

Power Protection!..



For server, internetworking,
Data center, Telecommunication
& Enterprise...



SwitchUPS

Synthetic Power On-Line



i UPS



Frontier Power



New...



- SwitchUPS
- SwitchUPS RM
- SwitchUPS PLUS

- Advanced, modular power management
For Net-work & multi web servers
- Easy installation and affinity
Extended-run power Hot-swappable
batteries back up
- Simple Maintenance & Manageability
Simple Display
Simple management
- Mission critical & scalable power
N+1 Hot sync redundant Matrix power
- The Traditional Technology of
Synthetic power On-line UPS
Low lifecycle cost & optimized design of
high efficiency
- High Technology has short life cycle.
CROSS guarantee the life of 10 years!
- Power Management and diagnostics
Power protection and hardware included software



Advanced, modular power management For Net-work & multi web servers

SwitchUPS β 1000(700W)
SwitchUPS β 2200(1440W)

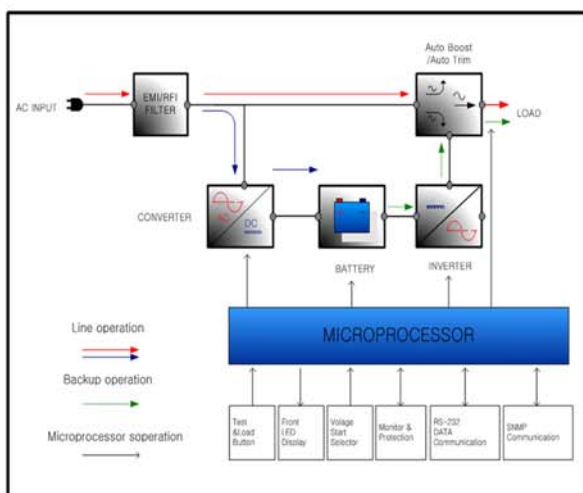


Specification

INPUT VOLTAGE	220Vac & Option(200/230) +20/-20 %
OUTPUT VOLTAGE	220Vac & Option(200/230)
FREQUENCY	50/60Hz +5 / -5 %
BATTERY	Lead-acid maintenance free (18 ~ 26Vdc),(27~39Vdc)

* UPS Management S/W optional

UPS System block diagram



- Inter net-working equipment
- Telecom equipment
- Multiple servers and web servers

Advances in enterprise computing and storage technologies demand a change in enterprise power protection technology. SwitchUPS is a single unit composed of modular components. This modular architecture provides the foundation of electric and power management availability power systems with a flexible range of power capacity.

SwitchUPS protects against spikes, sags, noise, lightning, and power outages, revolutionary technology exclusive to SwitchUPS.



(Front LED display view)

SwitchUPS ICON display LED

- Load level LED (100% / 75% / 50% / 25%)
- Battery level LED (100% / 75% / 50% / 25%)
- AC Input AutoBoost & AutoTrim LED
- Normal operating LED / - Test / Buzzer stop
- Inverter LED(AC Blackout & Low AC voltage & High AC Voltage)
- Battery abnormal LED
- Alarm LED (Over load, battery abnormal, Out put over voltage & low voltage, UPS fail)
- Input voltage level LED (275-290Vac / 230-274Vac / 210-229Vac / 180-209Vac / 150Z-179Vac)

**High technology has short life cycle.
CROSS guarantee the life of 10 years!**

- High reliability, low operating costs and manageability to defend your network servers and data center medium servers

When mission critical net-work servers applications such as fileservers, medium range systems and telecom equipment, you need a SwitchUPS that can take care of your loads and take care of itself. SwitchUPS from CROSS(www.crossups.com) provides advanced modular UPS protection and very excellent machine of management SNMP UPS. We can confidently recommend you UPS-Switch UPS which has completely solved the problem of in use of medium sized UPS.

SU 1000 / SU 1400 / SU 2200 / SU 3000 & PG2606 / PG 2603 SU 1000XR / SU 1400XR

Specification

INPUT VOLTAGE	220Vac & Option(200/230) +20/-20 %
OUTPUT VOLTAGE	220Vac & Option(200/230)
FREQUENCY	50/60Hz +5 / -5 %
BATTERY	Lead-acid maintenance free (18 ~ 26Vdc),(27~39Vdc)



High maintenance of quality performance

In case that you need to protect file server, minicomputer system, UNIX CPU's, internet hubs, telecommunications systems and the other mission-critical applications from any damages, UPS will be indispensable. The Switch - UPS of CROSS is innovative UPS of module type. CROSS-guarantees you the benefits and high manageability of your data center with the innovative and economical SwitchUPS.

SwitchUPS is an intelligent UPS based on DNM (Digital Net-Work Management) SNMP. Wherever you may stay in the world, it is basically loaded with software that can manage not only computer O/S but also all the peripheral of computer and equipment. Therefore, it can be the first device to protect the computer equipment whose foundation is network. And the device can protect your server and computer Network equipment from brownouts, blackouts, over voltages, Surges, and Spikes, while it can offer you the function to manage the control of the power of advanced business networks.

SwitchUPS protect your data by supplying network grade battery back up when power blackout. With optional software & monitoring kit SwitchUPS will safely store your data and shutdown your desktop and file server system before the battery is fully discharged, whether you're there or not. SwitchUPS protect your hardware and extend system life through superior full time multi-stage surge suppression and noise filtering. Meeting customer approval for network protection without the need for additional external conditioners.



Easy Hot-swappable
(Battery Connected)



(SU1000~1400)



(SU1000XR~2200)



Power Cell Guard(PG2606)

The Traditional Technology of Synthetic power Conversion UPS Low lifecycle cost & optimized design of high efficiency

SwitchUPS is high available design and included high reliability, low operating costs, SwitchUPS low waste energy, reduced lifetime costs and long battery life. SwitchUPS is Synthetic power On-line design delivers zero transfer time with computer loads and brownout protection with 80% fewer components than traditional UPS. Fewer components mean more good efficiency and greater reliability. There is also no need to over size for inrush current, so you need for only power rating just do it. Moreover the SwitchUPS is 95% inverter efficient at full load. The excess heat generated by these UPS not only wastes energy and reduces battery life it may also create a need for special environment equipment.

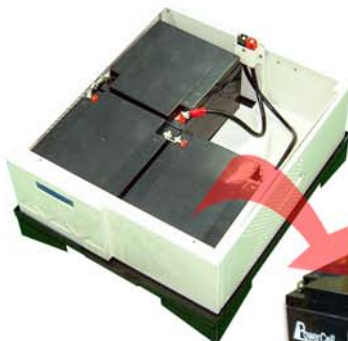
SwitchUPS is Synthetic power On-line and output voltage stability AutoBoost & AutoTrim provides an assurance of compatibility with all loads and allows you to work brownouts without unnecessary battery drain. AutoBoost automatically steps up low voltage to safe output levels and AutoTrim is automatically corrects over voltage conditions without unnecessary battery drain. AutoTrim automatically steps down high voltage to safe output levels.

SwitchUPS displays excellent function with type and it can protect the hardware system and extend the life of the system with the excellent protection of surge and reliable noise cut filtering. Especially, the FET Type with the excellent function will make the device of CROSS-intending ultra modernism a masterpiece in the world. With SwitchUPS functionality increasing your productivity, AutoBoost & AutoTrim automatically correct low voltage conditions allowing you and your net work clients to work through brownouts and over voltages without using battery power.

(SU 3000 & PG2603 PG PACK)



N+ (Extended runtime pack)



PowerCell

(12Vdc 26Ah 3Cell)
Lead-acid maintenance free



SwitchUPS is modular and flexible ... Hot swappable electric module and Battery module means high reliability and flexible...

- Long battery life and simple maintenance
- Easy expandable & extended run power
- Cost effective solution
- Low cost and easy installation

Nowadays the solution to meet the expenses and the additional system's for the downsizing of the computer system will be the most appropriately planned equipment. But as the planning and maintenance of most of the existing UPS system companies are old-fashioned and the environments used by them are not the greenhouse style necessary for the downsizing but the common office style, the adaptability of the equipment to the circumstance will be very important element. SwitchUPS will remove the risk of harmonic originated from PC and servers, and present the most appropriate solution for the problem of low and high voltage and frequency.

In addition, as SwitchUPS consists of the simple components of Isolation module, Electronics module, and Battery pack module (PG Pack) for the minimum fault, it can be changed rapidly and economically for the restoration of the fault owing to its effective planning. The most advanced performance features are available through CROSS's most popular UPS. PG Pack is intelligent battery pack.

The importance of battery in UPS should be considered first of all. Though most of the UPS with small & medium capacity are using the simple function of limit charging as the basic circuit, SwitchUPS is manufactured with the excellent charging technology of Floating & Equalizing Intelligent Battery management for the increased reliability. And our product has realized higher charging function, reliance, and efficiency. It shows excellent efficiency even in the Non Linear loading with heavy load, and it can reduce battery damage and thermal energy of non-efficiency. Especially, the network peripherals function of the important automated system operation makes the working of the system safer owing to the installation of auto shutdown interface port within the device. In the SwitchUPS modular design, the PG Pack and the Electronics module can be easily by hot swappable or repaired on-site by even an untrained employee without more fee. Recently most UPS battery replacement is neither quick nor easy. Special shipping is required for heavy batteries. Safe disposal procedures must be followed. Mean time to Repair can be weeks or more times. But PG Pack replacement takes just minutes with no effect on system uptime.

(SU PLUS 5200/7500)



(SU Plus 3600)



(SU Plus 19" Rack mount)



Advanced modular power management.....

Advances in enterprise computing and storage technologies demand a change in enterprise power protection technology.

SwitchUPS is a single unit composed of modular components.

This modular architecture provides the foundation of electric and power management availability power systems with a flexible range of power capacity.

SwitchUPS are having most important features of; wide scalable power, hot swappable battery back up and flexible rang of power capacity.

Features of SU Plus series.

- LED & LCD display.
- Due to independent design of UPS's electronic modules and battery modules, provides easy installation and maintenance.
- Maximized capacity and number of battery. (12Vdc, 26Ah, 4cells +N)
- Easy starting operation and self-testing function.
- No need testing equipment for maintenance.
To press test pushbutton will be done all required test of UPS.
- View finder provides local monitoring of the UPS.
- 4 battery packs in maximum shall be extended.
- SU Plus shall be capable of 19 inches of rack cabinet.
- The power shall be transferred to by-pass line when the UPS is fault.
- Su Plus shall consist of electronic module, battery pack and moving caster.



View of SU Plus installation PG2604, battery pack shall be connected easily to rear side of the UPS.
The height of UPS's electronic module is 4U, and PG2604 is 3U.

hot swappable battery back up and flexible rang of power capacity....



SU Plus PGM
SU Plus PGE

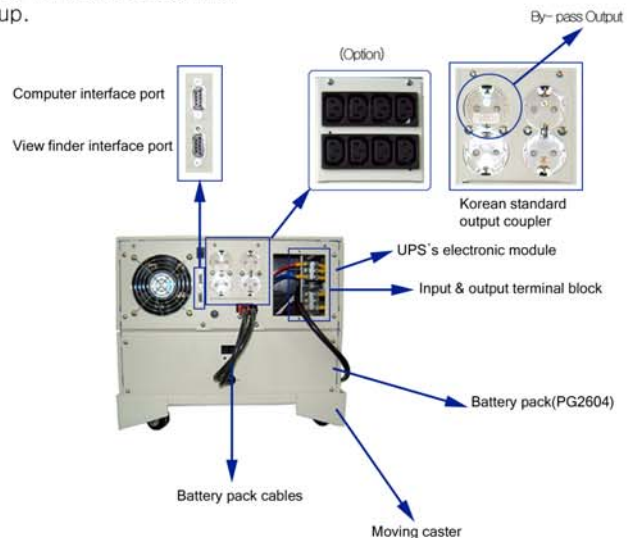
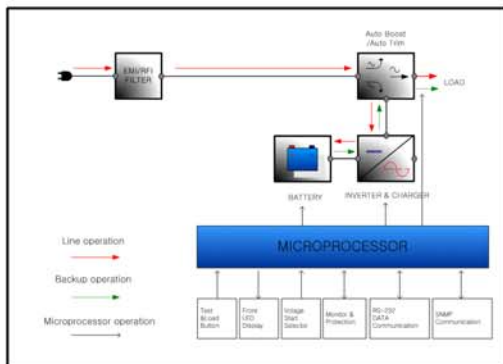
- PGM & PGE, battery pack provides long time of back up due to using by big capacities of batteries.
- The UPS's electronic modules and battery modules shall be separated. It provides easy installation and maintenance.
- PGM & PGE battery pack shall be connected into a all SwitchUPS Plus models. No need to purchase new UPS system for extension of back up.



SwitchUPS Display
(LED & LCD)



(ViewFinder)



SU RM1000 / SU RM1400 / SU RM2200 / SU RM3000 / PG2606 SU RM1000XR / SU RM1400XR

SwitchUPS RM 1000/1000XR/1400/1400XR/2200
(1kVA/1.4kVA/2.2kVA)



For any Net-work application Whatever you need is, SwitchUPS Rack mount UPS models are ideally suited for the rapidly expandability users of servers, hubs, routers, and others rack mount equipment. Slim Rack Mount (19") Switch UPS deliver premium UPS and the most advanced performance feature available. With power protection will safely data and shut down your network O/S and hardware before the battery fully discharge.

- SwitchUPS RM model protect your data
- SwitchUPS RM model protect 19" rack equipment hardware
- SwitchUPS RM model increases your productivity and reduces your cost.

SwitchUPS RM3000(3kVA)



The SURM 1-3kVA brings the proven and patented Synthetic power conversion technology in a 19" rack mountable form. With more servers, storage products and other mission-critical IT equipment becoming rack based, the need in increasing for innovative rack based power solution for branch office location, mission critical networking equipment or any others customer requiring a rack-based product within this power range. In addition to the advantage of hot-swappable and redundancy, rack users can also benefit from SwitchUPS Rack mount UPS, SURM is scalable components and integrated SNMP management features. The unit can also ne used in floor stand-alone applications.

Specification

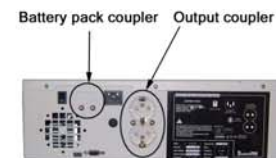
INPUT VOLTAGE	220Vac & Option(200/230) +20/-20 %
OUTPUT VOLTAGE	220Vac & Option(200/230)
FREQUENCY	50/60Hz +5 / -5 %
BATTERY	Lead-acid maintenance free (18 ~ 26Vdc),(27~39Vdc)

No need removing the UPS from rack cabinet for battery replacement because the battery replacement shall be done at front side of the UPS.

Features of SwitchUPS RM series

RM series are most capable of internetworking equipment such as server, hub, router and telecommunication device which of installed in 19 inches of rack cabinet.

RM is having a wide range of capacity from 1000VA to 3000VA, easy installation, easy battery replacement with hot-swappable design.



(SU 1kVA/1.4kVA/2kVA)

Models SU3000RM shall be supplied along with battery pack. The height of electronic module is 3U, and battery pack is 3U.



SU RM 3kVA REAR

(PowerCell Guard)



(3U "19" Rack Mount)

Power Management and diagnostics Power protection and hardware included software

SwitchUPS with communication interface port has realized comparatively economical efficiency of low price. And when the user is absent during the operation of all the important desktop operation systems like Windows, WIN NT, OS/2, NetWare, Sco UNIX, UNIX, etc., it can offer the function of auto shutdown with serial communication interface port (Port installed in it). SwitchUPS has the basic function to manage the equipment and automated system operation when PC is in disorder, and it possesses all the necessary devices of others SNMP S/W that UPS industry will seek according to O/S.



(UPSilon 2000)

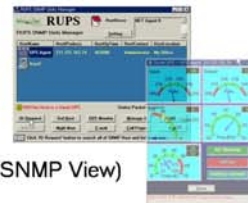
SwitchUPS has completely solved the problems that Power problem and especially it can guarantee to complement the weak surge and to control the noise. So it guarantees the security of the fault tolerant system of the power for 24 hours in a day and 365 days in a year.

While most of the off line UPS or line interactive UPS have has the problem of simple relay contact with the function of boost in low voltage and trim in high voltage, the SwitchUPS with the function of orthodox inverter & converter is a completely reliable equipment of true on line full sign wave. And even in the worst electrical circumstance, the device will show extremely excellent feature.



SNMP Agent adapter

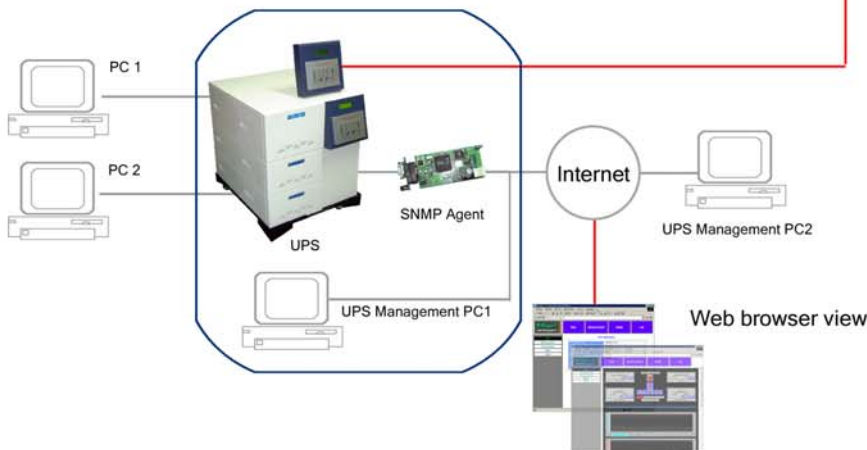
The UPS monitoring software and SNMP Agent are enable to monitor several UPS on a server. Also monitoring software provides remote monitoring on internet space.



(SNMP View)



View Finder provides remote monitoring of UPS. View Finder shows you UPS's status such as operation condiaion input/output voltage etc at local with 10m of maximum cong



MODEL	SwitchUPS β	SwitchUPS Desk	SwitchUPS RM	SwitchUPS Plus
Power Capacity (VA)	1000(700W)/2200(1440W)	1000(1000w)/1440(1260w) 2200(1760w)/3000(2100w)	1000(1000w)/1440(1260w) 2200(1760w)/3000(2100w)	3600(3240w)/5200(4160w) 7500(5250w)
Topology	Synthetic power conversion(On line net work management)			
Isolation transformer	Provides a galvanic isolation while operation on the inverter operating			
Recharge time	8 hours			1-2 hours
Typical transfer time	2msec(Synthetic power conversion)			
Input Specification				
Nominal input voltage and Frequency range	1 phase 200/220/230(user's require) Voltage ±20 % / Frequency 50/60 HZ ±5%			
Output Sepecification				
Nominal output voltage	1 phase 200/220/230 Dip switch selectable			
On line 3%	On line3 % Output voltage regulation (AutoBoost & AutoTrim) 자동전압기능			
Output voltage Waveform	Sine wave			
Load crest factor supported (c.f)	up to 5 : 1			
Power factor tolerance	Loads with 0.5 to 1.0 power factor			
Efficiency inverter at full load	> 92 %	> 95%	> 97%	> 97%
Audible noise(front 1.5m away)	40 dBA 이하			
Overload capacity	Up to 110% for 10 seconds then transfer to inverter			
Internal power distribution unit(PDU)	2 plugs & external distribution			
Feature				
Surge Suppression and Noise filtering	Yes			
User serviceable(SNMP Service)	Option (QuickSNMP & Others)			
Indicators, Interface & Control				
LED Indicators	Load,Battery level(25-100%), AutoBoost & AutoTrim, Inverter, Battery Abnormal, Alarm, Input voltage level(5 grade)			
LCD Indicators			No	Yes
View Finder			No	Yes
Power cord			Yes	Yes
Intelligent serial interface & SNMP			Yes	Yes
Others				
Battery type	Lead-acid maintenance free & user's optional			
Battery Voltage & cell	12v 2cell(DC24v)/12v 3cell(DC36v)	12v 3cell(DC36v)	12v 4cell(DC48v)	
Individual voltage & current monitoring	Self diagnostic, replace battery warning indicator			
Method of replacement	Hand plug compatible & hot swappable			
Dimension (H*W*D)	310*240*463	310*240*463(1000/1400) 310*240*510 (1000XR/1400XR/2200) 390*365*444 (3000/SU & PG Pack)	136*433*510(3U) (1000/1400/2200/3000) 136*433*510(3U) (RM PG Pack 2606)	177*433*510(SU,4U) 136*433*510 (PG Pack 2604)(3U) 750*433*510 (PGM 100 / PGE 100)
Weight (kg)	19/22/32kg (1000/7Ah,12Ah,26Ah) 26/31kg (2200/7Ah,12Ah)	24/26kg(1000/1400) 53/55/57kg (1000XR/1400XR/2200) 22kg(3000 SU) 39kg(3000 PG2603 Pack)	25/27kg(1000/1400) 49/53kg(2200/3000) 68kg(PG2606 Pack)	28/40/45kg(SU) (3600/5200/7500) 51kg(PG2604 Pack) 120kg(PGM Pack) 180kg(PGE Pack)
On site service	Optional			
Specification	BETA 1000(7/12/26Ah)	SU 1000(XR/PG2606)	SU 2200(PG2606)	SU 3000(PG2603)
125 VA(87w)	39/60/140	88/180/480	180/480	180/360
300 VA(210w)	14/28/57	57/130/390	130/390	130/260
600 VA(420w)	8/16/24	22/60/180	60/180	60//120
800 VA(560w)	6/12/18	12/38/100	38/100	38/76
1000 VA(700w)	7/21/63	23/69	23/46	24/48
1500 VA(1050w)			10/30	10/20
2000 VA(1400w)			7/23	7/14
3000 VA(2100w)				4/8
Specification	3600/PG2604/PG1004	5200/PG2604/PG1004	7500/PG2604/PG1004	
1000 VA(700w)	40/80/160	40/80/160		
2000 VA(1400w)	15/30/60	15/30/60		
3000 VA(2100w)	9/18/37	9/18/37		
4000 VA(2800w)		7/12/28		7/14/28
5000 VA(3500w)		5/10/20		5/10/20
7000 VA(4900w)				3/6/12

** Please be note that the design & specification shall be changed with notice

** Back up is subject to environmental condition and battery's performance