CET ENERGY SOLUTIONS
Smart Solutions at the Grid Edge

NextGen
UPS Split phase or Three phase
With Zinc Five Batteries

ECI technology inside

Revolutionizing power protection equipment with the NextGen UPS.
47KW Cabinet & 101KW Cabinet (available up to 2MW consult factory)

Telecom | Datacom | Mass transport | Industry | Power Utilities | Renewable

AC In
120 / 240 Vac
3x208 Vac

Back up
5 Minutes

AC Out
120 / 240 Vac
3x208 Vac

30 to 100 kW

Introduction

The NextGen UPS is redefining power protection with ECI patented technology inside that simplifies installation, maintainability with high power density, high efficiency, long life expectancy, fault tolerance, peak shaving, and grid re-injection ready.

The first UPS designed based on customer's experience and requirement in today's evolving market in mind…

The market now demands for deployed data and computing closer to the action with accelerated data and application for next-gen workloads. To achieve this, telecommunication and IT servers requires ultra-low latency connectivity and distributed computing. The NextGen UPS has been designed for this. It provides unmatched performance to ensure the continuity of your operation with multiple redundancy, high efficiency, easy maintenance, and offering low Total Cost of Ownership (TCO).

- Double Conversion On-Line Topology
- Compact footprint and robust design
- Hot-swappable
- Modular design (scalable)
- No single point of failure
- On-line double conversion (galvanic insulation)
- Ultra-low MTTR
- Network manageability
- IP51 is optional (available)
- Standard 5 years warranty

NextGen UPS - 47 kW

NextGen UPS - 101 kW

Features and Benefits

Superior performance and power protection with best-in-class high power density, long life expectancy, and efficiency for Data Center, Edge Computing, Telecom, and Industrial applications.

In the NextGen UPS, all converters are hot-swappable and replaceable by untrained personnel, whereas the battery blocks can be serviced with the system on-line. No interruption during maintenance periods, no interruption ever. With a couple more modules in the same bay, the most demanding businesses will enjoy N+1 fault-tolerant construction at the lowest cost and unbeatable user experience. The NextGen UPS is highly recommended with poor and

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www.cet-energysolutions.com
United States, Belgium, China, India, Luxembourg, Malaysia, Russia, United Kingdom, Australia & Germany

TAA Compliant Assembled & tested in the USA

unreliable grids. All disturbances are filtered by permanent double conversion with power factor correction. It also guarantees a unity power factor at the input regardless of the load characteristic so that it does not interfere with other equipment connected to the same distribution. That is an additional saving in power factor correction devices.

Used in conjunction with the advanced Inview controller the system offers real-time monitoring and remote monitoring of system faults. This unique, integrated solution, at the leading edge of power electronics and storage chemistry offers an incredible mix of low maintenance burden and very low MTTR.

Uptime and Power:

- Hot-swap modules does not require to be reconfigured
- Automatic phase balancing makes it generator friendly
- Fail-safe design equal to Zero Downtime
- Available in 48Vdc or 380 Vdc bus
- Battery Agnostic: Compatible with many batteries' chemistries including, Lead Acid, Nickel Zinc, NiCad, NiMH, Lithium based, Sodium-Ion, and Sodium Nickel

Energy Bill Savings

- Grid Re-injection ready
- Peak Shaving
- Phase Balancing
- Built-in power factor correction

Simplicity:

- All Plug and Play
- No need for a costly maintenance contract. The modules are very low maintenance while used in indoor clean room conditions
- All modules are lightweight to be handled by a single technician with no special tool required
- Easy capacity expansion

Manageability:

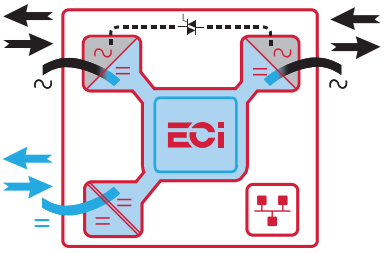
- Built-in Web/SNMP management
- MODBUS TCP
- 7" LCD display
- Audible alarms Serviceability
- Manual maintenance bypass (optional)

Reduced Total Cost of Ownership:

Power protection is vital to operations and revenue for many businesses. Statistics show that 30% of failures in datacenters are due to design limitations and complexity of the UPS. Moreover, costly maintenance contracts and frequent battery replacements do not achieve the low risk level whilst CFO's see a huge impact on their bottom line.

- Up to 95% Efficiency: Minimizes energy loss and operating costs over time
- Optimized footprint allows for a wide range of uses in Electrical rooms
- Input power factor correction reduces installation costs

The ECI Technology inside…



Our Patented Multi-Directional Power Converter:

- Allows energy to flow from source to load and vice versa
- Provides harmonious mix of multiple energy sources including stored energy and renewables
- Is modular and hot-pluggable
- Adapts to varied customer requirements with flexible, customized configurations
- Ranges from 9 kW to 2000 kW

NextGen UPS Split phase or Three phase

	NextGen UPS - 47 kW - 1 cabinet	NextGen UPS - 101 kW - 2 cabinets
General		
Topology	Online Double Conversion	
Power Rating (for more details, refer table 2 on page 4)	57 kVA / 47 kW	123 kVA / 101 kW
UPS Manual Bypass	Optional external manual bypass	
Environmental		
Operating Temperature Range / Storage Temperature Range	15 to 40°C Ambient / -20 to 70°C Ambient	
Storage Relative Humidity / Operating Relative Humidity	10% - 95% non-condensing / 20% - 90% non-condensing	
Altitude	< 1500 m: No derating, > 1500 m: Derating of 0.8% per 100m	
Audible Noise	<60 dBA @ 1 meter from surface	
Power		
AC Input Data (for rating, refer table 1 on page 4)		
Nominal Input Voltage	120 / 240 split phase / 3x208 Vac + N three phase (for rating and power, refer table 1 on page 3)	
Input Voltage Range	108 - 140 Vac L-N / 216 – 280 L-L / 3 x 187 – 3 x 242 Vac	
Input frequency synchronization range	57 - 63 Hz	
Input Power Factor	> 0.99 typical	
AC Output Data (for rating, refer table 2 on page 4)		
Peak Efficiency AC to AC / DC to AC @80% load	94.5% / 91.9%	
Output Voltage	120 / 240 split phase / 3x208 Vac + N three phase (for rating and power, refer table 2 on page 3)	
Frequency / accuracy on battery	60 Hz / 0.03%	
Short time overload capacity	125% for 15 seconds	
Output THD	< 1.5% with resistive load, < 5% with non-linear load	
Crest Factor at Nominal Power	3:1	
Waveform	Pure Sine Wave	
Output Voltage stability static / dynamic	± 1.0% from 10 to 100% load / ± 5% recovering time below 0.5 sec from 0 to 100% impact	
Battery Characteristics		
Battery Type	Integrated, Sealed, Non-spillable	
Battery Replacement	Field-replaceable	
Battery Technology	Nickel-zinc battery chemistry	
Transportation	Air ride and strap to truck	
UPS run time on battery	5 minutes 3 string 12 blocs at 47kW	5 minutes 5 strings 20 blocs at 100kW
Communications		
Ports	2 x Ethernet, 1 x Modbus (RS485), TCP/IP, SNMP Protocols (Standard)	
Relay Outputs	Two digital inputs, four configurable alarm relays and two dedicated relays for major and minor alarms	
Battery Disconnect	LVD & Breaker	LVD (Internal) & Breaker
Module LED's / Monitoring	Three status LED's / Inview X with 7" touchscreen	
Features		
Ethernet SNMP Interface	Yes	
Power Event Log	Event log captures up to 5000 events as FIFO	
Web-based Software (served from product)	Accessible locally or remotely	
Service Contract	Silver - Gold - Platinum	
Mechanical	**1 cabinet including batteries**	**2 cabinets Power + Battery**
Height x Width x Depth	83.0 in x 23.6 in x 31.5 in	83.0 in x 47.24 in x 31.5 in
Weight (with batteries)	1265 lbs	2520 lbs
Agency Compliance		
UL/CSA	UL1778 (Fifth Edition), CSA-C22.2 No. 107.3, NiZn Batteries: UL1989	
FCC	Part 15 Class A	
RoHS	Compliant	

*All Specifications Valid at 25°C *All Specifications Subject to Change

Table 1: UPS AC input utility ratings

Code	Models Maximum Ambient Temperature: 40° C	Number of modules	Rated Power		Voltage Nominal	Rated Current Nominal	Recommended Breaker
	UPS Product code	Pces	kVA	KW	Vac	(A)	(A)
A	NxtGn–UPS–0Z5–048–100–3–100–048–048–208	45 + 3*	123.75	101.25	3 x 120/208	318.8	450
B	NxtGn–UPS–0Z5–048–100–3–080–039–039–208	36 + 3*	99.00	81.00	3 x 120/208	255.0	350
C	NxtGn–UPS–0Z5–048–100–3–060–030–030–208	27 + 3*	74.25	60.75	3 x 120/208	191.3	250
D	NxtGn–UPS–0Z5–048–100–2–067–032–032–240	30 + 2*	82.50	67.50	2 x 120/240**	318.8	450
One Cabinet System							
E	NxtGn–UPS–0Z5–024–050–3–047–024–024–208	21 + 3*	57.75	47.25	3 x 120/208	148.8	200
F	NxtGn–UPS–0Z5–024–050–2–030–016–016–240	14 + 2*	38.50	31.50	2 x 120/240**	148.8	200
G	NxtGn–UPS–0Z5–024–050–1–030–016–016–120	15 + 1*	41.25	33.75	120	318.8	450

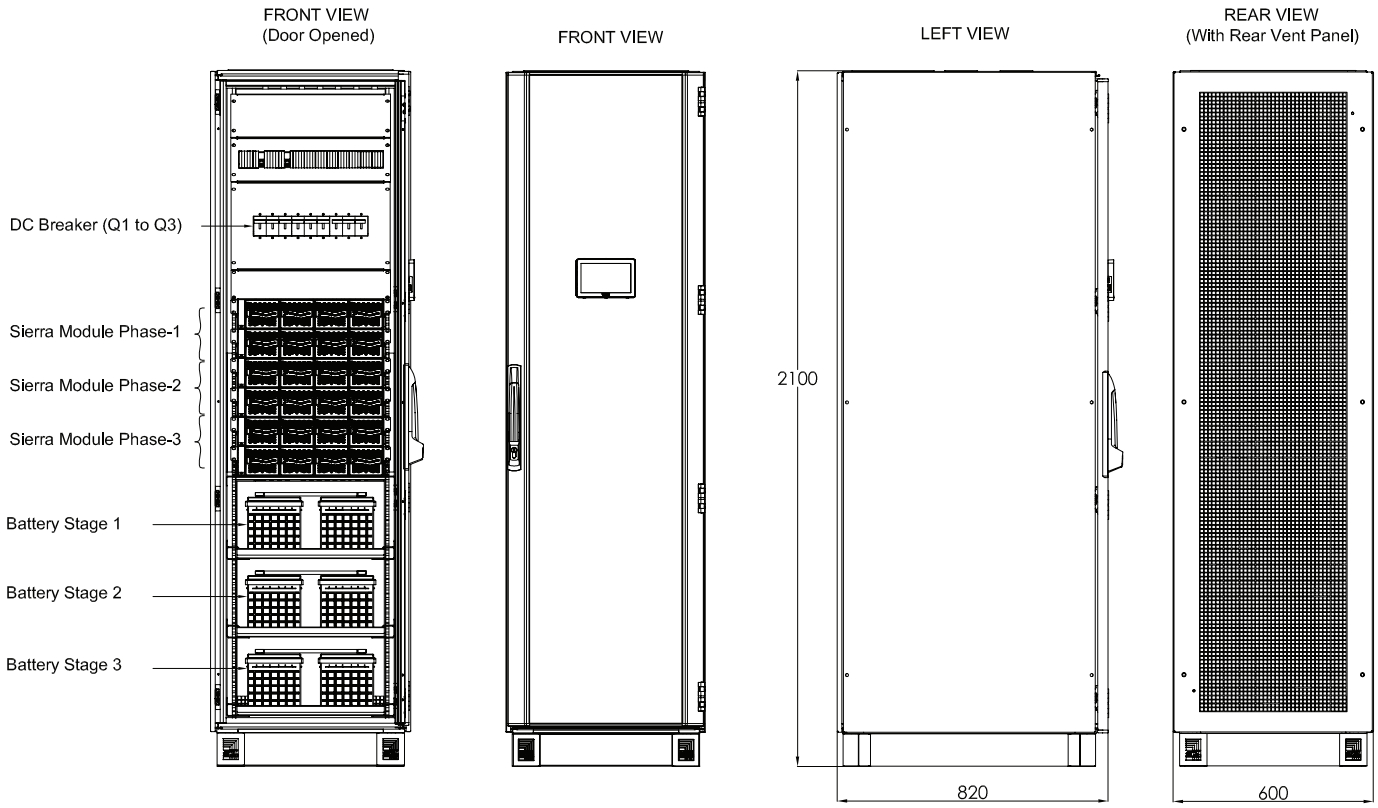
Table 2: UPS AC output ratings

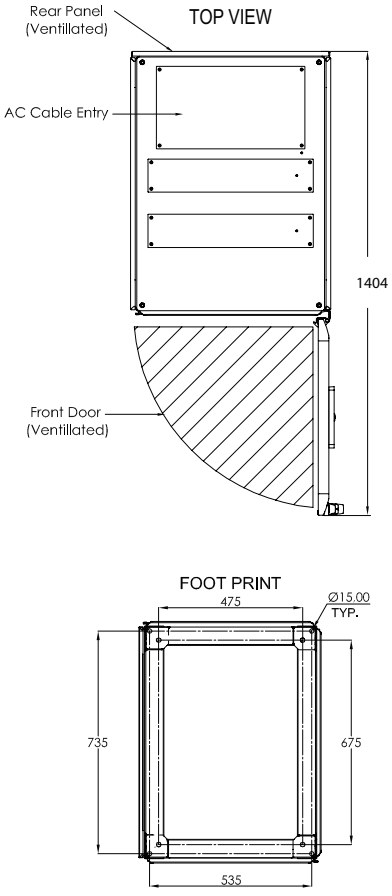
Code	Models Maximum Ambient Temperature: 40° C	Number of modules	Rated Power		Voltage Nominal	Rated Current Nominal	Recommended Breaker
	UPS Product code	Pces	kVA	KW	Vac	(A)	(A)
A	NxtGn–UPS–0Z5–048–100–3–100–048–048–208	45 + 3*	123.75	101.25	3 x 120/208	343.8	450
B	NxtGn–UPS–0Z5–048–100–3–080–039–039–208	36 + 3*	99.00	81.00	3 x 120/208	275.0	350
C	NxtGn–UPS–0Z5–048–100–3–060–030–030–208	27 + 3*	74.25	60.75	3 x 120/208	206.3	250
D	NxtGn–UPS–0Z5–048–100–2–067–032–032–240	30 + 2*	82.50	67.50	2 x 120/240**	343.8	450
One Cabinet System							
E	NxtGn–UPS–0Z5–024–050–3–047–024–024–208	21 + 3*	57.75	47.25	3 x 120/208	160.4	200
F	NxtGn–UPS–0Z5–024–050–2–030–016–016–240	14 + 2*	38.50	31.50	2 x 120/240**	160.4	200
G	NxtGn–UPS–0Z5–024–050–1–030–016–016–120	15 + 1*	41.25	33.75	120	343.8	450

* Extra module for N+1 redundancy

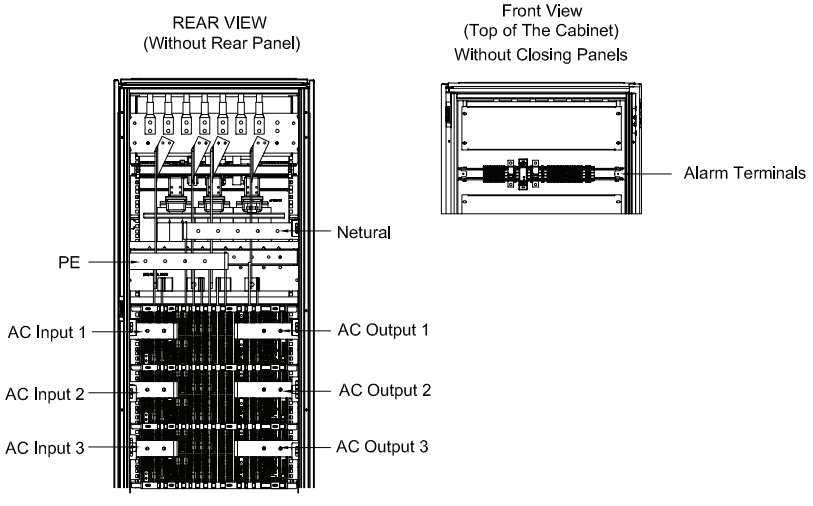
** or 120/208 by setting

NextGen UPS System - 50 kW - General Arrangement

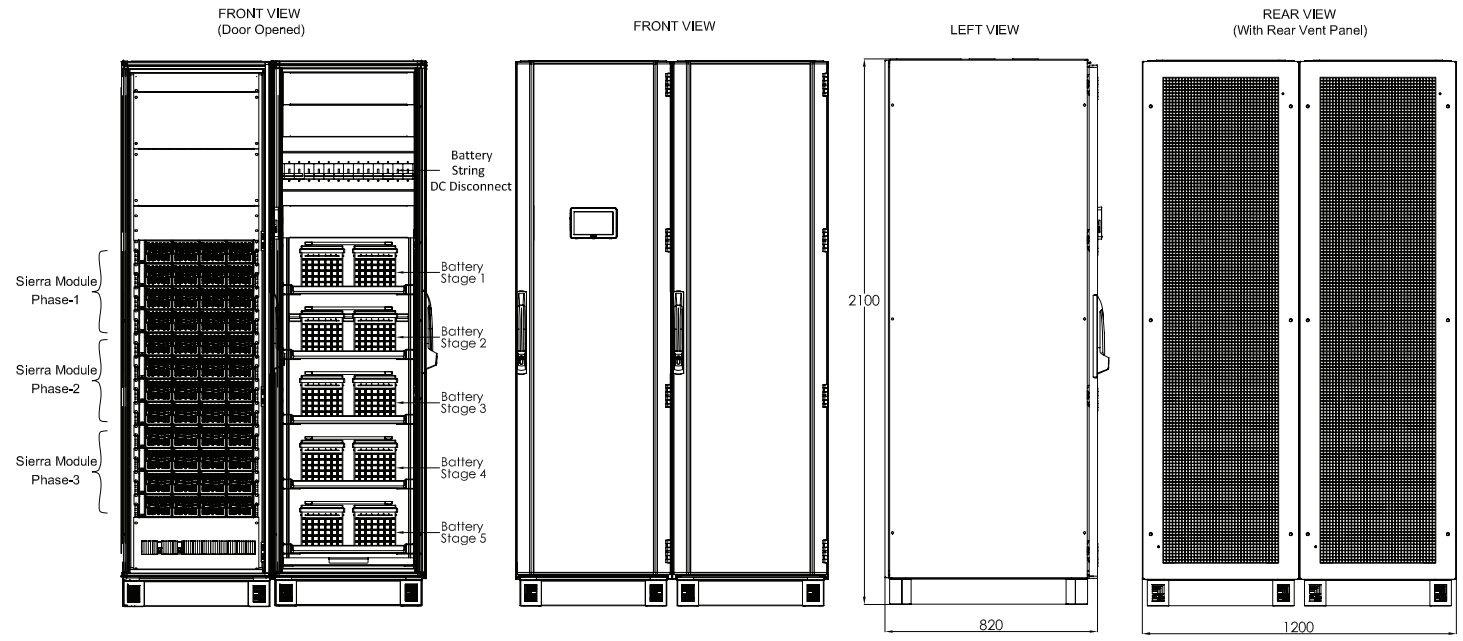


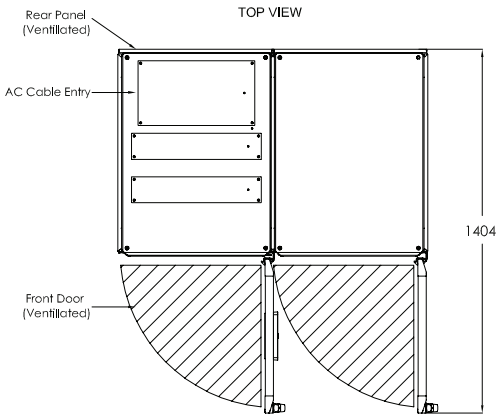


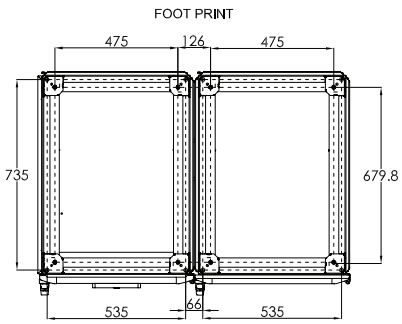
Customer Connections



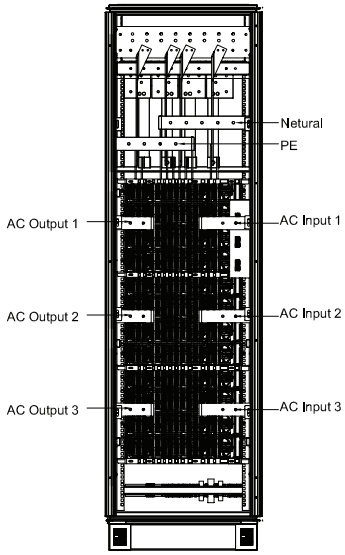
NextGen UPS System - 100 kW - General Arrangement

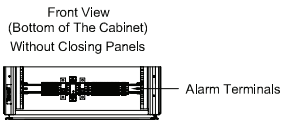




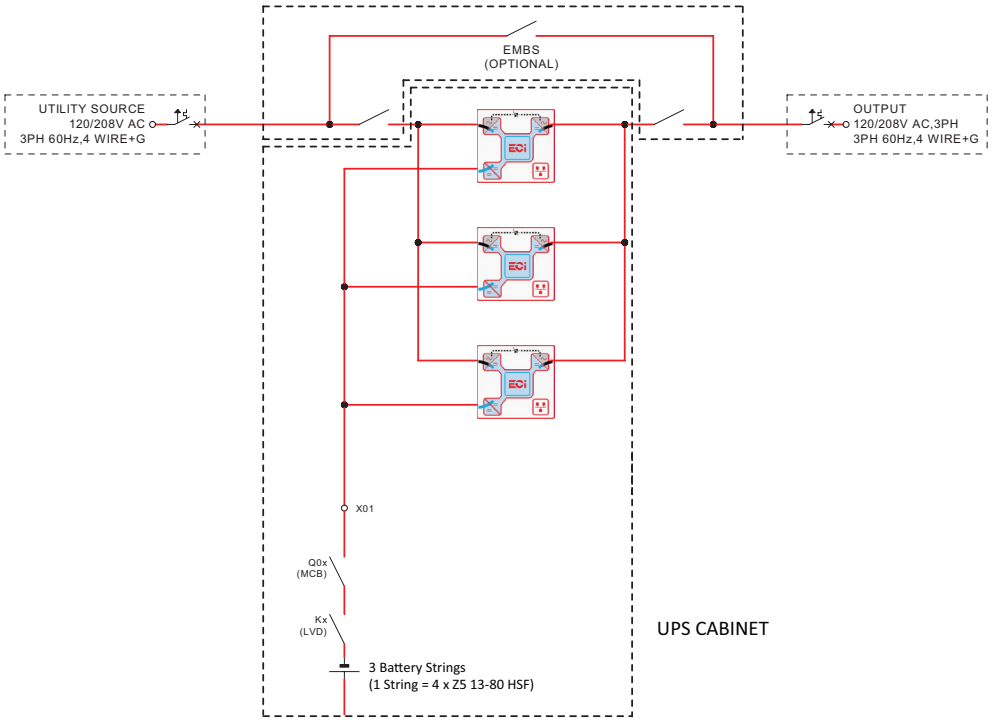


Customer Connections





NextGen UPS System - 50 kW - SLD



NextGen UPS System - 100 kW - SLD