220 Voltage AC outlets & USB charger port (CI-202 only). Now you can keep laptop computers, PDAs and AC appliances powered and operational wherever you go.



Mobile Inverter is used for the office equipments and portable electronic products. Such as the notebook computers, video games, printers, and all rechargeable battery products. Transforming a vehicle's or any DC lighter socket into a standard 120 Voltage AC outlet and 220 Voltage AC outlets & USB charger port (CI-202 only). Now you can keep laptop computers, PDAs and AC appliances powered and operational wherever you go.



- LED power indicator.
  - Overload protection. (for CI-202 model only)
  - Provide USB 5Vdc charger. (for CI-202 model only)
  - Grounded three prong AC outlet for 120V model.
  - hild safety cover. (for CI-175 120V model only)
- Converts 12 Volt car or marine battery power into standard 120Vac or 220Vac power.
  - All-in-one housing with adapter and AC outlet in single easy to install package.
  - All-in-one compact & lightweight design eliminates cords and makes carrying and storage a snap!
  - Built-in surge power protection and auto shut off to prevent damage or battery drain.

Application  
Equipment:



Specification

Specification / Model	CI 202-120V	CI 202-220V	CI 203-120V	CI 203-220V
AC Output Voltage	120Vac ± 10V	220Vac ± 20V	120Vac ± 10V	220Vac ± 20V
AC Output Frequency	60Hz ± 4Hz	50Hz ± 4Hz	60Hz ± 4Hz	50Hz ± 4Hz
AC Output Waveform	Modified Sine Wave			
Continuous Power	150W		100W	120W
Maximum Power	175W for 5 minutes		150 ~ 200W @ 30 sec	
Peak Power Rating	350W (Max.)		200W (Max)	
DC Input Voltage Range	10.5 ~ 16.2Vdc			
DC Input Connector Lighter adapter	Lighter adapter		Extend lighter adapter	
USB Charger	5V±5% / 500mA			
Low Battery Voltage Protection	Yes, 10.5Vdc and automatic reset			
Over-Temperature Protection	Yes, automatic rest			
Overload Protection	Yes, automatic rest			
Dimensions ( D x W x H)	127.3 x 71.8 x 50mm		100 x 68 x 23 mm	60 x 60 x 125 mm
Weight	180g	180g	140g	160g
Outlet	NEMA 5-15	Two pin plug	NEMA 5-15	220/240V Standard Outlet

Technical Specifications subject to change without notification.



CI 203-120V



CI 203-220V