

نانو افزار

UPS Battery Charger

- DC UPS
- Standby UPS
- Line Interactive UPS
- Online UPS
- Outdoor UPS
- AVR
- Battery



In our world , everything is built to last.

نانوافزار

UPS Battery Charger

درباره ما

شرکت نانو افزار تراشه پس از تجربه ۲۰ ساله مدیران در سال ۱۳۸۸ با اتکا بر دانش متخصصین کار آزموده با هدف طراحی و تولید و مشاوره و پشتیبانی تاسیس گردید. این شرکت سابقه ای در حدود یک دهه در ارائه خدمات یو پی اس و سیستم های تغذیه بدون وقفه به مشتریان داره و توانسته پروژه هایی در زمینه های تجهیزات صنعتی - فرودگاهی - خودروسازی - صنعت بیمه - صنایع نظامی و دیگر سازمان را اجرا و پشتیبانی نماید.

محصولات:

یو پی اس های تکفاز - یو پی اس های سه فاز - یو پی اس های صنعتی - شارژر - اینورتر - استابلایزر
انواع باتری های خشک سیلد اسید - نیکل کادمیوم
انواع کابینت های باتری
سیستم های انرژی خورشیدی
انواع تابلو برق های تک فاز و سه فاز

دپارتمان شرکت:

واحد مدیریت - واحد بازرگانی داخلی و خارجی - واحد فروش و بازاریابی (مدیریت فروش، پیگیری و اجرا، ملاقات با مشتریان، پاسخ دهی به مناقصات)، - واحد مالی (تنظیم فاکتور، حقوق و دستمزد، امور بانکی، بررسی بازپرداخت، دریافت انواع ضمانتنامه بانکی) - واحد فنی (پشتیبانی فنی و آموزش و خدمات شامل تهیه مدارک فنی و نقشه ها و اطلاعات مورد نیاز) - واحد انبار (تست، بازرسی کالا، بسته بندی، ارسال به محل مشتری) - واحد نمایندگی ها (انجام امور خدمات و فروش و تعمیرات و نگهداری در کلیه استانها) - واحد انفورماتیک (امور شبکه، نرم افزار و اینترنت) - واحد تولید (تولید یو پی اس و اینورتر و شارژر در ظرفیت های گوناگون و گسترش ظرفیت تولید و بومی سازی) - واحد تحقیق و توسعه (بررسی کالا و تکنولوژی های جدید جهت تولید و بروز رسانی محصولات)

اهداف شرکت:

شناخته شدن نام شرکت به عنوان تولید کننده و توزیع کننده ای صاحب نام جهت مشتریان با تقاضاهای مختلف و تغییرات در محصولات بر حسب تقاضاهای متفاوت مشتریان
شناخته شدن بر حسب نامی قابل اعتماد در صنعت الکترونیک: ما میدانیم تولید و واردات دستگاه های خوب و به روز، پایان تعهد به مشتری نیست و ما لازم به نو آوری های روز صنعت در دستگاههایمان از طریق واحد تحقیق و توسعه هستیم.
داشتن روابطی نزدیک با شمتری جهت رشد بازار: ما معتقدیم رشد شرکت همراه با رشد مشتریان و رضایت واقعی آنان می باشد.
ما متعهد به کاهش ضررهای احتمالی محصولات الکترونیک خود به محیط زیست هستیم و در پی صنعتی با استانداردهای پایین آلودگی جهت کمک به داشتن دنیایی عاری از آلودگی هستیم.



Byte



- 450VA/650VA/850VA/1KVA/1.5KVA/2KVA/3KVA line interactive UPS
- Excellent microprocessor control guarantees high reliability
- Boost and buck AVR for voltage stabilization
- Auto restart while AC is recovering
- Simulated sine wave output
- Off-mode charging
- Cold start function
- Optional USB/RS-232 communication port and RJ-11/RJ-45 protection
- Offering LED and LCD panels for selections

Byte Line Interactive UPS Selection Guide

MODEL	Byte 450	Byte 650	Byte 850	Byte 1K	Byte 1.5K	Byte 2K	Byte 3K
CAPACITY	450VA / 240W	650VA / 360W	850VA / 480W	1000VA / 600W	1500VA / 900W	2000VA / 1200W	3000VA / 1800W
INPUT							
Voltage	110/120 VAC or 220/230/240 VAC						
Voltage Range	81-145 VAC / 162-290 VAC						
Frequency Range	60/50 Hz (Auto sensing)						
OUTPUT							
Output Voltage	110/120 VAC or 220/230/240 VAC						
AC Voltage Regulation (Batt. Mode)	±10%						
Frequency Range (Batt. Mode)	60 Hz or 50 Hz ±1 Hz						
Transfer Time	Typical 2-6 ms, 10ms max.						
Waveform (Batt. Mode)	Simulated Sinewave						
BATTERY							
Battery Type & Number	12 V/4.5 Ah x 1	12 V/7 Ah x 1	12 V/9 Ah x 1	12 V/7 Ah x 2	12 V/9 Ah x 2	12 V/9 Ah x 2	12 V/9 Ah x 4
Typical Recharge Time	4-6 hours recover to 90% capacity						
PROTECTION							
Full Protection	Overload, discharge, and overcharge protection						
INDICATORS							
LCD Display	AC Mode, Battery Mode, Load Level, Battery Level, Input Voltage, Output Voltage, Overload, Fault, and Low Battery						
LED Display	AC Mode	Green lighting		Green lighting	The right green LED lighting & the 2nd to 5th green LEDs gradually lighting indicating load level		
	Battery Mode	Green flashing		Yellow flashing	The right green LED flashing & the 2nd to 5th green LEDs gradually lighting indicating battery capacity		
	Fault	N/A		Red lighting			
ALARM							
Battery Mode	Sounding every 10 seconds						
Low Battery	Sounding every second						
Overload	Sounding every 0.5 second						
Battery Replacement Alarm	Sounding every 2 seconds						
Fault	Continuously sounding						
PHYSICAL							
Dimension, D x W x H (mm)	287 x 100 x 142			350 x 146 x 160	397 x 146 x 205		495 x 150 x 250
Net Weight (kgs)	3.55	4.25	4.9	8.0	11.1	11.5	24.8
ENVIRONMENT							
Humidity	0-90 % RH @ 0- 40°C (Non-condensing)						
Noise Level	Less than 40dB						
MANAGEMENT							
Optional USB/RS-232 Port	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC						

Product specifications are subject to change without further notice

Mega Rackmount/Rack Tower 1KVA/1.5KVA/2KVA/3KVA



- True double-conversion
- Output power factor 0.9
- ECO and advanced ECO mode for energy saving
- Output voltage regulation < 1%
- Higher output crest ratio 3:1
- 50Hz/60Hz frequency converter mode
- Programmable power management outlets
- Emergency power off function (EPO)
- Hot swappable battery design

Mega Rackmount/Rack Tower Online UPS Selection Guide

MODEL	Mega RM 1K		Mega RM 1.5K		Mega RM 2K		Mega RM 3K		
PHASE	Single phase with ground								
CAPACITY*	1000 VA / 900 W		1500 VA / 1350 W		2000 VA / 1800 W		3000 VA / 2700 W		
INPUT									
Nominal Voltage	100*/110*/115*/120/127 VAC or 200/208/220/230/240 VAC								
Voltage Range	55-150 VAC \pm 5% or 110-300 VAC \pm 5% @ 50% load 80-150 VAC \pm 5% or 160-300 VAC \pm 5% @ 100% load								
Frequency Range	40 Hz ~ 70 Hz								
Power Factor	\geq 0.99 @ nominal voltage (100% load)								
THDi	\leq 5% @ nominal input voltage								
OUTPUT									
Output Voltage	100*/110*/115*/120/127 VAC or 200/208/220/230/240 VAC								
AC Voltage Regulation (Batt. Mode)	\pm 1%								
Frequency Range (Synchronized Range)	57 ~ 63 Hz or 47 ~ 53 Hz								
Frequency Range (Batt. Mode)	60Hz \pm 0.1Hz or 50 Hz \pm 0.1Hz								
Current Crest Ratio	3:1 (max.)								
Harmonic Distortion	\leq 2 % THD (Linear Load) ; \leq 4 % THD (Non-linear Load)								
Transfer Time	AC Mode to Batt. Mode		Zero						
	Inverter to Bypass		4 ms (Typical)						
Waveform (Batt. Mode)	Pure Sinewave								
EFFICIENCY									
AC Mode	90%		90%		91%		91%		
ECO Mode	97%		97%		97%		97%		
Battery Mode	88%	89%	89%		88%	89%	90%		
BATTERY									
Standard Model	Battery Type	12 V / 9 Ah	12 V / 7 Ah	12 V / 9 Ah	12 V / 7 Ah	12 V / 7 Ah	12 V / 9 Ah		
	Numbers	2	3	3	4	6	6		
	Typical Recharge Time	4 hours recover to 90% capacity							
	Charging Current (max.)	1.5 A**							
Long-run Model	Charging Voltage	27.4 VDC \pm 1%	41.1 VDC \pm 1%	41.1 VDC \pm 1%	54.8 VDC \pm 1%	82.1 VDC \pm 1%	82.1 VDC \pm 1%		
	Battery Type	Depending on the capacity of external batteries							
	Numbers	2	3	3	4	6	6		
	Charging Current (max.)	1A/2A/4A/8A (Selectable via LCD setting)							
	Charging Voltage	27.4 VDC \pm 1%	41.1 VDC \pm 1%	41.1 VDC \pm 1%	54.8 VDC \pm 1%	82.1 VDC \pm 1%	82.1 VDC \pm 1%		
INDICATORS									
LCD Display	UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions								
ALARM									
Battery Mode	Sounding every 5 seconds								
Low Battery	Sounding every 2 seconds								
Overload	Sounding every second								
Fault	Continuously sounding								
PHYSICAL									
Standard Model	Dimension, D x W x H (mm)	410 x 438 x 88		410 x 438 x 88	510 x 438 x 88	630 x 438 x 88	630 x 438 x 88		
	Net Weight (kgs)	11.6	14.2	14.5	19.5	26.9	27.4		
Long-run Model	Dimension, D x W x H (mm)	410 x 438 x 88		410 x 438 x 88	410 x 438 x 88		510 x 438 x 88		
	Net Weight (kgs)	6.4		6.5	6.5		10.5		
ENVIRONMENT									
Humidity	20-90 % RH @ 0- 40°C (non-condensing)								
Noise Level	Less than 50dB @ 1 Meter								
MANAGEMENT									
Smart RS-232/USB	Supports Windows® 2000/2003/XP/Vista/2008/7/8, Linux and MAC								
Optional SNMP	Power management from SNMP manager and web browser								

*Derate capacity to 95% when the output voltage is adjusted to 115VAC, derate capacity to 90% when the output voltage is adjusted to 110VAC and derate capacity to 80% when the output voltage is adjusted to 100VAC/200VAC/208VAC.

**If standard UPS is equipped with additional charger, the available setting options become 2A, 3A and 4A.

Product specifications are subject to change without further notice

Mega 6KVA/10KVA



- True double-conversion
- DSP technology guarantees high performance
- Output power factor 1
- Wide input voltage range (110-300 VAC)
- Active input power factor correction 0.99
- 50Hz/60Hz frequency converter mode
- Emergency power off function (EPO)
- Generator compatible
- SNMP/USB/RS-232 communications
- Adjustable battery numbers
- Optional N+X parallel redundancy

Mega 6KVA/10KVA Rack/Tower Online UPS Selection Guide

MODEL	Mega 6K(L) RT-LV	Mega 6K(L) RT-HV	Mega 10K(L) RT-LV	Mega 10K(L) RT	
PHASE	1 phase in / 1 phase out				
CAPACITY*	6000 VA / 8000 W		10000 VA / 10000 W		
INPUT					
Nominal Voltage	208/220/230/240 VAC				
Voltage Range	110~300VAC @ (0~60%) Load 140~300VAC @ (60~80%) Load 176~300VAC @ (80~100%) Load				
Frequency Range	48~54 Hz @ 50Hz / 58~64 Hz @ 60Hz				
Power Factor	≥ 0.99 @ full load				
THDI	< 4% @100% Load, < 6% @50% Load				
OUTPUT					
Output Voltage	104/110/115/120VAC	208*/220/230/240 VAC	104/110/115/120VAC	208*/220/230/240 VAC	
AC Voltage Regulation	± 1%				
Frequency Range (Synchronized Range)	48~54 Hz @ 50Hz / 58~64 Hz @ 60Hz				
Frequency Range (Batt. Mode)	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz				
Current Crest Ratio	3:1 (max.)				
Harmonic Distortion	≤ 1.5 % THD (Linear Load), ≤ 7 % THD (Non-linear Load)				
Transfer Time	AC Mode to Batt. Mode	Zero			
	Inverter to Bypass	Zero			
Waveform (Batt. Mode)	Pure Sinewave				
Overload	AC Mode	100%~110%: 10min · 110%~130%: 1min · >130% : 1sec			
	Battery Mode	100%~110%: 30sec · 110%~130%: 10sec · >130% : 1sec			
EFFICIENCY					
AC Mode	89%	94%	89%	94%	
Battery Mode	86%	91%	86%	91%	
BATTERY					
Standard Model	Battery Type	12 V / 7 AH	12 V / 7 AH	12 V / 9 AH	12 V / 9 AH
	Numbers	16	16	16	16
	Typical Recharge Time	9 hours recover to 90% capacity			
	Charging Current (max.)	1.0 A			
Long-run Model	Battery Type	Depending on applications			
	Numbers	16-20**			
	Charging Current (max.)	4.0 A			
	Charging Voltage	(13.65VDC x battery number) ± 1%			
INDICATORS					
LCD Panel	UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions				
ALARM					
Battery Mode	Sounding every 4 seconds				
Low Battery	Sounding every second				
Overload	Sounding twice every second				
Fault	Continuously sounding				
PHYSICAL					
Standard Model	Dimension, D x W x H (mm)	UPS Unit: 600x438x88 [2U] Battery Pack: 695x438x88 [2U] ISO Pack: 600 x 438 x 88 [2U]	UPS Unit: 600x438x88 [2U] Battery Pack: 695x438x88 [2U]	UPS Unit: 600x438x88 [2U] Battery Pack: 695x438x88 [2U] ISO Pack: 686 x 438 x 133 [3U]	UPS Unit: 600x438x88 [2U] Battery Pack: 695x438x88 [2U]
	Net Weight (kgs)	UPS Unit: 15 Battery Pack: 48 ; ISO Pack: 61	UPS Unit: 15 Battery Pack: 48	UPS Unit: 18 Battery Pack: 48 ; ISO Pack: 90	UPS Unit: 18 Battery Pack: 48
Long-run Model	Dimension, D x W x H (mm)	UPS Unit: 600 x 438 x 88 [2U] ISO Pack: 600 x 438 x 88 [2U]	600 x 438 x 88 [2U]	UPS Unit: 600 x 438 x 88 [2U] ISO Pack: 686 x 438 x 133 [3U]	600 x 438 x 88 [2U]
	Net Weight (kgs)	UPS Unit: 15 ; ISO Pack: 61	15	UPS Unit: 18 ; ISO Pack: 90	18
ENVIRONMENT					
Operation Humidity	20-90 % RH @ 0- 40°C (non-condensing)				
Noise Level	Less than 55dB @ 1 Meter		Less than 58dB @ 1 Meter		
MANAGEMENT					
Smart RS-232 / USB	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC				
Optional SNMP	Power management from SNMP manager and web browser				

* Derate capacity to 60% of capacity in CVCF mode and to 90% when the output voltage is adjusted to 208VAC.

**When using batteries from 16-19, the unit will de-rate according to below formula: P=Prating x N/20.

If the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be derated one percent per 100m.

Product specifications are subject to change without further notice.

Giga 3P/1P Tower



- True double-conversion
- DSP technology guarantees high performance
- Output power factor 0.9
- Wide input voltage range (110-300 VAC)
- Active power factor correction in all phases
- Built-in phase auto adapt function simplifies wire installation
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving
- Programmable power management outlets
- Emergency power off function (EPO)
- Generator compatible
- SNMP+USB+RS-232 multiple communications
- 3-stage extendable charging design for optimized battery performance
- Adjustable battery numbers
- Maintenance bypass available
- Optional N+X parallel redundancy

Giga Pro 3-phase in/1-phase out Online UPS Selection Guide

MODEL	Giga Pro 3P/1-10K (L)	Giga Pro 3P/1-15K (L)	Giga Pro 3P/1-20K (L)	Giga Pro 3P/1-30K (L)	
PHASE	3-phase in / 1-phase out				
CAPACITY	10000 VA / 9000 W	15000 VA / 13500 W	20000 VA / 18000 W	30000 VA / 27000 W	
INPUT					
Nominal Voltage	3 x 400 VAC (3Ph+N)				
Voltage Range	190-520 VAC (3-phase) @ 50% load ; 305-478 VAC (3-phase) @ 100% load				
Frequency Range	48-54Hz or 56-64Hz				
Power Factor	≥ 0.99 @ 100% Load				
THDi	< 8% @ 100% load				
OUTPUT					
Output Voltage	208/220/230/240VAC				
AC Voltage Regulation (Batt. Mode)	± 1%				
Frequency Range (Synchronized Range)	48-54Hz or 56-64Hz				
Frequency Range (Batt. Mode)	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz				
Current Crest Ratio	3:1 (max.)				
Harmonic Distortion	≤ 2 % THD (Line or Load) ≤ 5 % THD (Non-linear Load)				
Transfer Time	AC Mode to Batt. Mode	Zero			
	Inverter to Bypass	Zero			
Waveform (Batt. Mode)	Pure Sinewave				
EFFICIENCY					
AC Mode	91.5%	91.8%	91.8%	92.1%	
ECO Mode	97%	97%	97%	97%	
Battery Mode	87%	88%	88%	89%	
BATTERY					
Standard Model	Battery Type	12 V / 9 Ah			
	Numbers	20 pcs (18 - 20 pcs adjustable)*	20 pcs (18 - 20 pcs adjustable)* x 2 strings	20pcs(18-20pcs adjustable)* x3 strings	
	Typical Recharge Time	9 hours recover to 90% capacity			
	Charging Current (max.)	1A	2A	2A	4A
	Charging Voltage	273 VDC ± 1% (Based on 20pcs batteries)			
Long-run Model	Battery Type	Depending on applications			
	Numbers				
	Charging Current (max.)	4A	8A	8A	12A
	Charging Voltage	273 VDC ± 1% (Based on 20pcs batteries)			
INDICATORS					
LCD Display	UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions				
ALARM					
Battery Mode	Sounding every 4 seconds				
Low Battery	Sounding every second				
Overload	Sounding twice every second				
Fault	Continuously sounding				
PHYSICAL					
Standard Model	Dimension, D X W X H (mm)	592 x 250 x 576	815 x 250 x 826		
	Net Weight (kgs)	83	164	164	234
Long-run Model	Dimension, D X W X H (mm)	592 x 250 x 576	592 x 250 x 576	592 x 250 x 576	815 x 250 x 826
	Net Weight (kgs)	28	40	40	64
ENVIRONMENT					
Humidity	0-95 % RH @ 0-40°C (Non-condensing)				
Noise Level	Less than 58dB @ 1 Meter	Less than 60dB @ 1 Meter		Less than 65dB @ 1 Meter	
MANAGEMENT					
Smart RS-232 / USB	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC				
Optional SNMP	Power management from SNMP manager and web browser				

* L means long-run model.

**When using internal batteries from 18-19, the unit will de-rate according to below formula: P = P_{Rating} x N/20.

Giga II Pro 3P/1P Rackmount



- True double-conversion
- DSP technology guarantees high performance
- Output power factor 0.9
- Wide input voltage range (110-300 VAC)
- Active power factor correction in all phases
- Built-in phase auto adapt function simplifies wire installation
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving
- Emergency power off function (EPO)
- Generator compatible
- SNMP+USB+RS-232 multiple communications
- 3-stage extendable charging design for optimized battery performance
- Adjustable battery numbers
- Optional N+X parallel redundancy

Giga II Pro 3-phase in / 1-phase out Rack Online UPS Selection Guide

MODEL	Giga II Pro 3P/1-10KR (L)		Giga II Pro 3P/1-15KR (L)		Giga II Pro 3P/1-20KR (L)	
PHASE			3-phase in / 1-phase out			
CAPACITY	10000 VA/9000 W		15000 VA/13500 W		20000 VA / 18000 W	
INPUT						
Nominal Voltage			3 x 400 VAC (3Ph+N)			
Voltage Range			190-520 VAC (3-phase) at 50% load ; 305-478 VAC (3-phase) at 100% load			
Frequency Range			46-54 Hz or 56-64Hz			
Power Factor			≥ 0.99 @ 100% Load			
THDI			< 6% @ 100% Load			
OUTPUT						
Output Voltage			208/220/230/240VAC			
AC Voltage Regulation (Batt. Mode)			± 1%			
Frequency Range (Synchronized Range)			46-54Hz or 56-64Hz			
Frequency Range (Batt. Mode)			50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz			
Current Crest Ratio			3:1			
Harmonic Distortion			≤ 2 % THD (Linear Load) ≤ 5 % THD (Non-linear Load)			
Transfer Time	AC Mode to Batt. Mode			Zero		
	Inverter to Bypass			Zero		
Waveform (Batt. Mode)			Pure Sinewave			
EFFICIENCY						
AC Mode	90.5%				91%	
ECO Mode	96%				96%	
Battery Mode	87%				88%	
BATTERY						
Standard Model	Battery Type			12 V / 9 Ah		
	Numbers	20 (18 - 20* adjustable)		20 pcs x 2 strings (18 - 20* adjustable)		
	Typical Recharge Time			9 hours recover to 90% capacity		
	Charging Current (max.)	1A		2A		
	Charging Voltage			273 VDC ± 1% (based on battery numbers at 20 pcs)		
Long-run Model	Battery Type			Depending on the capacity of external batteries		
	Numbers					
	Charging Current (max.)			4A		
	Charging Voltage			273 VDC ± 1% (based on battery numbers at 20 pcs)		
INDICATORS						
LCD Display			UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions			
ALARM						
Battery Mode			Sounding every 4 seconds			
Low Battery			Sounding every second			
Overload			Sounding twice every second			
Fault			Continuously sounding			
PHYSICAL						
Standard Model	Dimension, D x W x H(mm)	UPS unit:668 x 438 x 133(3U) Battery pack: 580 x 438 x 133(3U)		UPS unit:668 x 438 x 266(6U) Battery pack: 580 x 438 x 133(3U) x 2PCS		
	Net Weight (kgs)	UPS unit: 22 Battery pack: 63		UPS unit: 45 Battery pack: 63 x 2PCS		
Long-run Model	Dimension, D x W x H(mm)	668 x 438 x 133(3U)		668 x 438 x 266(6U)		
	Net Weight (kgs)	22		45		
ENVIRONMENT						
Operation Humidity			0-95 % RH @ 0- 40°C (Non-condensing)			
Noise Level	Less than 60dB @ 1 Meter				Less than 65dB @ 1 Meter	
MANAGEMENT						
Smart RS-232 / USB			Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC			
Optional SNMP			Power management from SNMP manager and web browser			

*When using internal batteries from 18-19, the unit will de-rate according to the below formula: P = P_{rating} x N/20.
Product specifications are subject to change without further notice

Tera 3P/1P Tower



- True double-conversion
- DSP technology guarantees high performance
- Output power factor 0.9
- Wide input voltage range (110-300 VAC)
- Active power factor correction in all phases
- Built-in phase auto adapt function simplifies wire installation
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving
- Programmable power management outlets
- Emergency power off function (EPO)
- Generator compatible
- SNMP+USB+RS-232 multiple communications
- 3-stage extendable charging design for optimized battery performance
- Adjustable battery numbers
- Maintenance bypass available
- Optional N+X parallel redundancy

Tera Pro 3-phase in/1-phase out Online UPS Selection Guide

MODEL	Tera Pro 3/1-10K (L)	Tera Pro 3/1-15K (L)	Tera Pro 3/1-20K (L)	Tera Pro 3/1-30K (L)	
PHASE	3-phase in / 1-phase out				
CAPACITY	10000 VA / 9000 W	15000 VA / 13500 W	20000 VA / 18000 W	30000 VA / 27000 W	
INPUT					
Nominal Voltage	3 x 400 VAC (3Ph+N)				
Voltage Range	190-520 VAC (3-phase) @ 50% load ; 305-478 VAC (3-phase) @ 100% load				
Frequency Range	46-54Hz or 56-64Hz				
Power Factor	≥ 0.99 @ 100% Load				
THDi	< 8% @ 100% load				
OUTPUT					
Output Voltage	208/220/230/240VAC				
AC Voltage Regulation (Batt. Mode)	± 1%				
Frequency Range (Synchronized Range)	46-54Hz or 56-64Hz				
Frequency Range (Batt. Mode)	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz				
Current Crest Ratio	3:1 (max.)				
Harmonic Distortion	≤ 2 % THD (Line or Load) ≤ 5 % THD (Non-linear Load)				
Transfer Time	AC Mode to Batt. Mode	Zero			
	Inverter to Bypass	Zero			
Waveform (Batt. Mode)	Pure Sinewave				
EFFICIENCY					
AC Mode	91.5%	91.8%	91.8%	92.1%	
ECO Mode	97%	97%	97%	97%	
Battery Mode	87%	88%	88%	89%	
BATTERY					
Standard Model	Battery Type	12 V / 9Ah			
	Numbers	20 pcs (18 - 20 pcs adjustable)*	20 pcs (18 - 20 pcs adjustable)* x 2 strings	20pcs(18-20pcs adjustable)* x3 strings	
	Typical Recharge Time	9 hours recover to 90% capacity			
	Charging Current (max.)	1A	2A	2A	4A
	Charging Voltage	273 VDC ± 1% (Based on 20pcs batteries)			
Long-run Model	Battery Type	Depending on applications			
	Numbers				
	Charging Current (max.)	4A	8A	8A	12A
	Charging Voltage	273 VDC ± 1% (Based on 20pcs batteries)			
INDICATORS					
LCD Display	UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault conditions				
ALARM					
Battery Mode	Sounding every 4 seconds				
Low Battery	Sounding every second				
Overload	Sounding twice every second				
Fault	Continuously sounding				
PHYSICAL					
Standard Model	Dimension, D X W X H (mm)	592 x 250 x 576	815 x 250 x 626		
	Net Weight (kgs)	83	164	164	234
Long-run Model	Dimension, D X W X H (mm)	592 x 250 x 576	592 x 250 x 576	592 x 250 x 576	815 x 250 x 626
	Net Weight (kgs)	28	40	40	64
ENVIRONMENT					
Humidity	0-95 % RH @ 0- 40°C (Non-condensing)				
Noise Level	Less than 68dB @ 1 Meter	Less than 60dB @ 1 Meter		Less than 65dB @ 1 Meter	
MANAGEMENT					
Smart RS-232 / USB	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC				
Optional SNMP	Power management from SNMP manager and web browser				

* L means long-run model.

**When using internal batteries from 18-19, the unit will de-rate according to below formula: $P = P_{Rating} \times N/20$.

Tera Pro 3P/3P



- True double-conversion
- DSP technology guarantees high performance
- Output power factor 0.9
- Active power factor correction in all phases
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving (ECO)
- Emergency power off function (EPO)
- Generator compatible
- SNMP+USB+RS-232 multiple communications
- 3-stage extendable charging design for optimized battery performance
- Adjustable battery numbers for long-run model
- Maintenance bypass available
- Optional parallel operation up to 3 units
- Optional isolation transformer
- Optional 7" touch LCD panel

Tera 3-phase in/3-phase out Online UPS Selection Guide

MODEL	30K (L)*	40K (L)	60KL	80KL	100KL	120KL	160KL	200KL
PHASE	3-phase in / 3-phase out							
CAPACITY	30KVA / 27KW	40KVA / 36KW	60KVA / 54KW	80KVA / 72KW	100KVA / 90KW	120KVA / 108KW	160KVA / 144KW	200KVA / 180KW
INPUT								
Nominal Voltage	3 x 400 VAC (3Ph+N)							
Voltage Range	190-520 VAC (3-phase) @ 50% load ; 305-478 VAC (3-phase) @ 100% load							
Frequency Range	46-54 Hz or 56-64Hz							
Power Factor	≥ 0.99 @ 100% Load							
OUTPUT								
Output Voltage	3 x 360/380/400/415 VAC (3Ph+N)							
AC Voltage Regulation (Batt. Mode)	± 1%							
Frequency Range (Synchronized Range)	46-54Hz or 56-64Hz							
Frequency Range (Batt. Mode)	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz							
Current Crest Ratio	3:1 (max.)							
Harmonic Distortion	≤ 2 % THD (Linear Load) ; ≤ 5 % THD (Non-linear Load)							
Transfer Time	AC Mode to Batt. Mode	Zero						
	Inverter to Bypass	Zero						
Waveform (Batt. Mode)	Pure Sine wave							
Overload	AC Mode	100-110% for 10 min, 110-130% for 1 min, >130% for 1 second						
	Battery Mode	100-110% for 30 seconds, 110-130% for 10 seconds, >130% for 1 second						
Parallel Capacity	up to 3 units in parallel							
EFFICIENCY								
AC Mode	95.0%							
ECO Mode	98.0%							
Battery Mode	92.0%	92.0%	92.0%	92.0%	92.0%	92.0%	93.0%	93.0%
BATTERY								
Standard Model	Battery Type	12 V / 7 Ah	12 V / 9 Ah					
	Numbers	(16+16) pcs x 2 strings	(18+16) pcs x 2 strings					
	Typical Recharge Time	9 hours recover to 90% capacity			N/A			
	Charging Current (max.)	2A						
	Charging Voltage	± 218 VDC						
Long-run Model	Battery Type	Depending on the capacity of external batteries						
	Numbers	16 ~20 pcs (Adjustable)						
	Charging Current (max.)	4A	8A	12 A	16A			
	Charging Voltage	+/- 13.65V x N (N=16~20)						
INDICATORS								
LCD Display	UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault							
ALARM								
Battery Mode	Sounding every 4 seconds							
Low Battery	Sounding every second							
Overload	Sounding twice every second							
Fault	Continuously sounding							
PHYSICAL								
Standard Model	Dimension, D x W x H (mm)	815 x 300 x 1000			N/A			
	Net Weight (kgs)	225	250					
Long-run Model	Dimension, D x W x H (mm)	592 x 250 x 576		790 x 380 x 900	850 x 550 x 1500	950 x 550 x 1700	1000 x 650 x 2100	
	Net Weight (kgs)	43	45	95	150	185	250	
ENVIRONMENT								
Operation Temperature	0-40°C							
Operation Humidity	≤ 95% and non-condensing							
Noise Level	Less than 75dB @ 1 Meter							
MANAGEMENT								
Smart RS-232 / USB	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC							
Optional SNMP	Power management from SNMP manager and web browser							

*If output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 80%.
Product specifications are subject to change without further notice.

Peta 3P/3P



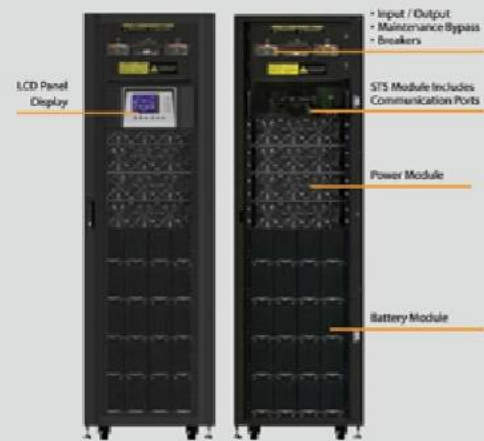
- Online double-conversion
- DSP technology guarantees high reliability
- True galvanic isolation transformer design
- Control designed to withstand all kinds of loads
- Intelligent battery management to prolong battery lifecycle
- Redundant fan design and independent ventilation enhance durable operation under harsh environment
- Adjustable battery numbers
- Accept dual-mains input
- Parallel operation with up to 4 units (option)
- Variety of communication options available
- Optional 7" touch LCD

Peta 3-phase in/3-phase out Online UPS Selection Guide

MODEL	Peta 10K	Peta 15K	Peta 20K	Peta 30K	Peta 40K	Peta 60K	Peta 80K	Peta 100K	Peta 120K
CAPACITY	10 KVA / 8 KW	15KVA / 12KW	20 KVA / 16 KW	30 KVA / 24 KW	40 KVA / 32 KW	60 KVA / 48 KW	80 KVA / 64 KW	100 KVA / 80 KW	120 KVA / 96KW
INPUT									
Nominal Voltage	3 x 380VAC/400VAC (3Ph + N)								
Acceptable Voltage Range	285VAC ~ 475VAC								
Frequency	50/60 Hz ± 10 %								
INVERTER									
Nominal Voltage	3 x 380VAC/400VAC (3Ph + N)								
Precision	Stationary: ±1% Transitory: ±5% (load variations 100-0-100%)								
Frequency	50/60 Hz synchronised ±1 % With mains absent ±0.1 Hz								
Max. Synchronisation Speed	±1 Hz/s								
Waveform	Pure Sinewave								
Total Harmonic Distortion (THDv)	<2% (Linear Load) ; <5% (Non-linear Load)								
Phase Displacement	120° ±1% (balanced load) ; 120° ±2% (imbalances 50% of the load)								
Dynamic Recovery Time	3 cycles at 90 % of the static value								
Admissible Overload	110% for 10min; 150% for 60sec ; >160% for 200ms								
Admissible Crest Factor	3:1								
Admissible Power Factor	0.6~1 (inductive or capacitive)								
Imbalance Output Voltage @ 100% Unbalanced Load	<1%								
Current Limit	High overload, short-circuit: RMS Voltage Limit High Crest-Factor current: Peak Voltage Limit								
STATIC BYPASS									
Type	Solid state								
Voltage	3 x 380VAC/400VAC (3Ph + N)								
Frequency	50/60 Hz								
Activation Criterion	Microprocessor control								
Transfer Time	Zero								
Admissible Overload	150% for 1 hour; 180% for 30sec; >200% for 200ms								
Transfer to Bypass	Immediate, for overloads above 160%								
Retransfer	Automatic after alarm clear								
MAINTENANCE BYPASS									
Type	Without interruption								
Voltage	3 x 400V (3Ph + N)								
Frequency	50/60 Hz								
Overall Efficiency	Line Mode	90%	91%	92%	93%				
	Battery Mode	90%	91%	93%	93%				
BATTERY & CHARGER									
Battery Type and Numbers	12VDC x 32 pcs (29-32 pcs adjustable)								
Nominal Battery Voltage	384 VDC (Based on 32pcs batteries)								
Charging Method	CC/CV								
Charging Current	Default 10A, Max. = Capacity / Battery Voltage				Default: 10A, Max. 40A				
Charging Voltage	432 VDC (Based on 32pcs batteries)								
PHYSICAL									
Dimensions, D x W x H (mm)	856 x 405 x 817		656 x 405 x 941		821 x 432 x 1159		975 x 554 x 1286		975 x 635 x 1326
Net Weight (Kgs)	118	120	179	241	278	400	471	573	650

Product specifications are subject to change without further notice

+Power Modular UPS



- High efficiency online double conversion technology**
 +Power is applied online double conversion technology with high performance over 94.5% at 50% load. It significantly reduces overall Total Cost of Ownership (TCO).
- High scalability**
 DSP control provides an improved solution with high performance. Integrated with modular design and parallel technology, +Power simplifies future power expansion.
- Unity output power factor**
 +Power delivers unity output power (kVA=kW) providing the maximum power capacity to mission critical loads. It satisfies the requirements of the latest servers and optimizes IT investment with every penny.
- Modular design lowers MTTR**
 Modular design is applied in power module, STS module and battery module. It will simplify maintenance and replacement with low MTTR (Mean Time To Repair).
- High reliable operation with redundant power supply in STS**
 +Power provides 2 power supplies in STS. It will ensure no shutdown risk for STS.
- User-adjustable charging current**
 +Power provides maximum 8A or 6A charging current for every power module and it's user-adjustable based on requirement.
- High overload capability**
 +Power supports, 110% overload for 60 minutes, 125% for 10 minutes, and 150% for 1 minute.
- Ease of installation and maintenance**
 Built-in maintenance bypass assures continuous power to critical loads during UPS maintenance. Besides, to facilitate installation and maintenance, all panel control and connectors are front accessibility.
- Flexible battery configuration adapts different applications**
 Battery numbers can be adjusted flexibly. It will adapt different power demands and shorten system downtime. Battery voltage can be set from 32 to 40 pieces per string.
- Graphic 5.7" LCD design for easy management**
 Designed for easy management, +Power is equipped with 5.7" graphic LCD screen. Intuitive design enhances display information identified and advanced configuration.
- N+1 or N+X parallel redundancy for power guarantee**
 Scalable architecture allows you to optimize cost expense to meet power demands by vertically expanding in a single rack enclosure from 30KVA to 210KVA and achieve N+1 or N+X redundancy in the same rack.
- Optional 10" touch LCD panel**





Model	+Power 30U					
Cabinet Height (U)	30U					
Cabinet Capacity	60 KW	80 KW	120 KW	90 KW	120 KW	180 KW
Capacity /Per Power Module	20 KW	20 KW	20 KW	30 KW	30 KW	30 KW
Power Module No.	3	4	6	3	4	6
Built-in Battery Modules	Yes	No	No	Yes	No	No



Model	+Power 42U	
Cabinet Height (U)	42U	
Cabinet Capacity	200 KW	210 KW
Capacity /Per Power Module	20 KW	30 KW
Power Module No.	10	8
Built-in Battery Modules	No	No

Model	+Power E	
Cabinet Height (U)	15U	
Cabinet Capacity	60 KW	90 KW
Capacity /Per Power Module	20 KW	30 KW
Power Module No.	3	3
Built-in Battery Modules	No	No

+Power 3P/3P 400V Modular UPS Selection Guide

MODEL	+Power 30U-90	+Power 42U-120	+Power 30U-120	+Power 30U-180	+Power 42U-200	+Power 42U-210
PHASE	3-phase in / 3-phase out					
CABINET CAPACITY*	90 KW	120 KW	120 KW or 80 KW	180 KW or 120 KW	200 KW	210 KW
BATTERY TYPE	Built-in Battery		External Battery			
ONE POWER MODULE CAPACITY	30KVA / 30KW		30KVA / 30KW or 20KVA / 20KW		20KW	30KVA / 30KW
MAX. POWER MODULE NO.	3	4	4	6	10	8
MAX. BATTERY SET NO.**	3	5	-	-	-	-
INPUT						
Nominal Voltage	3 x 380VAC/400VAC/415VAC (3Ph+N)					
Voltage Range	305 ~ 478 VAC at 100% load; 208 ~ 304VAC at <70% load					
Nominal Frequency	50/60Hz (Auto Sensing)					
Frequency Range	40Hz ~ 70Hz					
Power Factor	> 0.99 @ 100% Load , >0.98 @ 50% Load					
Harmonic Distortion (THD)	< 3% @ 100% load					
OUTPUT						
Nominal Voltage	3 x 380VAC/400VAC/415VAC (3Ph+N)					
Voltage Regulation (Steady state)	≤ ± 1% Typical (balanced load) ; ≤ ± 2% Typical (unbalanced load)					
Nominal Frequency	50/60Hz					
Frequency Range (Synchronized)	48Hz ~ 54Hz or 56Hz ~ 64Hz					
Overload Capability	1 hour for 110%, 10 mins for 125%;, 1 min for 150%, 200ms for >150%					
Harmonic Distortion	≤ 1.5% THD (Linear Load) ; ≤ 4% THD (Non-linear Load)					
Efficiency	Up to 94.5%					
BATTERY / CHARGER						
Nominal Voltage	+/- 216V (12V x 36 pcs)					
Maximum Voltage	+/- 240V (12V x 40 pcs)					
Minimum Voltage	+/- 192V (12V x 32 pcs)					
Float Charging Voltage	2.25V / Cell					
Boost Charging Voltage	2.35V / Cell					
Temperature Compensation	Yes					
Maximum Charging Current (Per Power Module)	8A		8A for 30KW power module 6A for 20KW power module		6A	8A
PHYSICAL						
Cabinet Dimension (D x W x H) mm	1100 x 600 x 1475 [30U]	1100 x 600 x 2010 [42U]	1100 x 600 x 1475 [30U]	1100 x 600 x 1475 [30U]	1100 x 600 x 2010 [42U]	
Net Weight (Kg)	675	932	335 or 333	437.5 or 434.5	625	549
ENVIRONMENT						
Operation Temperature	0 ~ 40°C					
Relative Humidity	0 ~ 95% non-condensing					
Altitude	<1000m for Nominal power					
IP Class	IP 20					
MANAGEMENT						
Smart RS-232 / USB	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC					
Optional SNMP	Power management from SNMP manager and web browser					
STANDARDS						
Safety	IEC/EN 60950-1; IEC/EN 62040-1					
EMC	IEC/EN 62040-2 Category C3					

*When temperature is above 30°C, the output power factor will be de-rated, 0.8 at 31°C~35°C and 0.8 at 36°C~40°C.

** One battery module contains 10 pcs of 12V/7Ah or 12/9Ah sealed lead acid batteries in one tray. One complete battery set contains 4 battery modules.

***If the UPS is installed or used in a place where the altitude is above than 1000m, the output power must be derated one percent per 100m.

Product specifications are subject to change without further notice

Model	Description	Dimension DxWxH(mm)	Weight (kg)
PM-20HV	3P/3P 20KVA / 20KW power module	650 x 440 x 132(3U)	34
PM-30HV	3P/3P 30KVA / 30KW power module	650 x 440 x 132(3U)	34.5
Battery Module	10 pcs of 12V 9Ah batteries	735 x 107 x 155	26

Standard Range VRLA



SEALED VRLA MONOBLOC AGM BATTERIES 18AH to 250AH

The extremely powerful, compact AGM VRLA batteries of Elect Power telecom Standard Range are an ideal energy source for durability in Telecommunications and Electric Utility applications, the Elect Power top terminal Standard Range provides high performance and reliability in long duration discharge applications. Our development team combines the market's demand with design optimization, precision component selection and state-of-the-art manufacturing process to produce the most cost effective battery solution for today's applications.

Applicable Operating temperature range:
-40°C (-40°F) to +70°C (+158°F)

Ideal Operating temperature range:
+20°C (+68°F) to +28°C (+82.4°F)

Storage time from a fully charged condition:
12 months at 20°C ~25°C/ 68°F~77°F. For each 9°C / 15°F rise, reduce the storage time by half.

Applications

Standard Range AGM batteries Incorporate Elect Power advanced VRLA technology designed for long life and high performance in:

Telecommunications	Electric Utility
Distributed Power	Switchgear Control Power
UPS	Communications
Cellular	Railroad
Microwave	Microwave
Broadband	Communications



Innovative Features

Thick positive plate design for maximum service float life - 12 years design life @ 20°C(68°F).

UL Recognized component.

Valve regulated lead acid battery (VRLA).

High-Compression Absorbed Glass Mat technology (AGM) for greater than 99% recombination efficiency.

Proprietary Fixed Orifice Plate Pasting technology applying active materials on both sides of the grid for consistent cell-to-cell performance, higher capacity and uniform grid protection.

Operates at a low internal pressure.

Heavy duty insert copper terminals for ease of assembly, reduced maintenance and increased safety.

Advanced lead tin calcium alloy, reduces grid corrosion and promotes long battery life.

Standard: Reinforced ABS (UL 94HB) container and cover.

Optional: Flame-retardant reinforced ABS container and cover compliant with U.L.94 V-0 with an Oxygen limiting Index of greater than 28%.

Over-sized, through the partition inter-cell welds provide low resistance connections, with minimal power loss.

Flame arresting, low pressure safety release venting system for individual cells, recognized per U.L. 924.

Multicell design for ease of installation and maintenance.

Horizontal or vertical operation.

Standards and Compliances

UL Compliant	Tested in accordance with:
NEBS Compliant	BS 6290 PART 4
EUROBAT	Belcore: TR-NWT-000766
10 years plus classification	ANSI, TI: 330

Designed in Quality Manufacturing

Quality manufacturing processes for the Standard Range AGM batteries incorporate the industry's most advanced technologies including: an automated sealing detection system, a computer controlled "fill by weight" acid filler, and a temperature controlled water bath formation process. Each and every unit is capacity tested.

No transport restrictions

Surface transport. Classified as non-hazardous material as related to DOT-CFR Title 49 parts 171-189.

Marine transport. Classified as non-hazardous material as per IMDG amendment 27.

Air transport. Complies with IATA/ICAO, Special provision A67.

Standard Range VRLA Discharge Watts Data @ 20°C (68°F)

Battery Model	End VPC	Discharge Data WPC @ 20°C						End VPC	Discharge Data WPC @ 20°C									
		Discharge Time in Minutes							Discharge Time in Hours									
		5	10	15	30	45	60		1.5	2	3	4	5	6	10	12	20	24
ST-12135	1.80	688	510	407	263	204	168	1.85	116	94.2	67.6	53.9	45.4	31.1	26.0	23.4	14.6	11.8
	1.75	675	496	431	273	206	174	1.60	123	98.8	71.1	56.3	46.6	32.1	26.7	24.0	15.1	12.7
	1.67	710	500	453	279	219	183	1.75	128	101	72.6	57.3	47.7	32.7	27.3	25.4	15.4	13.0
ST-12150	1.80	654	544	453	291	225	186	1.85	120	104	75.9	60.2	49.9	34.1	28.4	24.2	16.1	13.5
	1.75	730	568	478	302	229	192	1.60	135	110	78.9	62.3	51.8	35.7	29.6	25.3	16.6	14.0
	1.67	612	597	503	312	237	198	1.75	140	112	80.9	63.8	52.8	36.3	30.2	25.8	16.8	14.3
ST-12160	1.80	769	560	483	311	241	199	1.85	138	111	81.0	64.3	53.2	39.5	30.4	25.8	17.2	14.4
	1.75	834	618	510	323	245	206	1.60	147	118	84.2	66.5	55.3	39.1	31.6	27.1	17.7	15.0
	1.67	899	646	530	333	254	211	1.75	150	120	86.4	68.1	56.5	39.7	32.3	27.5	18.1	15.3
ST-12180	1.80	850	684	541	347	270	221	1.85	155	128	89.7	71.2	59.2	40.9	34.2	29.5	19.4	15.9
	1.75	936	746	571	362	277	229	1.60	166	131	94.3	74.6	62.0	42.6	35.5	30.3	20.0	16.6
	1.67	989	805	601	371	288	234	1.75	171	138	98.3	78.0	63.3	43.4	36.2	30.9	20.3	17.1
ST-12200	1.80	890	735	602	367	300	246	1.85	173	141	100	79.3	66.0	45.5	38.0	32.8	21.5	17.8
	1.75	975	790	637	403	309	254	1.60	185	146	105	83.0	69.1	47.5	39.3	33.6	22.2	18.7
	1.67	1030	825	670	413	318	261	1.75	190	151	107	84.7	70.5	48.3	40.3	34.3	22.6	19.0
ST-12230	1.80	1065	843	694	447	346	282	1.85	190	164	116	91.5	76.1	52.5	43.8	37.0	24.9	20.5
	1.75	1276	916	735	464	358	293	1.60	213	168	121	95.8	79.8	54.7	45.5	38.9	25.5	21.6
	1.67	1310	980	773	476	367	301	1.75	220	174	123	97.7	81.4	55.8	46.4	39.6	26.1	22.0
ST-12240	1.80	1112	880	724	467	361	294	1.85	208	171	121	96.0	80.0	55.0	46.0	40.0	26.0	22.0
	1.75	1332	996	787	484	372	306	1.60	222	179	126	100	83.0	57.3	48.0	41.0	26.7	22.7
	1.67	1367	1023	807	497	383	314	1.75	230	182	129	102	85.0	59.0	48.4	41.5	27.0	23.0
ST-12250	1.80	1176	950	754	488	376	307	1.85	216	178	125	99.5	82.7	57.1	47.6	41.2	27.1	22.3
	1.75	1350	998	789	504	387	318	1.60	232	183	132	104	86.7	59.5	49.5	42.3	27.7	23.5
	1.67	1469	1097	840	517	399	327	1.75	239	189	134	106	88.5	60.4	50.4	43.0	28.4	23.9
ST-660	1.80	310	231	183	117	90.6	75.0	1.85	52.2	42.1	30.6	24.3	20.0	13.9	11.4	9.76	6.48	5.43
	1.75	345	251	193	122	92.3	77.5	1.60	55.7	44.3	31.8	25.1	20.9	14.4	11.9	10.2	6.66	5.65
	1.67	369	272	203	126	95.1	79.6	1.75	58.5	45.1	32.6	25.7	21.2	14.7	12.2	10.4	6.78	5.79
ST-6100	1.80	458	367	302	200	160	132	1.85	88.6	69.9	50.1	40.0	33.7	23.1	19.3	17.3	10.9	8.83
	1.75	515	390	320	207	165	136	1.60	91.6	73.3	52.8	41.7	34.7	23.9	19.7	18.6	11.2	9.41
	1.67	552	413	337	216	168	137	1.75	94.1	75.1	53.8	42.4	35.4	24.2	20.2	18.8	11.3	9.58
ST-6150	1.80	654	544	453	291	225	186	1.85	120	104	75.9	60.2	49.9	34.1	28.4	24.2	16.1	13.5
	1.75	730	568	478	302	229	192	1.60	138	110	78.9	62.3	51.8	35.7	29.6	25.3	16.6	14.0
	1.67	612	597	503	312	237	198	1.75	140	112	80.9	63.8	52.8	36.3	30.2	25.8	16.8	14.3
ST-6180	1.80	850	684	541	347	270	221	1.85	155	128	89.7	71.2	59.2	40.9	34.2	29.5	19.4	15.9
	1.75	936	746	571	362	277	229	1.60	166	131	94.3	74.6	62.0	42.6	35.5	30.3	20.0	16.6
	1.67	989	805	601	371	288	234	1.75	171	138	98.3	78.0	63.3	43.4	36.2	30.9	20.3	17.1
ST-6200	1.80	890	735	602	367	300	246	1.85	173	141	100	79.3	66.0	45.5	38.0	32.8	21.5	17.8
	1.75	975	790	637	403	309	254	1.60	185	146	105	83.0	69.1	47.5	39.3	33.6	22.2	18.7
	1.67	1030	825	670	413	318	261	1.75	190	151	107	84.7	70.5	48.3	40.3	34.3	22.6	19.0
ST-6230	1.80	1065	843	694	447	346	282	1.85	190	164	116	91.5	78.1	52.5	43.8	37.0	24.9	20.5
	1.75	1276	916	735	464	358	293	1.60	213	168	121	95.8	79.8	54.7	45.5	38.9	25.5	21.6
	1.67	1310	980	773	476	367	301	1.75	220	174	123	97.7	81.4	55.8	46.4	39.0	26.1	22.0

Actual Battery Discharge Data may be +/-5% of figures shown above.





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