

SCU UPS

Genius 6000

Integrated, mini, server room



Overview

Genius 6000 integrates rack, power, cooling, and environment monitoring for a complete server room solution. It is a fully integrated, industry-leading plug-and-play solution with a ready to use IT rack space. The standard and modular server room architecture dramatically reduces time and complexity from concept and design up to installation. Complete physical infrastructure delivers high availability, efficiency and low Total Cost of Ownership.

Features and benefits

Fully integrated - complete physical infrastructure, factory assembled and testing

Fast deployment - ready to use from one day, simple installation and configuration reduces time to deploy

Small foot print - 0.72sqm foot print, suitable for office environment, no need of separate server room

Dust protection, noise insulation - fully closed operation, cold/hot air is circulated within the rack, low noise level.

Integrated monitor - energy usage monitoring, remote monitoring and automation of your server room

Energy saving - inbuilt air-conditioning accurately controls temperature inside the cabinet, small energy consumption



1. Standard rack cabinet

- Standard structure, available space for rack-mounted IT equipment
- Totally enclosed design. Noise reduction, sound insulation, dust-proof
- Circular air course for cold air from air conditioner, achieving closed heat dissipation
- Emergency fans automatically run during power outages ensuring continuous cooling

2. UPS

- Two available options: ERMS-12 modular UPS, or DSP-6KVA rack mount UPS
- provide pure uninterruptable power supply to critical IT equipment
- When AC power off, battery provide backup time to load
- Shutdown servers according to load priority

3. Precision Air Conditioning

- 4.5KW cooling capacity, Split type: 5U, Integral type: 10U
- frequency conversion technology, microcomputer temperature control
- refrigeration, dehumidification, air supply and dust elimination.
- R134 compressor, high performance, industrial fan
- Dual safety condensed water collecting device

4. lithium battery pack

- High-rate, power type, lithium batteries
- Discharge capacity of 3.7C, adapt to various load
- Battery Management System (BMS) with functions of battery status monitoring and estimated battery remaining, charging and discharging control, balancing and so on

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5. Power management & PDU

- Power management breakers for power, cooling, lighting; inbuilt SPD
- PDU: PDU distribute power to IT equipment

6. Environment monitoring

- Detect temperature, humidity, access control, water cut and smoke inside the cabinet
- Carry out alarm and fault treatment timely



7. Integrated monitoring

- User friendly colorful touch screen
- Real time monitoring and display of environmental and operation parameters
- Alarm management, local alarm, network alarm and self-protection
- SNMP V1/V2 protocol; RJ45 interface

Traditional Server Room vs. Genius 6000

	Traditional Server Room	Genius 6000
Room preparation	Required and complex	Not required
Design and construction	Multi-vendor , Time-consuming	Factory designed and pre-configured
Power distribution	Require wall mounted DB box	Build in system
Cost of preparation	High	Low
Install period	2-3 weeks	1 day
Area required	10 - 20sqm	0.72sqm
Dust prevention	Usually not available, high cost	Fully enclosed system
Noise level	High noise	Low noise, suitable for office
Monitoring system	Individual systems Low capability Low integration	Fully Integrated system Factory Installed / Connected / Tested
Relocation cost	High, Difficult	Low, Easy

TECHNICAL SPECIFICATION

model		Genius 6000	
cabinet	Dimension (mm)	600(W)*1200(D)*1800(H)	
	Available space	38U	
	Server space	24U-30U	
	Area	0.72m ²	
	Color	RAL7047	
	IP degree	IP30	
UPS	Model	ERMS-12	DSP11-6KVA
	Type	Embedded modular UPS	Rack mount UPS
	Rated power	6KVA+6KVA	6KVA
	AC Input	220V/3Ph/50Hz	220V/1Ph/50Hz
	Input PF	0.99	0.99
	DC input	±240VDC	240VDC
	Output	220V/1Ph/50Hz	220V/1Ph/50Hz
	Output PF	0.9	0.9
	Efficiency	95%	93%
Acoustic noise (dB)	<55	<55	
Battery	Backup time	10min	10min
	Rate voltage	±240VDC	240VDC
	Discharge temperature	-20~+60°C	
	Max discharge current	25A	
	Storage temperature	-20~+60°C	
	Discharge time	≥300 times(60%)	
Cooling	Air conditioning type	Split type	Integral type
	Cooling capacity (W)	4500	4500
	Rated power (W)	1250	2000
	internal circulation air (m ³ /h)	830	1200
	external circulation air (m ³ /h)	1200	2000
	Refrigerant	R407C	R407C
	outdoor unit noise (dB)	70	--
	indoor unit noise (dB)	<65	<65
Environment monitoring	Temperature sensor	-40° to +125°C, ±2°C	
	Humidity sensor	0~100%	
	Water leak detection	Water Leakage electrode detection	
	Door access sensor	limit switch	
	Smoke detection	combustible gas, smoke	
Integrated monitoring	LCD	colourful touch screen	
	Communication	SNMP V1/V2 protocol; RJ45 interface	

DSP Series Rackmount UPS

1KVA-20KVA

Wire in/out mode: 1/1, 1/3, 3/1, 3/3



DSP Series Rackmount UPS: High frequency On-line double conversion technology; Universal Rackmount and Tower model.
Parallel function: AC output can be connected in parallel. 1+1 redundancy in power module protects the users' data center.
Application field: High power density data center, bank, security, vending machines system, Telecom/VoIP, etc..
Function: clean and persistent power supply, safeguards key equipment and Apps against shutdown, data loss and process interruption caused by power failure.



- Universal Rackmount and Tower model; Rackmount DSP could be embedded in 19 inch standard cabinet.
- N+1 parallel connection is possible, redundant system ensures a more reliable power supply to the users' load.
- Intelligent fan speed regulation. System adjusts cooling and sends out alarm according to the temperature in the cabinet.
- Intelligent battery management. System controls equalisation and float charging, temperature compensation, discharge timing.
- Variety of intelligent communication. Remote monitoring and control , easy management, suitable for unattended operation.
- Variety of alarms. Real time visual alarm status available.
- Acurate performance via DSP control technology. Variety of protection functions. For example, AC over/under voltage, battery input over/under voltage, inrush current, over temperature, output overcurrent, short circuit protection, output over/under voltage, monitor alarm, audible and visual indication, remote notification, etc.

DSP Series Rackmount UPS

DSP11-1KVA/2KVA/3KVA

- Rated power: 1KVA/2KVA/3KVA
- Wire in/out mode: 1/1
- Rack mount and Tower
- S: internal battery
- L: external battery pack



DSP11-6KVA/10KVA

- Rated power: 6KVA/10KVA
- Wire in/out mode: 1/1
- Rack mount and Tower
- Optional battery pack:
Lead acid battery or Lithium battery

DSP-10KVA/15KVA/20KVA

- Rated power: 10KVA/15KVA/20KVA
- Wire in/out mode: 1/1, 1/3, 3/1, 3/3
- Rack mount and Tower
- Optional battery pack:
Lead acid battery or Lithium battery



Lithium battery pack

Model	Capacity (AH)	Dimension (mm)	Weight (kg)	Model DSP	Full load backup time	Half load backup time	Remarks
DUPL2440	24V40AH	430(W)*395(D)*86(H)	10	DSP11-1KVA-24L	55 mins	120 mins	
DUPL4820	48V20AH	430(W)*395(D)*86(H)	11	DSP11-2KVA-48L	24 mins	55 mins	
DUPL7215	72V15AH	430(W)*395(D)*86(H)	12	DSP11-3KVA-72L	17 mins	39 mins	
DUPL24015	240V15AH	430(W)*622(D)*131(H)	30	DSP11-6KVA DSP11-10KVA	34 mins 18 mins	75 mins 40 mins	
DUPL24015	240V15AH	430(W)*622(D)*131(H)	30	DSP-10KVA DSP-15KVA DSP-20KVA	40 mins 25 mins 18 mins	95 mins 55 mins 40 mins	Two battery packs for one UPS (±240V)

Model	DSP11-1KVA-24S DSP11-1KVA-24L	DSP11-2KVA-48S DSP11-2KVA-48L	DSP11-3KVA-72S DSP11-3KVA-72L	DSP11-6KVA	DSP11-10KVA	DSP-10KVA	DSP-15KVA	DSP-20KVA
Power	1KVA	2KVA	3KVA	6KVA	10KVA	10KVA	15KVA	20KVA
DC input								
Voltage	24VDC	48VDC	72VDC	240VDC			±240VDC	
Max charging current	5A			3A	5A	2A	3A	4A
Battery	S:14 mins half load 4 mins full load	S:14 mins half load 4 mins full load	S:14 mins half load 4 mins full load	External battery pack				
	L:external battery	L:external battery	L:external battery					
AC input								
Input rated voltage	1 phase, 3 Wire, 220V					3 phases, 4 Wire, 380V		
Input voltage range	120 Vac~276 Vac			176 Vac~264Vac		304 Vac~456 Vac		
Input current	4A	8A	12A	34A	57A	3*19A	3*28A	3*38A
Input current harmonic	≤ 5% Rated input and linear load			≤ 3% Rated input and linear load				
Input power factor	0.99 (100% linear load)							
Input frequency	40~70Hz			45~56Hz(output rated linear load)				
Frequency Synchro range	±10%							
Frequency synchro rate	0.5~2Hz/s							
AC output								
AC output voltage	220Vac			220Vac/230Vac/240Vac				
Output power factor	0.9			0.9				
Output active power	900W	1800W	2700W	5.4KW	9KW	9KW	13.5KW	18KW
Output frequency	50HZ			50/60Hz				
Output frequency stability	±0.2			±0.1(battery power)				
Output THDU	3% (linear load)							
Output voltage accuracy	±2%							
Transient range	±5% (load changing 0% - 100% - 0%)							
Transient duration	20ms							
Peak factor	3:1 (rated input)							
Output delay at power-on	5~60s							
Overload	10min 125% rated load							
Overall efficiency	≥ 90%			≥ 93%				
Transfer time Bypass-Inverter	≤ 2ms							
parallel current unbalancedness	5% (> 50% load)							
Communication	RS232/RS485(optional) / LAN (optional)							
Others								
Mounting	Rackmount / tower							
Acoustic noise	≤40dB	≤45dB		≤50dB	≤55dB	≤58dB	≤58dB	≤58dB
MTBF	350000	350000	350000	100000h				
heat-dissipating method	Forced air cooling							
Protection level	IP20							
Enclosure material	Cladding aluminum galvanized , cold-rolled steel sheet, panel: plastic spraying processing							
Dimension (mm)	430(W)*402(D)*86(H)			430(W)*622(D)*88(H)		430(W)*622(D)*132(H)		
Weight (kg)	S: 20kg	S: 22kg	S: 27kg	17kg		25kg		
	L: 10kg	L: 10kg	L: 10kg					

Lead acid battery pack

Model	Capacity (AH)	Dimension (mm)	Weight (kg)	Model DSP	Full load backup time	Half load backup time	Remarks
DUP1204L3	24V24AH	430(W)*395(D)*86(H)	24	DSP11-1KVA-24L	20 mins	50 mins	
DUP1204L2	48V12AH	430(W)*395(D)*86(H)	24	DSP11-2KVA-48L	9 mins	20 mins	
DUP1204L6	72V8AH	430(W)*395(D)*86(H)	24	DSP11-3KVA-72L	4 mins	12 mins	
DUP1208M1	240V8AH	430(W)*622(D)*131(H)	60	DSP11-6KVA	10 mins	23 mins	
				DSP11-10KVA	4 mins	12 mins	
DUP1208M1	240V8AH	430(W)*622(D)*131(H)	60	DSP-10KVA	12 mins	32 mins	Two battery packs for one UPS (±240V)
				DSP-15KVA	6 mins	17 mins	
				DSP-20KVA	4 mins	12 mins	

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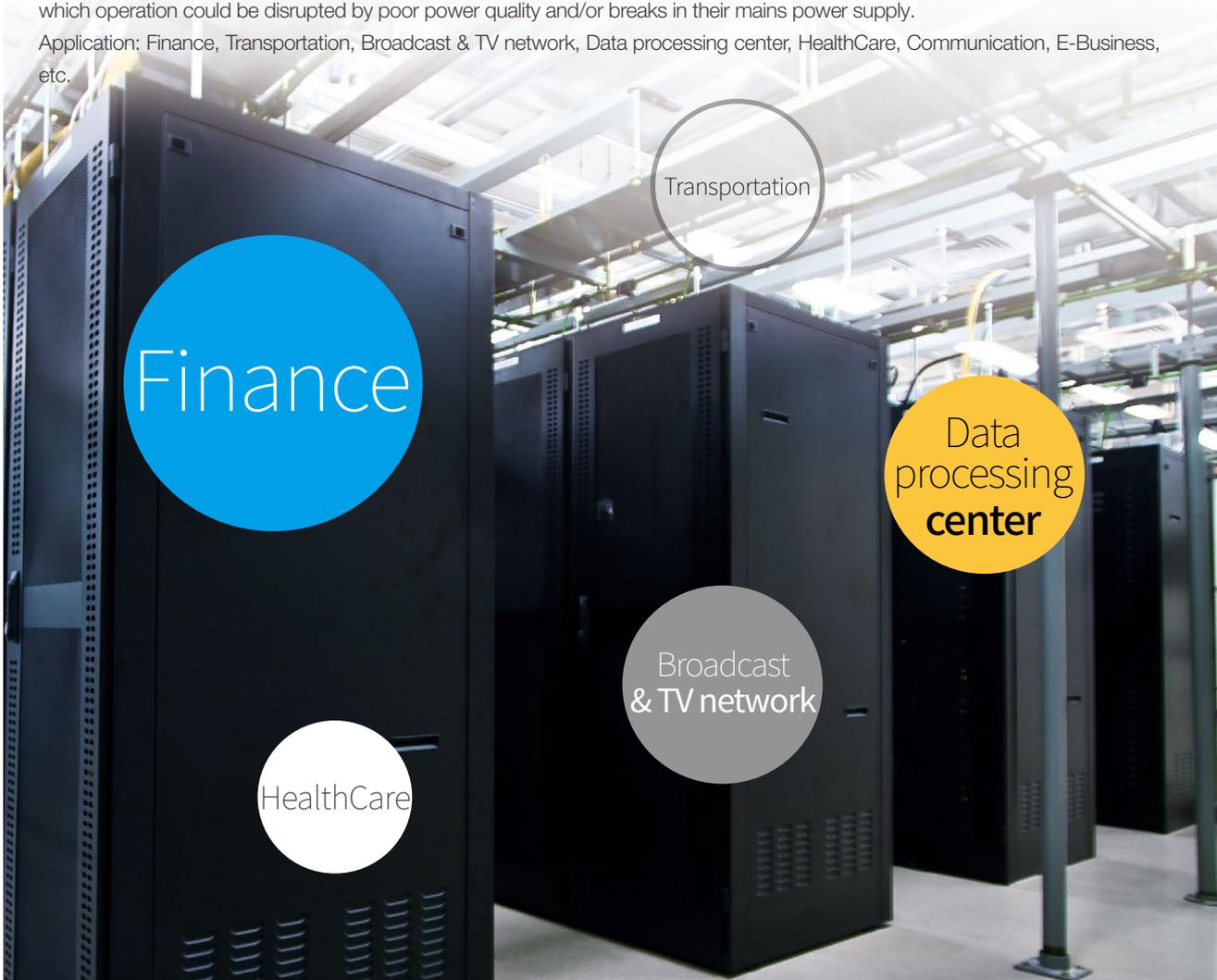
DSM Series UPS

20KVA-400KVA Wire in/out mode: 3/3

DSM is a high frequency, on-line double-conversion uninterruptible power supply. 0.9 output PF to suit any load. In the same time, 6 system parallel is available, which meets the requirements of users' demand. DSM design and high control technology provides better protection and higher reliability on load.

The UPS has been designed to protect critical information and telecommunications systems, networks, services and processes which operation could be disrupted by poor power quality and/or breaks in their mains power supply.

Application: Finance, Transportation, Broadcast & TV network, Data processing center, HealthCare, Communication, E-Business, etc.



- ZERO IMPACT SOURCE

- low input current distortion - less than 3%, high input power factor 0.99;
- Delayed start-up protects its power supply sources (mains or generator) from any harmonics and reactive power generated by the loads it is powering.

- BATTERY CARE SYSTEM

- Two voltage level recharge meeting the IU characteristic:
 - Temperature compensation: to avoid excessive voltage being applied to the batteries in a high ambient
 - Extendable back-up time options using battery extension cabinets
 - Battery test: to detect performance degradation and predict battery failure.
 - Cycle recharge function. Battery could be maintenance according battery manufacturer's requirements, in order to extend the life of battery.
 - "Trial charging" recharging function, in order to avoid voltage unbalance after changing battery.
- Extension inverter design capacity, which supplies 115% load (PF0.8) for a long time.
 - Full active power from 0.9 capacitive to 0.9 inductive load.
 - High efficiency design, more than 95% (online mode)
 - DSP microprocessor technology ensures excellent static and dynamic characteristics in any operation situation.
 - Simple and convenient separation bypass
 - Variety of intelligent communication. Remote monitoring and control, easy management, suitable for unattended operation.
 - optional isolation transformer.



DSM-20

Rated power: 20KVA

Dimension (mm): 350(W)*660(D)*670(H)

Weight: 120Kg



DSM-30 DSM-40

Rated power: 30KVA/40KVA

Dimension (mm): 400(W)*750(D)*1000(H)

Weight: 135Kg/145Kg

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DSM Series UPS



DSM-60 DSM-80 DSM-100 DSM-120

Rated power: 60KVA/80KVA/100KVA/120KVA

Dimension (mm): 600(W)*950(D)*1600(H)

Weight: 190Kg/200Kg/220Kg/380Kg



DSM-160 DSM-200

Rated power: 160KVA/200KVA

Dimension (mm): 800(W)*950(D)*2000(H)

Weight: 450Kg/500Kg



DSM-300 DSM-400

Rated power: 300KVA/400KVA

Dimension (mm): 1200(W)*950(D)*2000(H)

Weight: 700Kg/900Kg

Model	DSM-20	DSM-30	DSM-40	DSM-60	DSM-80	DSM-100	DSM-120	DSM-160	DSM-200	DSM-300	DSM-400
Power	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	120KVA	160KVA	200KVA	300KVA	400KVA
INPUT											
Nominal voltage	380Vac										
Voltage tolerance	-45% - 25%;±25% full load,-25% - -45% derating,-45% with 72% load										
Frequency tolerance	45 - 65Hz										
Input mode	three-phase + N										
Power Factor	> 0.99										
THDI	≤ 3%										
OUTPUT											
Power factor	0.9										
Voltage	380Vac±1%										
THDU	< 1% with linear load / < 2% with non-linear load										
Synchronous frequency accuracy	< 0.001%										
Battery tolerance	50Hz±0.5 ~ ±2										
Overload	110%,5h; 125%,10min; 150%,1min; > 250%,200ms										
Phase discrete	120°±1°(100% unbalance load)										
Admissible three-phase voltage unbalance factor	±1%(balance load);±1.5%(100% unbalance load)										
Peak factor	5:1										
Bypass voltage	±5% - ±25%										
Overall efficiency	≥ 98%										
Transfer time	0ms										
Transient dynamic response range	±2%(load changing 0 - 100%)										
Transient dynamic response recovery time	10ms										
STS overload ability	20 times current(100ms)										
Panel display	LCD+LED										
Redundant parallel technology	directly via Parallel board										
Environment											
Operation temperature	-5°C - +45°C										
Storage temperature	-25°C - 70°C										
Continuous operation temp.	Max 40°C , 8hours										
Relative humidity	0- 95%,non-cadency										
Max operation altitude	3000m (no derate)										
Acoustic noise (1m distance)	52dB										
OTHERS											
Anti-interference	EN61000-4-2,3,4,6,8,11 Level III ,EN61000-4-5 Level IV,EN50091-1-1-1.A										
MTBF (system)	> 250,000 hours										
MTTR (Board level maintenance)	10mins										
Surge protector	voltage pulse 10/700us, current pulse 8/20us,20KA										
Protection Level	IP21(IP31 Option)										