Uninterruptible Power Supply Systems

EXIMPOWER
Uninterruptible Power Supplies

Local Area Networks (LAN)
Servers
Data Centers
Internet Centers (ISP/ASP/POP)
Industrial PLCs
Emergency Devices (Lights/Alarms)
Electro-Medical Devices
Telecommunications Devices
Industrial Applications

CRIPT - 16KPR

on-line UPS
Rack Mount - 1, 2, 3, 6 kVA
Modular   - 4 to 24 kVA

Exim-P is proud to introduce the superior **CRIPT** *UPS*, 19" Rack Mounted type and Modular UPS, which can be configured in N+X for the most demanding application.

They are both designed to deliver clean; safe and regulated power supply to protect your critical mission equipment, so as to safeguard your valuable equipment and critical data from any abnormal power disturbances, such as surges, spikes, blackouts and lightning strikes.

CRIPT -16KPR 19"
Rack Mounted

AP128 Rack Mount UPS make use of the unique AC-DC conversion circuitry to prevent line power failure; power sags; power surges; brownouts; line noise and high voltage spikes; frequency variation; switching transients and line harmonic distortion.

With the use of the outstanding IGBT as the power conversation component, the operating frequency of the Inverter of UPS is capable of reaching tens of KHz, due to the high frequency operating characteristics of IGBT. Higher working efficiency of the inverter also improves the overall efficiency of UPS. Also, high switching frequency reduces UPS noise as well.

1K (S)

2K

6K

- Microprocessor Control Guarantees High Reliability
- PWM Technology with IGBTs
- Wide Input Voltage Range, up to115V to 300V
- Communication Ports is provided, SMART RS-232 and Intelligent Slot for AS-400, or SNMP Card to ease the control and monitor of UPS
- Free Download power monitoring software from the Internet for Monitoring UPS Status
- Optional External Battery Socket Available for Extended Backup Time
- Cold Start Function
- Auto Self-testing of Inverter and Battery when turning on the UPS to achieve optimum performance
- Modular design for 1kVA to 3kVA which helps in faster MTTR

- DSP technology for 6kVA which can integrate all intelligent functions, less components and parts which helps to reduce UPS size and weight. Also, UPS efficiency and power density increase
- Two step charging system is available for 6kVA. It helps to reduce the charging time to recover the battery energy
- Standard compliance:
  EN 61000-4-2 Level 3 Immunity: Electro Static Discharge (ESD); EN 61000-4-3 Level 2 Immunity: electromagnetic fields; EN 61000-4-4 Level 3 Immunity: transient over voltages (BURST); EN 61000-4-5 Level 3 Immunity: current surges (Surge); EN61000-2-2 Immunity to low frequency signals; EN62040-1-1: 2003 (Safety); EN50091-2 Class B (Conducted emission); EN61000-3-2 Harmonic current (1kVA to 3kVA)

CRIPT Rack Mounted On-line UPS Specification

Technical Specification				
MODEL	RM 1K	RM 2K	RM 3K	RM 6K
POWER RATING	**1kVA/ 0.7kW**	**2kVA/ 1.4kW**	**3kVA/ 2.1kW**	**6kVA/ 4.2kW**
INPUT				
Voltage	220V/ 230V/ 240V			
AC High / Low Volt threshold (*Dependent on output load percentage*)	0% to 60% load – Battery backup at AC mains110V±5V; 60% to 70% load – Battery backup at AC mains120V±5V; 70% to 80% load – Battery backup a AC mains140V±5V; 80% to 100% load – Battery backup at AC mains160V±5V; Normalise when AC mains 175V± 5V Input high voltage – Battery backup at AC mains300V±5V; Normalise when AC mains 285V± 5V			Battery backup @ low mains: 176V±3% Return from low mains: 185V±3% Battery backup @ hi mains: 276V±3% Return from hi mains: 266V±3%
Frequency	46 Hz ~ 54 Hz			
Power Factor	≥0.95			≥0.98
BATTERY / Charger				
Type	Sealed lead acid maintenance free type			
Backup Time @ Typical Load	8 mins	12 mins	8 mins	10 mins
Optional EX charger current (*without battery fitted*)	7Adc	9.6Adc		4.2Adc
OUTPUT				
Voltage	220V/ 230V/ 240V			
Voltage stability	± 2%			
Crest Factor	3:1			
Voltage Distortion	≤3%			
Frequency (synchronise mode)	50Hz ± 4%			
Frequency (battery mode)	50Hz ± 0.2%			50Hz ± 0.05%
Output waveform	Sinusoidal			
Overload	110% ~ 150% for 30sec before transfer to bypass; >150% for 300ms transfer to bypass			
Efficiency	85%		88%	>88%
DISPLAY / INTERFACE				
Status & Indication	Input Healthy / Battery Discharge / Inverter Operation / Bypass Operation / UPS Fault / Load Level Status / Battery Capacity Status			
Audible alarm	YES.			
Control	UPS On/ Off switch; Bypass Transfer/ Re-transfer button			
Communication Software	RS232 Serial port. Software support: WIN 98/NT/2K/XP/2003ME; Linux; Sun Solaris;			
Optional	SNMP Card for Power Management from SNMP Manager and Web browser			
PHYSICAL DATA SHEET				
Dimension (L x D x H) mm	482 x 450 x 2U (*With battery*)	482 x 450 x 2U (*UPS*) 482 x 450 x 2U (*Batt*)		482 x 450 x 3U (*UPS*) 482 x 450 x 3U (*Batt*)
Weight with batt (kg)	17	11 (*UPS*) 28 (*Battery*)	12 (*UPS*) 28 (*Battery*)	19 (*UPS*) 65 (*Battery*)
With EX charger, no battery - (kg)	9	12	16	N.A.
Operating Environment	0°C ~ 40°C			
Relative Humidity	20% ~ 90% non-condensing			
Audible Noise level (@ 1m)	< 45 dBA	< 50 dBA		< 55 dBA

Note: UPS specification and data may subject to change for improvement without prior notice

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CRIPT 19"
Modular

CRIPT Modular UPS is a scalable single phase & three-phase with double-conversion uninterruptible power supply which is specially designed to meet the demands of corporation.

It can be configured to parallel redundancy which provides the maximum reliability and delivers power output per modules from 4kVA to 24kVA.

For a unique parallel capacity system, adding an extra UPS power module upgrades the load capacity for longer run-times or to add N+X parallel redundancy as well.

Configuration includes display module and optional battery charger module, with up to six UPS modules, operating independently. If any one of the UPS fails, the load is instantaneously redistributed among the remaining UPS modules, and the defective UPS module is automatically taken off-line from the system. It also provides easy setup and optional external battery bank to upgrade battery runtime.

That gives our customers increased flexibility and reliability to maximum the power, and is very cost-effective to upgrade the system without a large investment.

- Modules are available in 4kVA, 8kVA, 12kVA, 16kVA, 20kVA, 24kVA
- N+X Parallel Redundancy is achieved by adding
- Digital Signal Processor & Pure Sinewave Output Design with Multiple Communicaton Ports, increasing flexibility, functionality & reliability

- Scalable On-Line Three Phase or Single Phase Input & Single Phase Output
- Modular Design with Hot Swappable Modules
- LCD Display design
- Compact & Light Weight with screwless design
- Additional External Battery Pack

● Modular Design with Hot Swappable Modules & 19" Rack Mount Design

Modular design for 6 modules redundancy is a key of flexibility and an ideal way to provide the highest quality online power protection for the mission critical installations from 4KVA to 24KVA.

The modules can be hot-swapped and enabled true continuity of power to the load without any interruption of service. It also designs for 19" rack mount.

The module has been installed in this postion
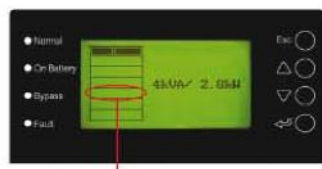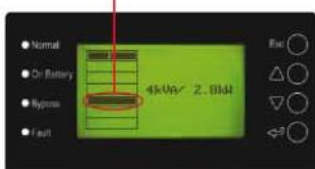
The module has not been installed in this postion

● LCD Display Design

The AP128 LCD display provides user-friendly menu control and delivers messages to the ability to manage, configure, control, and diagnose the UPS directly.

And it connects with LCD modules for monitoring various UPS parameters such as input and output voltages, current frequency, power factor, and phase form. This LCD module is suitable for any make of online UPS systems.

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N + X Parallel Redundancy is Achieved by Adding Up EXTRA UPS Power Modules

Parallel redundancy feature among UPS has been used as a way of delivering higher levels of reliability and load sharing. If one UPS power module goes faulty for any reason, there are other power modules to assume the load.

The UPS power modules can be hot-swapped out without interrupting the supply of the load. On the other hand, in the parallel capacity systems additional modules can be added to increase overall system capacity and added an unlimited battery packs allowing a seamless growth path as needs change. This approach is cost-effective and essential for mission critical applications, or in demanding environment.

N + X Redundancy Capacity

Capacity / No. of power module	1 module	2 modules	3 modules	4 modules	5 modules	6 modules
4kVA	N	N + 1 (4kVA)	N + 2 (8kVA)	N + 3 (12kVA)	N + 4 (16kVA)	N + 5 (20 kVA)
8kVA		N	N + 1 (4kVA)	N + 2 (8kVA)	N + 3 (12kVA)	N + 4 (16kVA)
12kVA			N	N + 1 (4kVA)	N + 2 (8kVA)	N + 3 (12kVA)
16kVA				N	N + 1 (4kVA)	N + 2 (8kVA)
20kVA					N	N + 1 (4kVA)
24kVA						N

Battery Capacity Vs Backup Time

	24Ah	24Ahx2	24Ahx3	24Ahx4	24Ahx5	24Ahx6	38Ah	38Ahx2	38Ahx3	38Ahx4	38Ahx5	38Ahx6
4kVA	30 min	1 hr	1.7 hr	2.2 hr	3 hr	4 hr	40 min	1.5 hr	2.5 hr	3.5 hr	4.5 hr	6 hr
8kVA	10 min	30 min	45 min	1 hr	1.3 hr	1.7 hr	10 min	40 min	1.2 hr	1.5 hr	2 hr	2.5 hr
12kVA		15 min	30 min	40 min	50 min	1 hr		17 min	40 min	1 hr	1.2 hr	1.5 hr
16kVA		10 min	20 min	30 min	40 min	45 min		10 min	30 min	40 min	1 hr	1.2 hr
20kVA			15 min	20 min	30 min	40 min			15 min	30 min	40 min	1 hr
24kVA			10 min	15 min	20 min	30 min			10 min	17 min	30 min	40 min

	65Ah	65Ahx2	65Ahx3	65Ahx4	65Ahx5	65Ahx6	100Ah	100Ahx2	100Ahx3	100Ahx4	100Ahx5	100Ahx6
4kVA	1.5hr	3.5 hr	5.5 hr	7 hr	9 hr	11 hr	2.5 hr	5.5 hr	9 hr	12 hr	15 hr	18 hr
8kVA	30 min	1.5hr	2.5 hr	3.5 hr	4.5 hr	5.5 hr	1 hr	2.5 hr	4 hr	5.5 hr	7 hr	9 hr
12kVA	20 min	50 min	1.5 hr	2 hr	2.5 hr	3 hr	30 min	1.5 hr	2.5 hr	3.5 hr	4.5 hr	5.5 hr
16kVA	10 min	30 min	1.2 hr	1.5 hr	2 hr	2.5 hr	20 min	1 hr	2 hr	2.5 hr	3 hr	4 hr
20kVA		25 min	50 min	1.2 hr	1.5 hr	2 hr	10 min	40 min	1.5 hr	2 hr	2.5 hr	3 hr
24kVA		20 min	30 min	50 min	1.2 hr	1.5 hr		30 min	1 hr	1.5 hr	2 hr	2.5 hr

Modular On-line UPS Specification

	Capacity			4-24 kVA	
Input	Three/Single Phase			Single Phase	Three Phase
	Wiring			1Ø2 W+G	3Ø4 W+G
	Voltage	Loaded > 70%		(160~300) Vac	(270~520) Vac
		70% >Loaded> 50%		(140~300) Vac	(242~520) Vac
		Loaded> 50%		(118~300) Vac	(204~520) Vac
	Input frequency			50/60(±8%) Hz	
	Power Factor			≥ 0.98	
	Bypass			(80~264) Vac	(140~457) Vac
Output	Phase			Single	
	Wiring			1Ø2 W+G	
	Voltage			110*/220, 230. 240 (1±2%) Vac	
	Power Factor			0.7	
	Output Frequency			Same as Input Frequency 50/60 (± 0.5%) Hz (Battery Mode)	
	Overload Capacity			110-130%, after 30 second transfer to bypass >130%, after 2 second transfer to bypass	
	Module Capacity/each			4kVA	
	Output Capacity			4kVA x number of modules	
	External Battery			120Vdc (10 battery per pack)	
	Connect to Generator			Yes	
	Interface			RS232, RS485, Intelligent Slot	
Weight	Module			15 kg	
	Chassis			75 kg	
	Chassis & Down-Voltage ISO Transformer			211kg	
	Module Dimension (LxDxH) in mm			405x530x87	
	Chassis Dimension (LxDxH) in mm			442x700x965	
	Optional Down Voltage ISO Transformer Dimension (LxDxH) in mm			442x700x1265	

Note: UPS specification and data may subject to change for improvement without prior notice

* Optional Isolation Box

TECHNICAL ASSISTANCE SERVICES

UPService, our technical assistance facility uses highly trained engineers to provide a reliable and competent technical support and after-sales service.

UPService can provide customers with:

• A dedicated **CALL CENTRE** for connection to the UPService organisation. UPService personnel are always available and ready to provide advice and assistance regarding UPS installation, maintenance, fault finding and repair.

• FAST & READY

A fast repair on site is guaranteed through the use of state-of-the-art UPS technology and the professionalism of the UPService personnel and Authorised Assistance Centres.

UPService guarantees that failed parts are replaced with original ones, tested and updated in order to maintain the safety, reliability and operating characteristics of the UPS.

• **COMMISSIONING AND START-UP** UPService can provide assistance during commissioning and startup of the UPS equipment on-site with additional training during handover to site personnel.

UPService engineers can also verify site suitability, analyse and advise on potential problems, and disconnect and relocate equipment. UPService recommend that all hardwired installations are commissioned by UPService engineers.

• **MAINTENANCE CONTRACTS** can be provided by UPService to minimise response times and repair costs. Contracts range from periodic inspections to comprehensive cover including labour and materials.

• The **TELEGUARD** software package provides remote 24 x 7 UPS supervision. TeleGuard can interrogate G-TEC UPS connected to a local telephone line to check on their operating logs and system status.

Should the UPS report an alarm condition, the UPService Call Centre is immediately notified and a dedicated customer response activated. Routine site reports can be sent automatically to customer personnel.

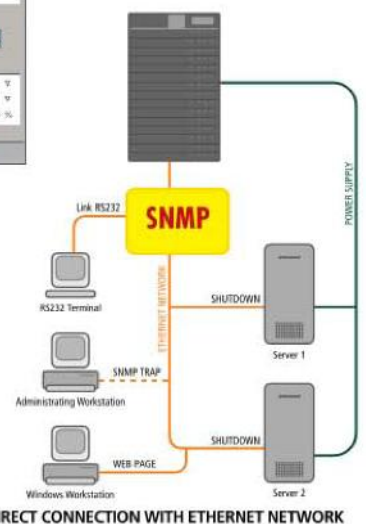• UPService organises regular **TECHNICAL TRAINING COURSES** for UPS operators and installers.

Communication and Power Management Solutions

WinPower CD is packed with UPS, and can also be downloaded from the Internet. It has the function of remote monitor and control UPS through LAN, warning notifications through broadcast and mobile phone, multi-shutdown PCs, and schedule UPS self-test. This unique software provides complete power protection for computer system during power failure. The software supports lots of O/S including Windows family, Linux, Sun Solaris 7/8/9, Compaq True64, FreeBSD, IBM Aix 4.3x, 5.1x, and HP-UX 11.x. More than that, to offer increased benefits for our customers, we have also released USB version MAC version on the Internet.

- Power flow display for monitoring UPS status
- Scheduled system shutdown/restart
- Scheduled UPS test
- Warning notification via E-mail / Pager
- Warning notification via Broadcast
- Password security protection
- Remote Monitor / Control via LAN
- Multi-language versions: English, Germanic, French, Italian,Spanish, Portuguese and Chinese
- Selectable User Interface (Background)
- UPS Parameter setting
- Record logs for analysis
- Multi-OS supported: Windows Family, Linux, Sun Solaris 7/8/9, IBM AiX 4.3x, 5.1x, Compaq True64, FressBSD, HP-UX 11.x and MAC
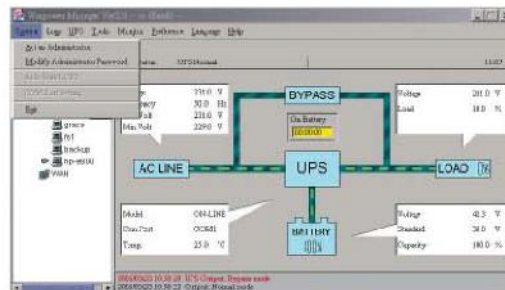
SNMP Network Card allows management of UPS across LAN using any of the main network communication protocols – TCP/IP and network interface via SNMP.

DIRECT CONNECTION WITH ETHERNET NETWORK

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