

Working in Power



AP160i

online UPS COMPACT

Rack-tower convertible

1, 2, 3, 6 & 10 kVA UPS

New unity output PF1, 6 & 10kVA UPS

- LOCAL AREA NETWORKS (LAN)
- SERVERS
- DATA CENTERS

- INTERNET CENTERS (ISP/ASP/POP)
- INDUSTRIAL PLCS
- EMERGENCY DEVICES (LIGHT, ALARM)

- ELECTROMEDICAL DEVICES
- TELECOMMUNICATION DEVICES
- INDUSTRIAL APPLICATION

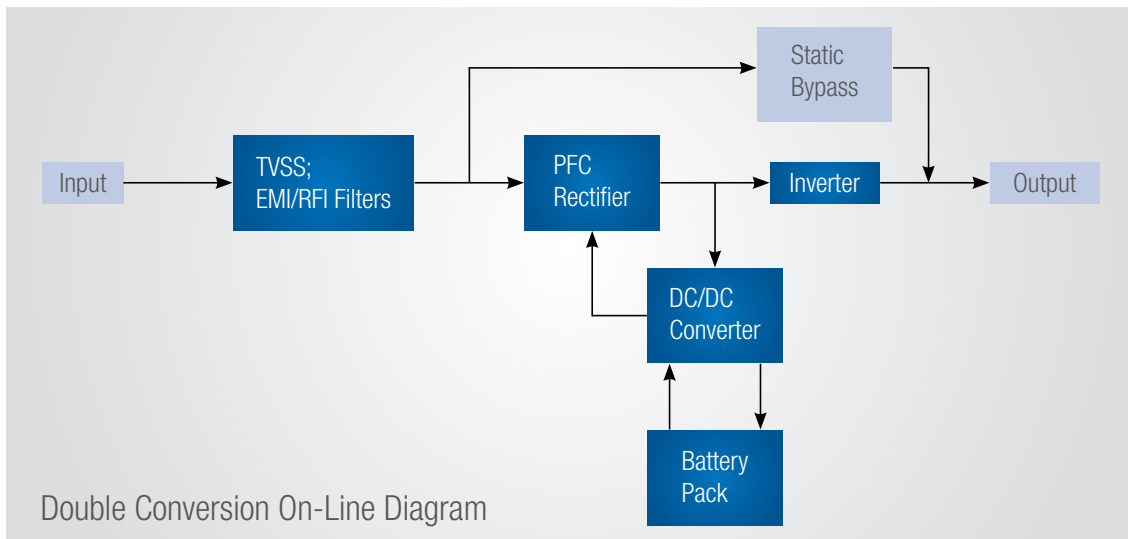
AP160i series

G-TEC is proud to introduce one of the most affordable UPS AP160i in its class with high reliability; power available; high power density and efficiency to safe guard your valuable data and mission critical equipment from power disturbances.

Today's mission critical equipment such as blade servers; VOIP; PoE, laboratory equipment, emergency voice announcement systems and etc, are demanding reliable power supply in case of power disturbances. AP160i's rack/ tower convertible is most suitable for different application.

AP160i rack/ tower convertible UPS is double conversion true on-line designed UPS ensure regulated sinusoidal voltage and frequency is supplied to the load despite whatever input power coming into the UPS, such as power surges; transient spike; power dips, electrical noise or even power blackout. The regulated UPS output supply meets all standards demanded by the critical load.

G-TEC introduces the New Version AP160i-6K/10K UPS. Designed with unity output power factor (PF1), it provides higher power by 11.1%.



Rack-TowerConvertible

AP160i 1kVA to 10kVA rack tower convertible can be easily adapted and installed to different environment. LCD display panel can be adjusted.

AP160i

AP160i rack/ tower convertible UPS is available with 1kVA; 2kVA; 3kVA; 6kVA & 10kVA provide standard backup time as well as optional battery packs for extended battery run-time solutions.



AP160i - 2K & 3K UPS



NEW AP160i - 6K/10KPF1 UPS & Battery Pack



AP160i - 6KS/10KS UPS & Battery Pack

UPS FEATURES

HIGH POWER EFFECTIVENESS

- It is designed with 0.9 output PF and ≥ 0.98 input PF (1-3kVA); ≥ 0.99 input PF (6-10kVA), thus high power effectiveness.

EXCELLENT RELIABILITY

- Designed with DSP technology and tropicalized costed PCBs for maximum reliability.

USER FRIENDLY ADJUSTABLE PARAMETERS

- With proprietary computer monitoring software (MTR), voltage; frequency; Battery EOD voltage; UPS shutdown and shutdown timing setting; battery testing; transfer & re-transfer etc, can be set and adjusted to achieve the maximum desire UPS performance.

UPS PARALLELING

- 6kVA & 10kVA can be paralleled up to 3 units to achieve redundancy and power capacity.

USER FRIENDLY LARGE LCD DISPLAY

- LCD display segment can rotate 90° to ease readout easier in rack or tower installation; all electrical measurements and power consumption can be read from the display.

EXTENDED BATTERY RUNTIME

- Optional battery pack is available to increase battery runtime for hours in case of emergency.

BUILT-IN MANUAL BYPASS

- 6K & 10K UPS is designed with standard built-in manual bypass breaker, thus ensuring business continuation even if UPS is at service and maintenance.

HIGH PERFORMANCE, HIGH EFFICIENCY

- The New 6K/10K PF1 UPS delivers 11.1% higher power than previous model. AC/AC efficiency is up to 95% making the New 6K/10K PF1 UPS one of the highest efficiency in its class, and efficiency is up to 98% at ECO mode.

INTELLIGENT FAN SPEED CONTROL

- The New 6K/10K PF1 UPS is featured with automatic fan speed regulation dependent on load rate, input voltage & working mode

DIGITAL CONTROL, FLEXIBLE BATTERY MANAGEMENT

- The New 6K/10K PF1 UPS is designed with fully digitized flexible battery management system, battery quantity for KS model can be adjusted at user friendly mimic panel range from 16, 18, 20, 22, & 24 blocks of 12V battery and charging current range from 1A, 2A, 3A, 4A & 5A dc.

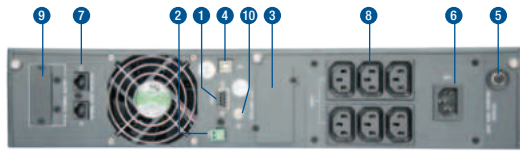
SELF AGING, POWER CIRCULATION FEATURE

- The New 6K/10K PF1 UPS is featured with this function to enable simulation of UPS testing can be done without load connected.

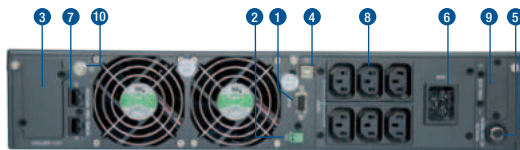
AP160i

1kVA to 10kVA

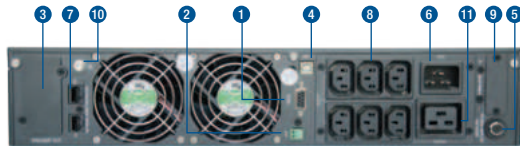
Overview of UPS rear panel for external connection.



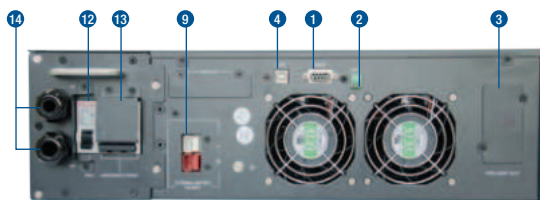
AP160i-1Krearpanel



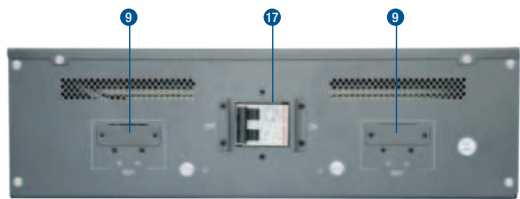
AP160i-2KSrearpanel



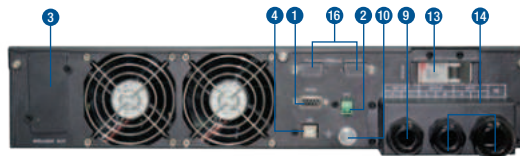
AP160i-3KSrearpanel



AP160i-6KS&10KSrearpanel

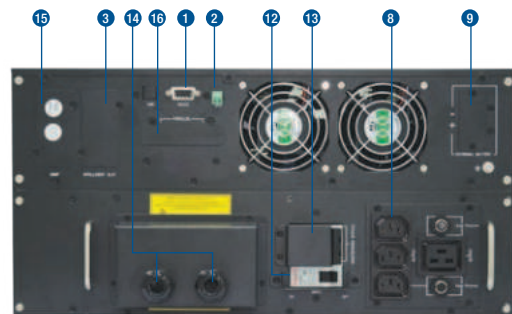


AP-6K/10Kbattery pack

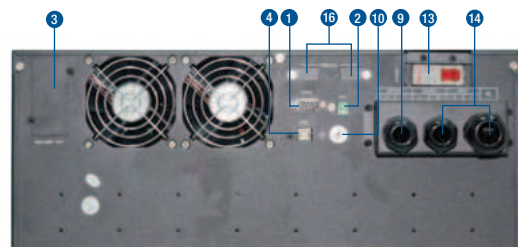


NEW AP160i - 6KS/10KS rear panel

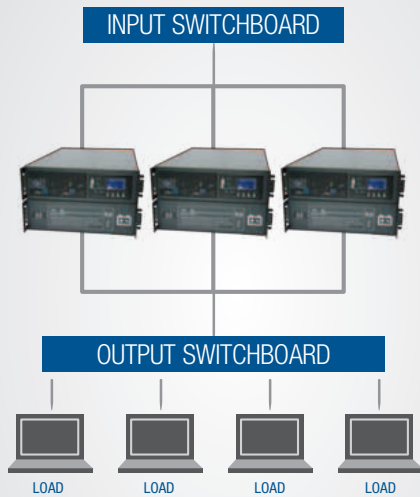
Description	
1	RS232 communication DP9 port
2	EPO, normally close
3	Intelligent slot for SNMP/ AS400 card
4	B type USB port
5	Input surge protection
6	Power cord input socket
7	Network surge protection
8	10A Output socket C13
9	External battery port
10	Battery ground
11	16A output socket C19
12	Input circuit breaker
13	Maintenance bypass breaker
14	Input and output cable entry
15	Intelligent slot for SNMP
16	Optional parallel port
17	Battery breaker



AP160i - 6K & 10K



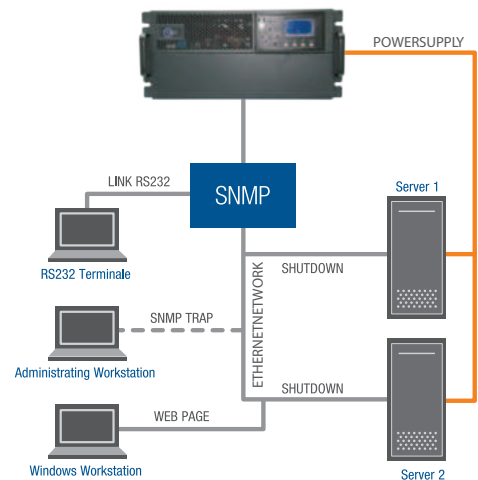
NEW AP160i-6K/10K UPS



AP160i 6kVA to 10kVA UPS with optional parallel kit fitted up to 3 UPS in parallel, can meet most demanding power requirement. Increase power availability and flexibility.

Parallel Redundancy feature provides economic power solution for system integration. Furthermore, parallel redundancy feature equally shares the load to maximize UPS performance, and more secure UPS continuous operation.

Direct Connection with Ethernet Network



Communication and Power Management Solutions

With optional SNMP card, it has the function to remote monitor and control UPS, 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, FreeBSD. More than that, to offer increased benefits for our customers, we have also released USB version MAC version on the internet.

Options and Accessories



UPS management card DY807 NetAgent 9 SNMP card is featured with the followings:

- Real Time UPS monitoring
- Comprehensive UPS management and flexible configuration via Web Browser, NMS, Telnet, SNMP
- IPv6 Supported
- Encryption of HTTPS, SSL, SSH, SNMPv1/v2/v3
- Centralized authentication by Radius
- Event notification via Email, SMS, Trap
- Environmental sensors supported via USB (Temperature, Humidity, Water, Smoke, Door/Windows)
- Standard UPS MIB, RFC1628, PPC MIB
- Multi-languages supported
- Schedule periodic UPS self-tests
- Record event / data log
- Graceful shutdown operating system



Flexible AS400 card designed with 6 I/O contacts offering two (2) different connections; i.e.DB9 serial port and phoenix terminator solutions to accommodate different connection for UPS remote monitoring.

Status monitoring includes:

- UPS failure
- General alarm
- Load on Bypass
- Battery low
- Normal condition
- Mains fail



Accessories are available to suit different installation method
 Guide rail for rack mounting
 Support base and spacer for tower standing

AP160i

TECHNICAL SPECIFICATIONS														
Model	1K	1KS	2K	2KS	3K	3KS	6K	6KS	10K	10KS	6K (PFI)	6KS (PFI)	10K (PFI)	10KS (PFI)
Power Rating (kVA / kW)	1 / 0.9		2 / 1.8		3 / 2.7		6 / 5.4		10/9		6/6		10/10	
INPUT														
Rated Voltage	200Vac / 208Vac/ 220Vac / 230Vac / 240Vac						220Vac / 230Vac / 240Vac			200Vac / 208Vac / 220Vac / 230Vac / 240Vac				
Voltage Tolerance	110 – 288 Vac													
Voltage Range	>110Vac – 288Vac (±3%) @ 50% load >132Vac – 288Vac (±3%) @ 70% load >154Vac – 288Vac (±3%) @ 80% load >176Vac – 288Vac (±3%) @ 100% load						>115Vac – 300Vac @ 65% load >138Vac – 300Vac @ 80% load >161Vac – 300Vac @ 90% load >184Vac – 300Vac @ 100% load (Above values are based on 230V nominal)			>110Vac – 288Vac (±3%) @ 50% load >132Vac – 288Vac (±3%) @ 75% load >154Vac – 288Vac (±3%) @ 90% load >176Vac – 288Vac (±3%) @ 100% load				
AC Input Connector	IEC C14 power cord		IEC C20 power cord				Terminal block							
Frequency Range	40Hz – 70Hz													
THDi%	<3.6% at full load						<6% at full load			<4% at full load				
Power Factor	≥0.98 (input 220V, full RCD load)										≥0.99			
OUTPUT														
Rated Voltage	200Vac / 208Vac/ 220Vac / 230Vac / 240Vac						220Vac / 230Vac / 240Vac			200Vac / 208Vac / 220Vac / 230Vac / 240Vac				
Voltage Regulation	±1%													
Frequency	50Hz ±5Hz (synchronizing) / 50Hz ±0.1Hz (free running)						50Hz ±3Hz (synchronizing) / 50Hz ±0.05Hz (free running)			50Hz ±5Hz (synchronizing) / 50Hz ±0.1Hz (free running)				
Crest Factor	3:1													
Harmonic Distortion (THDv)	≤2% linear load / ≤5% non-linear load		≤2% linear load / ≤5% non-linear load				≤1% linear load / ≤5% non-linear load			≤1% linear load / ≤5% non-linear load				
Output Waveform	Pure Sinewave													
Power factor	0.9										1			
Output Connection	6 x IEC320 C13 10A				6 x IEC320 C13 10A & 1 x IEC320 C19 16A		Terminal block for 6KS & 10KS / Terminal block & 3 x IEC320 C13 10A & 1 x IEC320 C19 16A for 6K & 10K			Terminal block				
BATTERY														
Type	Sealed Lead Acid Type													
Rating	7Ah		7Ah		7Ah		7Ah		9Ah		7Ah	16, 18, 20, 22, 24 pcs	9Ah	16, 18, 20, 22, 24 pcs
Numbers of Batteries	3	See note	6	See note	8	See note	16	16 or 20 battery. See note	16	16 or 20 battery. See note	16	16	16	16
Backup Time (typical load)	> 6 mins		> 6 mins		> 6 mins		> 5 mins		> 5 mins		> 8 mins	adjustable	> 8 mins	adjustable
Recharge Time	6 hours to 90% of battery capacity for internal battery model For KS model depending on battery Ah and quantity													
GENERAL CHARACTERISTICS														
Efficiency (online mode)	89.6%		90.3%		90.6%		92%				95% @ 60% load 94.5% @ 100% load			
Dimensions LxDxH (mm)	440 x 430 x 86 (2U)		440 x 480 x 173 (4U)	440 x 480 x 86 (2U)	440 x 480 x 173 (4U)	440 x 480 x 86 (2U)	438 x 680 x (5U)	438 x 680 x (3U)	438 x 680 x (5U)	438 x 680 x (3U)	440 x 660 x 172	440 x 550 x 86	440 x 660 x 172	440 x 550 x 86
Weight UPS case (kg)	13.5	8	28	9.5	33	10.5	62	18.5	70.5	21.5	58	16	62	18
Operating Temperature	0-40° C													
Humidity	0-95% (non-condensing)													
Noise Level (dBA @ 1m)	<50		<55				<58		<60		<58			
Standard Interface	Standard USB; RS232 for Power Monitor Software													
Interface for Intelligent Slot	SNMP / AS400 dry contact													
Compliance	IEC62040-1-1; IEC62040-2 Class A; IEC61000-4-2 level 4; IEC61000-4-3 level 3; IEC61000-4-4 level 4; IEC61000-4-5 level 4; IEC61000-2-2						IEC62040-1-1; IEC62040-2 Class 3; IEC61000-4-2 level 4; IEC61000-4-3 level 3; IEC61000-4-4 level 4; IEC61000-4-5 level 4; IEC61000-2-2							

Note: 1) Battery for KS model is external and its Ah rating & quantity shall depending on battery runtime.
2) Product specifications are subject to change for upgrading without prior notice.

TECHNICAL **ASSISTANCE** SERVICE

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 24x7 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.



TECHNICAL
ASSISTANCE SERVICE

G-Tec Asia Pacific Pte Ltd



Working in Power

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