

UPS
CROSS
Power Protection

ISO 9001 / KS A 9001

***i* UPS**

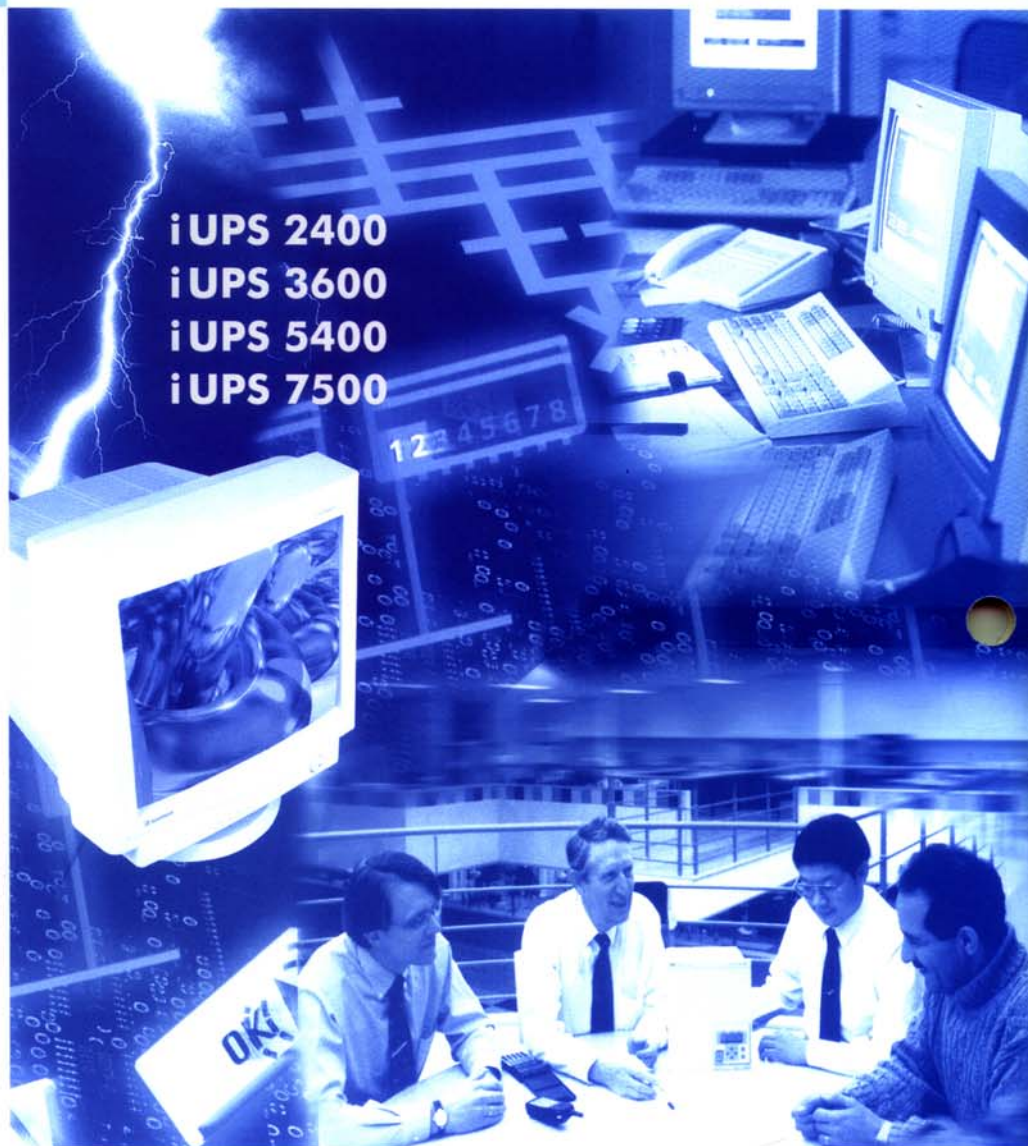
***i* UPS 2400**
***i* UPS 3600**
***i* UPS 5400**
***i* UPS 7500**





GOODS OF HIGH TECHNOLOGY HAVE SHORT LIFE CYCLE.
But the Goods manufactured by ^{UPS}CROSS guarantee
the life of 20 years!

*We can confidently recommend you ups-iUPS which has completely
solved the problem of Line Interactive (Offline UPS) produced in use of medium sized UPS.*



iUPS 2400
iUPS 3600
iUPS 5400
iUPS 7500

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Stability & Easy Manageability

with innovative quality and high maintenance.

- 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 **CROSS** is ultra innovative UPS of module type. **CROSS**-guarantees you the benefits and high manageability of your data center with the innovative and economical **iUPS**.
- **iUPS** 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 (**QuickCROSS**) which can manage not only computer Operating System but also all the peripheral of computer. Therefore, it can be the first device to protect the equipment whose foundation is network. And the device can protect your server 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.
- **CROSS iUPS** protect your data by supplying network grade battery back up when power fails. With optional software & monitoring kit **CROSS iUPS** 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.
- **CROSS iUPS** 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.
- **CROSS iUPS** True on line sine wave output(C.V.C.F) and output voltage stability (1%) provides an assurance of compatibility with all loads.
- **iUPS**(PowerMON II) 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). **iUPSII(QuickCROSS)** 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 **MultiView, SingleView, QuickCROSS, SmartMON, NetMON, MultiMON**, etc that UPS industry will seek according to O/S.

Standard UPS

Frontier



Stability & easy manageability



Harmony of perfect technology

Harmony of perfect technology

- **iUPS** has completely solved the problems that the Off Line and Line Interactive of other companies have got, 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.
- **iUPS** displays excellent function with true on line **C.V.C.F.(Constant Voltage Constant Frequency)** 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 **iIGBT On Line** Type with the excellent function will make the device of **CROSS**-intending ultra modernism a masterpiece in the world.
- 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 **iUPS** with the function of orthodox inverter & converter is a completely reliable equipment of true on line full sign wave (within 2% distortion). And even in the worst electrical circumstance, the device will show extremely excellent feature.
- The output stability of **iUPS** shows the highest ranking in the field (less than 1%) in the world. As the boost & trim of most of the line interactive UPS changes the stability by 10-15% at times, it may originate the downsizing which may damage the network equipment, especially the telecommunication system of Hub or Router. But **iUPS** can provide the stability less than 1% even in full load and it will play a decisive role to protect the computer server and telecommunications system with the stable voltage and **C.V.C.F (Constant Voltage Constant Frequency)**.
- 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. **iUPS** will remove the risk of harmonic originated from PC and servers, and present the most appropriate solution for the problem of low voltage and frequency. In addition, as **iUPS** consists of the simple components of Isolation module, Electronics module, and Battery pack module (**PowerCell Guard**) 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. **PowerCell Guard** 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, **iUPS** 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 interface function of the important automated system operation makes the working of the system more safe owing to the installation of auto shutdown interface port within the device.

Protect of iups vs Legacy line interactive ups

True on line C.V.C.F



Output stability (1%)
Distortion (2%)

Legacy Off line (Line interactive)UPS



Output stability ($\pm 12\%$)(203~260V)
Distortion (5%)





EASY INSTALLATION AND AFFINITY

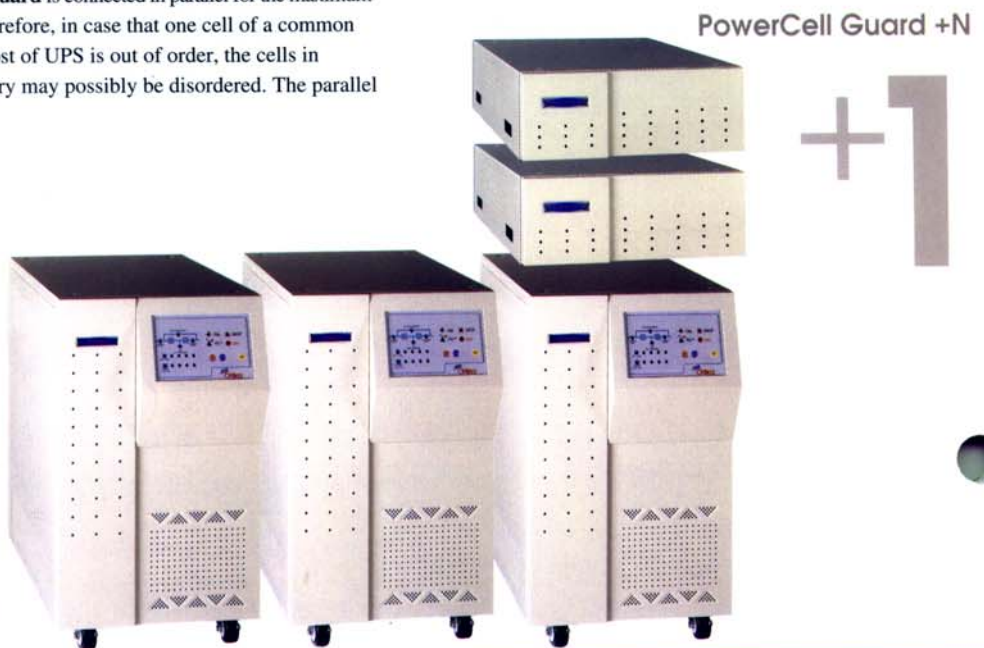
Extended-run power Hot-swappable battery back up

- **CROSS iUPS** reduces the expenses of users and enhances the productivity by the through management of power. And the battery pack can be separated from the main equipment for the convenience of using and moving. In other words, the equipment is planned to be the best equipment for the customers and installers by the maximum reduction of transportation limitation resulted from the volume and weight of UPS and its battery.
- Long time back up can be easily achieved by using **PowerCell Guard Pack**, and the users can change batteries even when the switch is on, and they can reduce the necessary expenses and operation hours. The intelligent battery control system of **PowerCell Guard** enhances the reliance through the rapid charging technology and automatic battery test function. And the protection function from over charge and the charging function of non-pulse is another technology that the intelligent battery management system of CROSS supports. This kind of feature of the equipment can extend the life of battery and it warns an alarm and shut down itself before the battery is consumed completely for the protection of battery. The highly improved charging technology can recharge the discharged battery rapidly to meet the next use. The **Hot Swappable connection** of the battery is the considerate device for the users and it protects the users from the waste of service expenses and non-operating time.
- **PowerCell Guard** is connected in parallel for the maximum security. Therefore, in case that one cell of a common battery in most of UPS is out of order, the cells in another battery may possibly be disordered. The parallel

connection of **PowerCell Guard** can reduce maximally the loss resulted from the inferior battery, and the **intelligent battery management** can reduce maximally the thermal energy from battery. So the high efficiency of **iUPS** can reduce the expenses of the customers because the device with high efficiency needs only the minimum energy.

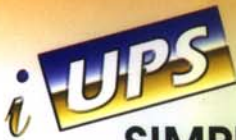
- Owing to the economy of **PowerCell Guard**, we need not purchase excessive quantity of battery for the disperse of the future risks which not only costs us much expenses but also makes the rooms for computers smaller. And it is recommendable that you purchase **iUPS** with excellent economical efficiency and maintenance ability. You may purchase the other parts of the system after you examine the real function of the **PowerCell Guard pack**. If you connect the device, you can extend the back up time.
- **CROSS iUPS N+1**(N is primary/1 is emergency redundant system) is a device of new concept with the parallel operation. And you need not purchase a large sized one. You are recommended to purchase the devices whenever you need according to the planning of you business. And if you purchase the same equipment, you can achieve the efficiency and secure the safety of fault tolerant for **365 days every year and 24 hours every day**. In case of purchasing of more than 3 sets, N-1 can be operated for the practical use and the rest one may be reserved for the emergency operation.

Low cost & installation



System N+1

PowerCell Guard +N

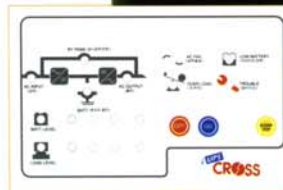


SIMPLE MAINTENANCE & MANAGEABILITY

- The display of **iUPS** is a device for the users. Generally, most of the people who purchase small sized equipment do not know electricity. Most of them purchase the goods considering the fame of the companies and in most cases they do not know how to operate the equipment. In case of **CROSS iUPS** model, the user can judge the using load and the normal operation of the equipment only by checking the icon-typed displays. And the device is designed for the users of PC to operate the equipment visually and to sense the information through the computer.
- Informative LED Display provides status at a glance that instantly assess the status of your power and the **CROSS iUPS** without even pushing a button. Bar meters and status indicators are simple to use and easy to understand. Visual and audible alarms alert you do fault conditions.
- Load and battery meters keep you control prevents you from exceeding **iUPS** capacity. Load meter reports utility line voltage and battery capacity allowing you to gauge how much time you have before batteries are depleted. Alarm sounds upon low battery condition allowing you time to save data and shutdown system.

CROSS iUPS ICON display LED

- I-1 Load level LED
- I-2 Battery level LED
- I-3 AC Input / output LED(On line C.V.C.F block diagram)
- I-4 By-pass LED(1' ST emergency solid state and transfer LED)
- I-5 Battery charging LED
- I-6 AC fail / Low battery / Over load / trouble
- I-7 ON / OFF / Buzzer stop



- As Off line UPS or Line interactive UPS usually use the utility electricity without management, the disorder of the equipment can be checked only when the electricity is off. So the equipment have not been often used. But as **CROSS iUPS** is **True on line UPS**, any disorder of the equipment can be checked at the moment it occurs. And you can operate the equipment with most efficiency.
- Off line UPS or Line interactive UPS usually have the battery which can be charged limit and the life of the battery is short. And the disorder of the equipment can be checked only when the electricity is off. But **CROSS iUPS** of **True on line UPS** is ready to operate the battery and secure the most appropriate battery life, so the long operating time without disorder of the fault tolerant system can be guaranteed.
- For the installation, our product is considered to achieve the easy connection to input and output devices. Not only the extension of battery but also the input working is very easy, and for the output, 4 plugs are installed for anyone to use conveniently. And although the consideration to use the equipment by output terminal to outside is not a great one, it may be a device of the customer-oriented technology. Of course, you need not distinguish Hot(+) and Neutral(-).

<http://www.crossups.com>

When companies, schools, and hospitals purchase some equipment from SOHO markets, they usually do not know the real loading and the disorder of the equipment. In addition, in case that the equipment is purchased with the computers at the same time, they generally do not know how to operate and maintain all the equipment. And at times they throws them into discards 2-3 years after they purchase them. But through the more strengthened **PowerPlan** we have solved the worry of yours that would like to purchase the system of **CROSS T.E.C. iUPS**

When you purchase any of the equipment of UPS, you are recommended to consider the module method. The module method of our products guarantees the regular service, circuit examination, and changing of components, and the equipment's of **CROSS T.E.C.** to assist SNMP can protect file server, power, and the best flexibility.



Simple maintenance & manageability

UPS SPECIFICATION

iUPS				
Power Capacity(KVA)	2400va(1920w)	3600va(2900w)	5400va(4000w)	7500va(5300w)
Topology	Full True on-line C.V.C.F (i IGBT)			
Isolation by pass transformer	Provides a galvanic isolation while operating on the emergency bypass line			
Recharge time (normal)	8 hours			
Extended Battery Option	Yes (PowerCell Guard)			
Typical transfer time with load	0 sec (On line type)			
Common mode EMI/RFI noise attenuation range over 100kHz to 30mHz range	60-80db			
Input Specification				
Nominal input voltage	1 phase 208/220/240 (user's require)			
Nominal input frequency	50/60Hz			
Input voltage range	20%			
Input frequency range	6%			
Output Specification				
Nominal output voltage	1 phase 208/220/240 (user's require)			
Output voltage stability	1%			
Output voltage regulation(adjustment)	5%			
Total voltage harmonic distortion	2% at full load (Linear load)			
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	93 %			
Audible noise (front 1.5m away)	55 dB			
Overload capacity	125% 10 min, 700 % for 600 millisecond			
Internal power distribution unit(PDU)	4plugs			
External power distribution unit (PDU)	Yes (Terminal unit)			
Feature				
N+1 Redundancy Power(KVA)	Yes(N+1)			
Expandability	Yes (PowerCell Guard)			
Runtime(Battery)Expandability	QuickCROSS (Win95 / Win98)			
User serviceable	Yes (Auto static solid state 4m sec transfer)			
Intelligent automatic bypass (Emergency by pass 1)	Yes (Manual by pass)			
Manual bypass(Emergency by pass 2)				
Indicators, Interface & control				
LED Display	Load level, Battery level, Input fail, Low battery, Over load, Trouble, AC input, Battery, AC output, By pass			
Power cord	Yes			
Intelligent serial interface(O/S Management protocol)	Yes(PowerMon II & SmartMon & Others GUI Protocol)			
SNMP Capability	Yes			
Multiple server / OS Shutdown	via MultiLink			
Modem(out of band) control	Yes			
Others				
DC Characteristics	168-216 v			
Intelligent battery recharging	Yes! Intelligent battery management)			
Battery type	Lead-acid maintenance free & user's optional			
Individual pack voltage & current monitoring	Self diagnostic, replace battery warning indicator			
Method of replacement	Hand plug compatible & hot swappable			
Expansion capacity	Unlimited (N+1)			
Runtime with supplied packs(full/half load)	30/60 min	23/46 min	18/36 min	13/26 min
Electric module dimension	W x D xH(mm) 357 x570 x620 (in wheel)			
PowerCell Guard module dimension	W x D xH(mm) 357 x570 x132			
Electric module weight				
PowerCell Guard (E0716)pack weight				
Warrant(PowerPlan)	2 years			
On site service	Optional			

**2 years
guarantee
& after service**



QUALITY GUARANTEE FOR 2 YEARS AND THE MEASURES AFTER THAT
CROSS-is operating UPS After Service Center in the important cities all over the nation. Of course, we are fully prepared for the exchange of your batteries and to operate the equipment even after the two-year. And we wish to recommend not purchasing the goods that are difficult for you even to have after service.

UPS
CROSS
Power Protection

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