

**EAST**<sup>®</sup>  
SINCE 1989

# Modular UPS

**EAST UPS  
Guard  
Power Well**



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EAST GROUP CO., LTD.  
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# COMPANY PROFILE

## About Us

EAST Group Co., Ltd. established in 1989, is a global smart city & smart energy system solutions supplier and excellent listed company (stock code 300376), having registered capital of 2.3 billion CNY and a headquarter with 200,000 m<sup>2</sup> manufacturing and R&D space in Dongguan city. We keep growing marketing and service network with more than 140 countries' partners and customers spread around the world. We have been awarded Global Top 500 New Energy Enterprises, and won the 117th China Patent Excellence Award with more than 660 patents.

## Our Products

EAST is ISO 9001: 2015 and ISO 14001: 2015 certified, and committed to providing green, energy-saving, stable, reliable and continuous power supply products and solutions. Our main products and services include:

- 1) UPS & Data center solutions
- 2) Solar inverters & PV energy solutions
- 3) Electric vehicle charging station
- 4) Energy storage & Smart micro-grid system
- 5) Stabilizer (AVR)
- 6) EPS (Emergency power supply)
- 7) Lead-acid maintenance-free battery

## Our Team

EAST R&D team consists of 600 professional engineers and power experts. A Postdoctoral Scientific Research Workstation granted by the National Ministry of Personnel, and four R & D and operation bases in Dongguan, Hefei, Kunshan and Nanjing city have been established, which constantly bring in talent all over the world to join us.

## Our Mission

Customer's satisfaction is our permanent pursuit. In order to consistently create maximum value for customers, we focus on our customers' market challenges and needs by providing excellent power supply solution and high quality products as well as best service, and giving top priority to meeting customer requirements to enhance their competitiveness and profitability.

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20 kVA ~ 150 kVA



**05** EA660  
20 kVA ~ 200 kVA

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# EA660

20 kVA ~ 150 kVA  
PF 1.0



## Application

Small and medium-sized IDC data center, ISP internet service provider, telecommunication, finance, securities, taxation, transportation, energy and other industries.

The fourth-generation EA660 series 20kVA-150kVA (PM20K, PM25K, PM30K, PM50K) plug-in UPS power supply product is a collection of EAST's latest R&D results and application experience, the new launch of a new generation of three-input three-output high-end modular UPS power supply. This product series using dual DSP full digital control technology design, effectively improves product performance and system reliability, and achieves a higher power density of integration and miniaturization. There are four models of single-module power: 20kVA, 25kVA, 30kVA and 50kVA. The maximum capacity of a single machine is 150kVA. The whole machine adopts a modular design, all modules (including the power module, bypass module and control module) support hot-swappable operation, which truly realizes the advantages of high reliability, high efficiency, easy management, and easy maintenance.

## Available Options

Standard configuration with wheels for independent installation, easy to move, can be used alone as a whole machine, can also remove the side door plate and casters pushed into the distribution cabinet to save space.



## Features & Benefits

### High Reliability

- Advanced DSP digital control technology, rectifier and inverter using dual DSP control
- Fan speed changes intelligently with temperature, which reduces noise and extends the life of the fan
- Any one damaged fan can still carry 35% load, with strong fault tolerance
- Adopting the three-proof paint immersion process, the UPS can work in harsh environments for a long time
- Perfect hardware and software protection, super self-diagnostic function, abundant history record
- Advanced digital parallel technology for higher reliability than stand-alone systems
- Online monitoring of vulnerable devices, monitoring and management, early warning

### High Availability

- Wide input voltage range, 50Hz/60Hz grid system self-adaptive, suitable for a variety of grid environments
- Linear derating at low voltage input reduces the number of times of battery discharges and extends battery life
- Support 30-46 batteries, flexible configuration of the number of battery cells, saving customers' investment
- Compatible with lead-acid batteries and lithium iron batteries, adapting to the needs of different types of battery configurations
- The UPS can be started directly from the battery in the absence of mains power to meet emergency requirements
- The reset delay start time can be set to reduce the impact on the power grid or generator
- Supports 50Hz input/60Hz output and 60Hz input/50Hz output frequency conversion

### High Usability

- Touch color screen display, friendly human-machine interface
- Powerful background software for various parameter settings, online upgrade program and other operations
- Compact internal layout reduces footprint
- All modules support hot-swap operation
- Plug-in box type design, easy to install and saves the user's investment
- Self-aging function, convenient for on-site debugging and testing

### High Intelligence

- Support RS485, RS485/CAN (BMS), NET (with SNMP function), dry contact, WIFI card and 4G card and other communication interfaces to monitor the operation status of the UPS, configure WIFI card or 4G card to monitor the UPS in real time through the cell phone APP
- Intelligent battery management, float charge voltage temperature compensation technology, automatic equal or float charge control, charger sleep control, can improve the reliability of the charger and extend battery life
- Intelligent dormancy design ensures efficient operation of the UPS system at low load rates

### High Efficiency

- With active power factor correction (PFC) technology, the input power factor is up to 0.99
- On-line efficiency is increased to 96%, saving energy and reducing operating costs
- Under good grid conditions, its working efficiency is up to 99% with ECO mode on

### Plentiful Fittings

- Standard RS485, RS485/CAN (BMS), NET (with SNMP function), input and output dry contacts and EPO
- Optional parallel unit component, LBS component, WIFI card, 4G card, battery temperature sensor, EMD environment detector.

## Specifications

MODEL	EA6640	EA6680	EA66120
System cabinet rated capacity	40kVA/40kW	80kVA/80kW	120kVA/120kW
Power module rated capacity	20kVA/20kW		
Number of power modules	2	4	6
MODEL	EA6650	EA66100	EA66150
System cabinet rated capacity	50kVA/50kW	100kVA/100kW	150kVA/150kW
Power module rated capacity	25kVA/25kW		
Number of power modules	2	4	6
MODEL	EA6660	EA66120	EA66150
System cabinet rated capacity	60kVA/60kW	120kVA/120kW	150kVA/150kW
Power module rated capacity	30kVA/30kW		
Number of power modules	2	4	5+1

INPUT	
Input phases	Three-phase five-wire (3Φ+N+PE)
Input rated voltage	380Vac/400Vac/415Vac
Input voltage variable range	304~485Vac (no derating); 138~305Vac (linear derating between 40%~100% load)
Input frequency variable range	40~70Hz
Input power factor	≥0.99
Input current harmonics	≤3%
Bypass input voltage range	-60%~+25% (settable)
Battery voltage	Lead-acid battery: ±240VDC (±180VDC~±276VDC settable), 12V battery 40 cells (even number 30~46 cells settable); Lithium battery: ±256VDC (±192VDC~±256VDC settable), 3.2V cell 160 single cells (120, 128, 150, 160 single cell settable)

OUTPUT	
Output phases	Three-phase five-wire (3Φ+N+PE)
Output rated voltage	380Vac/400Vac/415Vac
Output voltage regulation precision	±1%
Output frequency accuracy	Mains mode: tracking bypass input in synchronized state; battery mode: 50Hz/60Hz±0.1%
Output power factor	1
Output waveform distortion	≤1% (resistive load); ≤3% (non-resistive load)
Output current crest factor	3:1
Inverter overload capacity	105%<load≤110%, turn to bypass after 60 minutes; 110%<load≤125%, turn to bypass after 10 minutes; 125%<load≤150%, turn to bypass after 1 min; load>150%, turn to bypass after 0.2 sec.

SYSTEM	
Max. system efficiency	Online mode: 96%, ECO mode: 99%
Switching time	0 ms
Maximum parallel units	2 units
Protection	Output short-circuit protection, output overload protection, over-temperature protection, battery low voltage protection, output over-/under-voltage protection, fan failure protection, etc.
Communications interface	Standard configuration: RS485, RS485/CAN (BMS), NET (with SNMP function), input and output dry contacts and EPO; Optional configuration: parallel unit component, LBS component, WIFI card, 4G card, battery temperature sensor, EMD environment detector
Display	5-inch touch color screen

ENVIRONMENT	
Operating temperature	0~40°C
Storage temperature	-25°C~55°C (without battery)
Relative humidity	0%~95% (non-condensing)
Altitude	Altitude ≤1000m, over 1000m, load derated 1% per 100m
IP rating	IP20

OTHERS			
Cabinet dimension (W×D×H) (mm)	483×852×490	483×852×670	483×852×850
Cabinet net weight (kg)	65	70	88
Module dimension (W×D×H) (mm)	442×620×86		
Module net weight (kg)	21		
Color	Black		

MODEL	EA66150
System cabinet rated capacity	150kVA/150kW
Power module rated capacity	50kVA/50kW
Number of power modules	3

INPUT	
Input phases	Three-phase five-wire (3Φ+N+PE)
Input rated voltage	380Vac/400Vac/415Vac
Input voltage variable range	304~485Vac (no derating); 138~305Vac (linear derating between 40%~100% load)
Input frequency variable range	40~70Hz
Input power factor	≥0.99
Input current harmonics	≤3%
Bypass input voltage range	-60%~+25% (settable)
Battery voltage	Lead-acid battery: ±240VDC (±180VDC~±276VDC settable), 12V battery 40 cells (even number 30~46 cells settable); Lithium battery: ±256VDC (±192VDC~±256VDC settable), 3.2V cell 160 single cells (120, 128, 150, 160 single cell settable)

OUTPUT	
Output phases	Three-phase five-wire (3Φ+N+PE)
Output rated voltage	380Vac/400Vac/415Vac
Output voltage regulation precision	±1%
Output frequency accuracy	Mains mode: tracking bypass input in synchronized state; battery mode: 50Hz/60Hz±0.1%
Output power factor	1
Output waveform distortion	≤1% (resistive load); ≤3% (non-resistive load)
Output current crest factor	3:1
Inverter overload capacity	105%<load≤110%, turn to bypass after 60 minutes; 110%<load≤125%, turn to bypass after 10 minutes; 125%<load≤150%, turn to bypass after 1 min; load>150%, turn to bypass after 0.2 sec.

SYSTEM	
Max. system efficiency	Online mode: 96%, ECO mode: 99%
Switching time	0 ms
Maximum parallel units	4 units
Protection	Output short-circuit protection, output overload protection, over-temperature protection, battery low voltage protection, output over-/under-voltage protection, fan failure protection, etc.
Communications interface	Standard configuration: RS485, RS485/CAN (BMS), NET (with SNMP function), input and output dry contacts and EPO; Optional configuration: parallel unit component, LBS component, WIFI card, 4G card, battery temperature sensor, EMD environment detector
Display	5-inch touch color screen

ENVIRONMENT	
Operating temperature	0~40°C
Storage temperature	-25°C~55°C (without battery)
Relative humidity	0%~95% (non-condensing)
Altitude	Altitude ≤1000m, over 1000m, load derated 1% per 100m
IP rating	IP20

OTHERS	
Cabinet dimension (W×D×H) (mm)	485×850×620
Cabinet net weight (kg)	65
Module dimension (W×D×H) (mm)	442×620×129
Module net weight (kg)	35
Color	Black

## Remarks:

- This product is mainly used in industrial and commercial aspects, when the application involves life support system, please contact the manufacturer's technical personnel.
- For the important power supply system, should be used in the national standard GB50174 provisions of class A or B power supply architecture, that is, dual power supply system to power the load, improve the reliability of the system power supply.
- Specifications change without notice, pictures are for reference, please prevail in kind.

# EA660

20 kVA ~ 200 kVA  
PF 1.0



## Highlights

High power factor 1.0

High efficiency 96%

High power density

3-level technology

2 U power module

Power flexibility from 20-200 kW

Scalability & Modular hot-swappable

Low total cost of ownership

EA660 Series modular UPS is ideal for reliable, saving, intelligent and easy solutions. It ensures that a scalable, secure, high quality power supply is available for any critical high-density computer and IT environment applications, such as data centers and other critical loads.

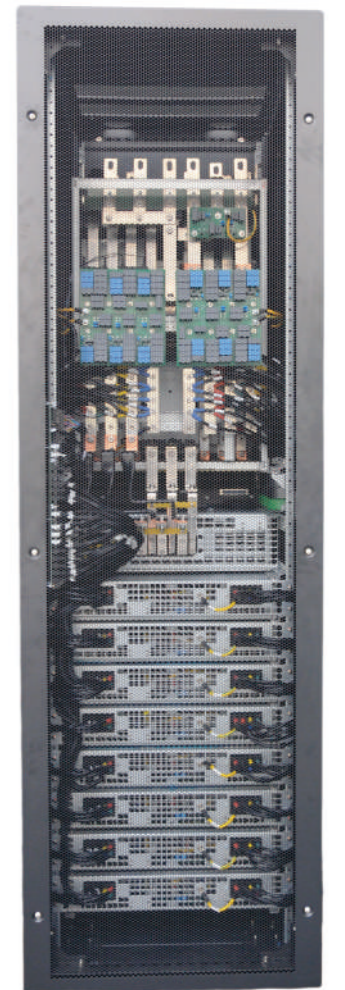
EA660 Series (20 kVA ~ 200 kVA) UPS is a high-end modular UPS with latest dual-core DSP control technology. It adopts a highly intelligent modular design which mainly contains power modules, bypass module and control module, all modules support "plug & play" to simplify UPS servicing and maintenance. The available UPS power and redundancy level can expand vertically from 20 kVA / 20 kW to 200 kVA / 200 kW in one single power cabinet with flexible configuration for meeting different needs. Based on superior electrical performance, perfect hardware and software protection function, EA660 Series UPS can adapt to different grid environment and provides maximum protection and high quality power for critical loads in data centers or other important applications.

## Features

- Advanced dual-core DSP control technology
- True On-line, double conversion power protection, and with strong load capacity
- Compact footprint, modular Hot-swappable design simplifying maintenance and scalability
- High efficiency up to 96% in on-line mode, 99% efficiency in ECO mode
- Dual input design, independent bypass available, improving bypass availability
- Output power factor 1.0, input power factor  $\geq 0.99$ , input THDi  $\leq 3\%$ , output THDv  $\leq 1\%$
- 138 ~ 485 Vac wide input voltage range, 50 Hz / 60 Hz grid self-adaptive
- Frequency conversion available: 50 Hz input / 60 Hz output or 60 Hz input / 50 Hz output
- Advanced digital parallel technology, improving redundancy and reliability in system
- Flexible charger parameter and battery configuration settings, battery number 30~46 pcs selectable
- Compatible with lead-acid battery and lithium battery, suitable for different types of battery configuration requirements
- Support cold start with battery and auto restart with mains power
- Settable delay time for startup when the mains power is restored, reducing the impact on the grid or generators
- Fan speed varies intelligently with temperature, reducing noise and extending the service life of the fan
- Fault-tolerant design for fan system, taking 35% loads when any one of fans fails
- Superior hardware and software protection function, robust self-diagnostic function, and abundant event logs
- Hibernation function to improve the system efficiency at light loads and extend the service life of UPS
- Powerful background software for parameters configuration and online updating
- 7 inches LCD touch screen, friendly human-machine interface
- Multi-platform communications: RS232, RS485, CAN, NET, dry contacts, SNMP, Wi-Fi and 4G communication interfaces; Real-time monitoring UPS available through the mobile App after installing Wi-Fi card and 4G card
- Intelligent battery management, automatic floating/equalizing charge control, battery self-diagnosis control, SOC detection, SOH detection and charger hibernation control, extending battery lifespan

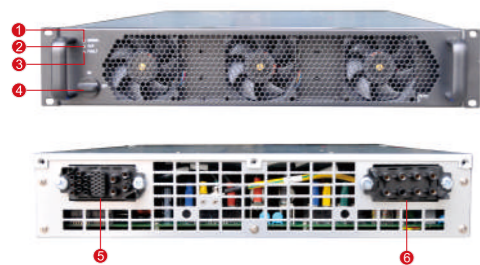
## Available Options

Parallel cables, LBS cables, Battery temperature sensor, Wi-Fi card, 4G card, EMD





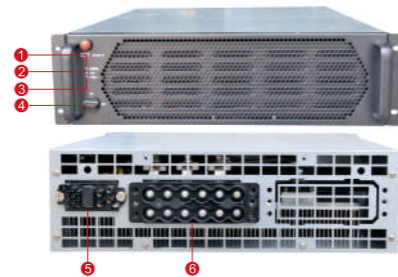
**Power Module**



- ① Run indicator
- ② Alarm indicator
- ③ Fault indicator
- ④ Ready switch
- ⑤ Output port
- ⑥ Input port

Dimensions (W x D x H) (mm)	442×620×86
Weight (kg)	21 kg
Charging current	10 A
Capacity	20/25/30 kVA
Power density	20.9W/inch <sup>3</sup> (Max)

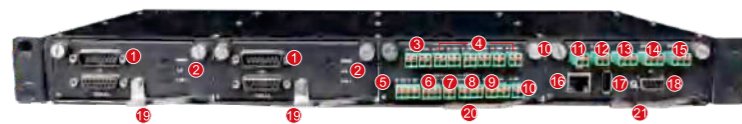
**Bypass Module**



- ① Run indicator
- ② Alarm indicator
- ③ Fault indicator
- ④ Ready switch
- ⑤ Signal terminal
- ⑥ Power terminal

Dimensions (W×D×H) (mm)	442×500×130
Weight (kg)	18 kg
Capacity	200 kVA / 200 kW

**Control Module**



- ① LBS connection port/track parallel port
- ② LED indicator
- ③ Input dry contacts
- ④ Output dry contacts
- ⑤ Battery ground fault (BTG) interface/generator (GEN) interface
- ⑥ Generator (GEN) port
- ⑦ Battery circuit breaker (BCB) port
- ⑧ EPO port
- ⑨ Switch state port of distribution cabinet
- ⑩ SPD port
- ⑪ Ambient temp port
- ⑫ Battery temperature compensation port
- ⑬ CAN port
- ⑭ RS485 port 1
- ⑮ RS485 port 2
- ⑯ Ethernet port
- ⑰ USB port
- ⑱ LCD port
- ⑲ Plug-in switch of system control board
- ⑳ Plug-in switch of dry contacts board
- ㉑ Plug-in switch of monitoring board

**Specifications**

MODEL	EA6680	EA66120	EA66160
Rated capacity	80 kVA / 80 kW	120 kVA / 120 kW	160 kVA / 160kW
Number of power module	4	6	8
Rated capacity of power module	20kVA/20kW		
MODEL	EA66100	EA66150	EA66200
Rated capacity	100 kVA / 100 kW	150 kVA / 150 kW	200 kVA / 200kW
Number of power module	4	6	8
Rated capacity of power module	25kVA/25kW		
MODEL	EA66120	EA66150	EA66180
Rated capacity	120 kVA / 120 kW	150 kVA / 150 kW	180 kVA / 180kW
Number of power module	4	5	6
Rated capacity of power module	30kVA/30kW		
INPUT			
Input wiring	Three-phase five-wire (3Φ + N + PE)		
Rated voltage	380 / 400 / 415 Vac		
Voltage range	138 ~ 305 Vac (linear derating at 40% ~ 100% load), 305 ~ 485 Vac (no derating)		
Frequency range	40 ~ 70 Hz		
Input power factor	≥ 0.99		
THDi	≤ 3%		
Bypass input voltage range	-60% ~ +25% (settable)		
Battery voltage	± 240 Vdc (±180 ~ ± 276 Vdc settable)		
Number of battery	40 pcs 12 V batteries (30, 32, 34, 36, 38, 40, 42, 44, 46 pcs settable)		
OUTPUT			
Output wiring	Three-phase five-wire (3Φ + N + PE)		
Rated voltage	380 / 400 / 415 Vac		
Output voltage regulation accuracy	±1%		
Output frequency accuracy	Synchronized with utility in mains power mode; 50 Hz / 60 Hz ± 0.1% in battery mode		
Output power factor	1		
Output waveform distortion (THDv)	≤ 1% (linear load); ≤ 3% (non-linear load)		
Crest factor	3:1		
Overload capacity	105% < load ≤ 110% for 60 min, 110% < load ≤ 125% for 10 min, 125% < load ≤ 150% for 1 min, load > 150% for 0.2 s		
SYSTEM			
Max. efficiency	96% in on-line mode, 99% in ECO mode		
Transfer time	0 ms		
Max. number of parallel connections	2		
Protections	Short-circuit, overload, over-temperature, battery low voltage, undervoltage, overvoltage, fan failure protection		
Communications	Standard configurations: RS485, CAN, NET, SNMP, dry contacts port, and EPO Optional configurations: Wi-Fi card, parallel port, LBS port, 4G card, battery temperature sensor, EMD		
Display	7 inches LCD touch screen		
ENVIRONMENTAL			
Operating temperature	0°C ~ 40°C		
Storage temperature	-25°C ~ +55°C (without battery)		
Relative humidity	0% ~ 95% (non-condensing)		
Altitude	≤ 1000 m, above 1000 m, derating 1% for each additional 100 m		
Protection level	IP 20		
Noise	≤ 65 dB (at 1 m)		
OTHERS			
Cabinet dimensions(W x D x H)(mm)	600 x 850 x 1200	600 x 850 x 1800	600 x 850 x 2000
Cabinet weight(kg)	180	250	280
Module dimensions(W x D x H)(mm)	442 x 620 x 86		
Power module weight(kg)	21		
Color	Black		

● All specifications are subject to change without notice.

# EA660

50 kVA ~ 600 kVA  
PF 1.0



## Highlights

High power factor 1.0

High efficiency 96.5%

High adaptability

Power flexibility from 50-600 kW

Modular hot-swappable & Scalability

High MTBF and low MTTR

EA660 modular UPS is ideal for reliable, saving, intelligent and easy solutions. It ensures that a scalable, secure, high quality power supply is available for any critical high-density computer and IT environment applications, such as data centers and other critical loads.

EA660 modular UPS is a scalable three-phase / three-phase uninterruptible power supply system with DSP technology and provides true on-line double conversion power protection. The available UPS power and redundancy level can expand vertically from 50 to 600 kVA / 600 kW in one single power cabinet, and four power cabinets can be connected in parallel, increasing the capacity up to 2.4 M kW. It features modular hot-swappable design, all modules support "plug & play", including power modules, bypass module, and control module, simplifies UPS servicing and maintenance.

## Features

- DSP digital control technology
- Flexible modularity and easy scalability with all hot-swappable module design
- High efficiency at low load rate: 96% at 40% rated load and 95% at 20% rated load
- High power density of 50 kVA / 3U power module
- High grid adaptability, strong load adaptability and strong overload capability
- Small footprint (500 kVA system only 1.02 m<sup>2</sup> footprint)
- Inbuilt integrated PDU system, easy installation and saving investment
- Input power factor > 0.99, THDi < 3%, environment friendly and high-efficiency and energy-saving
- Soft-start technology improves generator matching up to 1:1.1
- Support two modes of frequency conversion: 50 Hz input / 60 Hz output and 60 Hz input / 50 Hz output
- Intelligent hibernation design enables UPS to operate efficiently at low load rate
- Advanced parallel expansion technology, support 4 units in parallel
- Share battery pack in parallel operation, saving user's battery cost
- Flexible charger parameter and battery configuration setting, numbers of battery 30 ~ 46 pcs selectable
- Intelligent battery management (Intelligent charge/discharge management and float charging voltage temperature compensation), extending battery lifespan
- Support battery cold start and utility self boot
- Self-aging function, easy debugging and test on site
- Fault-tolerant design for fan system: 30% load can be driven when 2 fans fail and 50% load when 1 fan fails
- Front accessible maintenance, top/bottom cable entry compatible
- Complete hardware and software protection function, robust self-diagnostic function, and abundant event logs for check
- 7 inches LCD touch screen, friendly human-machine interface
- Monitoring unit with built-in SNMP, supports RS485 and dry contacts





Specifications

MODEL	EA66200	EA66300	EA66400	EA66500	EA66600
Rated capacity	200 kVA/200 kW	300 kVA/300 kW	400 kVA/400 kW	500 kVA/500 kW	600 kVA/600 kW
Numbers of power modules	4	6	8	10	12
Rated capacity of power module	50 kVA				
<b>INPUT</b>					
Input wiring	3 Ph + N + PE				
Rated voltage	380 / 400 / 415 Vac				
Voltage range	138 ~ 485 Vac (305 ~ 485 Vac without power downgrading; 138 ~ 305 Vac with linear downgrading 40%)				
Input frequency	40 ~ 70 Hz				
Power factor	≥ 0.99				
Current distortion	< 3%				
<b>BATTERIES</b>					
Battery voltage	± 240 Vdc (±180, ± 192, ± 204, ± 216, ± 228, ± 252, ± 264, ± 276 selectable)				
Number of battery	40 pcs 12 V batteries ( 30 / 32 / 34 / 36 / 38 / 42 / 44 / 46 pcs selectable)				
<b>OUTPUT</b>					
Output wiring	3 Ph + N + PE				
Rated voltage	380 / 400 / 415 Vac ±1%				
Frequency	Synchronized with utility in mains power mode: 50 Hz / 60 Hz ± 0.25% in battery mode				
Power factor	1				
Voltage distortion	≤ 1% with linear load / ≤ 3% with non-linear load				
Crest factor	3:1				
Inverter overload capacity	105% < load ≤ 110%: transfer to bypass in 60 min 110% < load ≤ 125%: transfer to bypass in 10 min 125% < load ≤ 150%: transfer to bypass in 1 min Load > 150%: transfer to bypass in 200 ms				
Bypass overload capacity	Load ≤ 125% for long term; >150% load for 200 ms				
<b>SYSTEM</b>					
Efficiency	96.5 %				
Max. number of parallel connections	4 units				
Transfer time	0 ms				
Protections	Short circuit protection, overload protection, over-temperature protection, battery low voltage protection, output over/low voltage protection, fans failure protection etc.				
Communications	RS485, dry contacts, SNMP				
Display	7 inches LCD touch screen				
<b>OTHERS</b>					
Operating temperature	0 ~ 40°C				
Storage temperature	-25°C ~ +55°C				
Humidity	0 ~ 95% (non-condensing)				
Altitude	≤ 1000 m. Above 1000 m, derating 1% for each additional 100 m				
Protection level	IP 20				
Noise level at 1 m	< 65 dB		< 68 dB		
Cabinet dimensions (W x D x H) (mm)	600 × 850 × 2000		1200 × 850 × 2000		1400 × 850 × 2000
UPS module dimensions (W x D x H) (mm)	440 × 620 × 130				
Cabinet weight (kg)	233	242	415	465	617
Power module weight (kg)	32				

● All specifications are subject to change without notice.

Power Module



Bypass Module



Control Module



- ① Parallel port    ② LED indicator    ③ DRY\_IN    ④ DRY\_OUT    ⑤ BTG port    ⑥ BCB port
- ⑦ BCB tripping signal    ⑧ EPO port    ⑨ Switch state port of power distribution cabinet    ⑩ SPD port    ⑪ Environmental temperature port    ⑫ Battery temperature compensation port
- ⑬ CAN port    ⑭ RS485 port 1    ⑮ RS485 port 2    ⑯ Ethernet port    ⑰ USB port    ⑱ LCD screen port

# EA660

400 kVA ~ 1200 kVA  
PF 1.0



## Highlights

High power factor 1.0

High efficiency 97%

High adaptability

Power flexibility from 400 - 1200 kW

Modular hot-swappable & Scalability

High MTBF and low MTTR

EA660 modular UPS is ideal for reliable, saving, intelligent and easy solutions. It ensures that a scalable, secure, high quality power supply is available for any critical high-density computer and IT environment applications, such as data centers and other critical loads.

EA660 modular UPS is a scalable three-phase / three-phase uninterruptible power supply system with DSP technology and provides true on-line double conversion power protection. The available UPS power and redundancy level can expand vertically from 400 to 1200 kVA / 1200 kW in one single power cabinet, and four power cabinets can be connected in parallel, increasing the capacity up to 4800 kW. It features modular hot-swappable design, all modules support "plug & play", including power modules, bypass module, and control module, simplifies UPS servicing and maintenance.

## Features

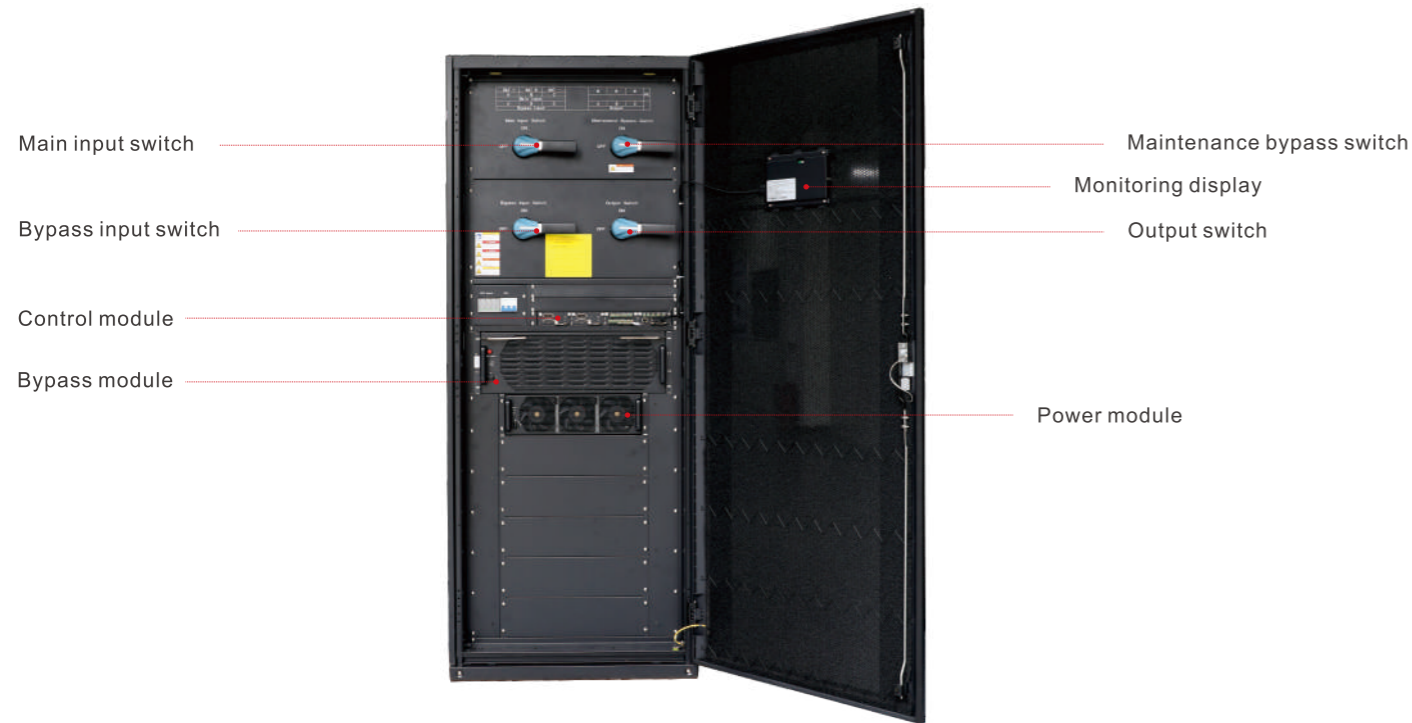
- Dual DSP digital control technology
- Flexible modularity and easy scalability with all hot-swappable module design
- High efficiency at low load rate: 97% at 40% rated load and 96% at 20% rated load
- High power density of 100 kVA / 3U power module
- Wide input voltage range, high grid adaptability, strong load adaptability and strong overload capability
- Small footprint (600 kVA system only 0.8 m<sup>2</sup> footprint)
- Inbuilt integrated PDU system, easy installation and saving investment
- Input power factor > 0.99, THDi < 3%, environment friendly and high-efficiency and energy-saving
- Soft-start technology improves generator matching up to 1:1.1
- Support two modes of frequency conversion: 50 Hz input / 60 Hz output and 60 Hz input / 50 Hz output
- Intelligent hibernation design enables UPS to operate efficiently at low load rate to prolong service life and improve the system efficiency
- Advanced parallel expansion technology, support 4 units in parallel
- Share battery pack in parallel operation, saving user's battery cost
- Flexible charger parameter and battery configuration setting, numbers of battery 30 ~ 50 pcs selectable
- Intelligent battery management (Intelligent charge/discharge management and float charging voltage temperature compensation), extending battery lifespan
- Support battery cold start and utility self boot
- Self-aging function, easy debugging and test on site
- Fault-tolerant design for fan system: 20% load can be driven when 2 fans fail and 50% load when 1 fan fails
- Front accessible maintenance, top/bottom cable entry compatible
- Complete hardware and software protection function, robust self-diagnostic function, and abundant event log for check
- 7 inches LCD touch screen, friendly human-machine interface
- Monitoring unit with built-in SNMP, supports RS485 and dry contacts



400-600kVA

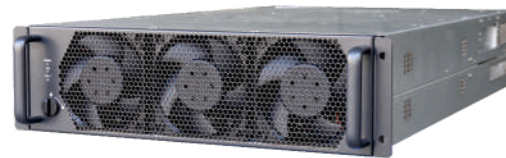


800-1200kVA



**Power Module**

**Bypass Module**



**Control Module**



- ① Parallel port    ② LED indicator    ③ DRY\_IN    ④ DRY\_OUT    ⑤ BTG port    ⑥ BCB port
- ⑦ BCB tripping signal ⑧ EPO port    ⑨ Switch state port of power distribution cabinet    ⑩ SPD port    ⑪ Environmental temperature port    ⑫ Battery temperature compensation port
- ⑬ CAN port    ⑭ RS485 port 1    ⑮ RS485 port 2    ⑯ Ethernet port    ⑰ USB port    ⑱ LCD screen port

**Specifications**

MODEL	EA66400	EA66500	EA66600	EA66800	EA661000	EA661200
Rated capacity	400 kVA/400 kW	500 kVA/500 kW	600 kVA/600 kW	800 kVA/800 kW	1000 kVA/1000 kW	1200 kVA/1200 kW
Numbers of power modules	4	5	6	8	10	12
Rated capacity of power module	100 kVA / 100 kW					
<b>INPUT</b>						
Input wiring	3 Ph + N + PE					
Rated voltage	380 / 400 / 415 Vac					
Voltage range	138 ~ 485 Vac (324 ~ 485 Vac without power downgrading; 139 ~ 324 Vac with linear downgrading 35%)					
Input frequency	40 ~ 70 Hz					
Power factor	≥ 0.99					
Current distortion	< 3%					
<b>BATTERIES</b>						
Battery voltage	480 Vdc (360 ~ 600Vdc selectable)					
Number of battery	40 pcs 12 V batteries ( 30~50 pcs selectable)					
<b>OUTPUT</b>						
Output wiring	3 Ph + N + PE					
Rated voltage	380 / 400 / 415 Vac ± 1%					
Frequency	Synchronized with utility in mains power mode: 50 Hz / 60 Hz ± 0.1% in battery mode					
Power factor	1					
Voltage distortion	≤ 1% with linear load / ≤ 3 % with non-linear load					
Crest factor	3:1					
Inverter overload capacity	105% < load ≤ 110%: transfer to bypass in 60 min 110% < load ≤ 125%: transfer to bypass in 10 min 125% < load ≤ 150%: transfer to bypass in 1 min Load > 150%: transfer to bypass in 200 ms					
Bypass overload capacity	Load ≤ 125% for long term; >200% load for 100 ms					
<b>SYSTEM</b>						
Efficiency	97%					
Max. number of parallel connections	4 units					
Transfer time	0 ms					
Protections	Short circuit protection, overload protection, over-temperature protection, battery low voltage protection, output over/low voltage protection, fans failure protection etc.					
Communications	RS485, dry contacts, SNMP					
Display	7 inches LCD touch screen					
<b>OTHERS</b>						
Operating temperature	0°C ~ 55°C					
Storage temperature	-25°C ~ 55°C					
Humidity	0 ~ 95%(non-condensing)					
Altitude	≤1000 m. Above 1000 m, derating 1% for each additional 100 m					
Protection level	IP 20					
Cabinet dimensions (W x D x H) (mm)	800 x 1000 x 2000			2000 x 1000 x 2000		
Cabinet packing dimensions (W x D x H) (mm)	900 x 1100 x 2190			2100 x 1100 x 2190		
Power module dimensions (W x D x H) (mm)	440 x 750 x 130					
Power module package dimensions (W x D x H) (mm)	604 x 1004 x 268					
6 power modules package dimensions (W x D x H) (mm)	1250 x 1030 x 940					
Cabinet net weight (kg)	412			920		
Cabinet packing weight (kg)	450			1010		
Power module weight (kg)	50					
Power module packing weight (kg)	55					
6 power modules packing weight (kg)	360					

● All specifications are subject to change without notice.