

MX-SERIES 100



Expeditionary Mobile Microgrid

The ZeroBase MX-SERIES is mobile power system for shelters and contingency basing that dramatically reduces or eliminates the fuel required for power generation



APPLICATIONS

The ZeroBase MX-SERIES dramatically reduces or eliminates the fuel needs for expeditionary operations. This capability allows manpower previously dedicated to securing fuel and fueling generators, to be returned to the mission.

- **Temporary Shelters** Power ECU's, barracks, kitchens, laundry and showers
- **Operations Centers** Digital quality, uninterrupted power for critical IT and C4ISR
- **Mobile Landing Strips** Power for lights, weather stations, automatic landing systems, and operation centers
- **Grid Stabilization** Can be used to provide continuity for equipment connected to an intermittent grid

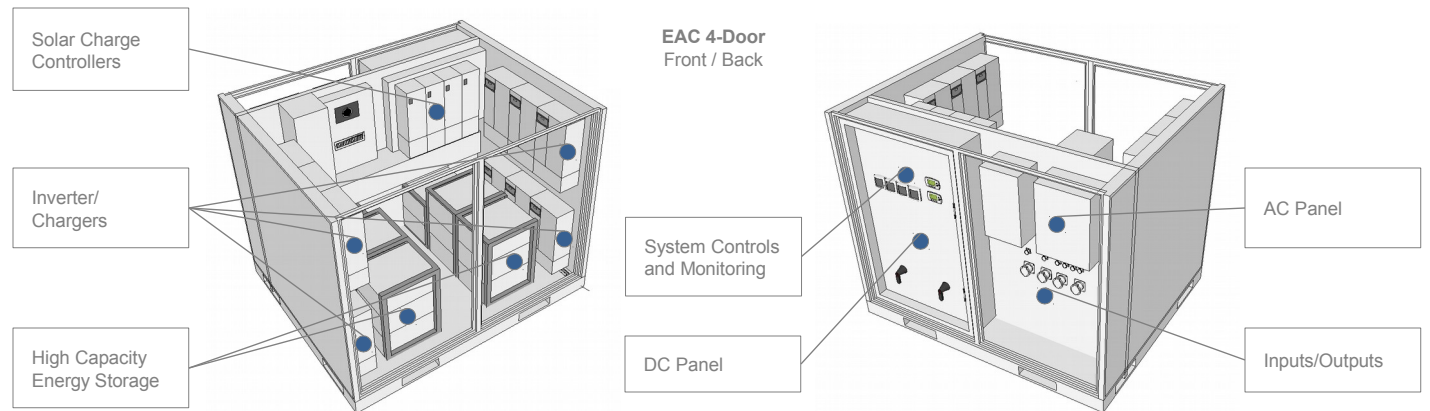
FEATURES

- **Mission-ready** The fully-enclosed system is operational in minutes
- **Power anything** Up to 100 kW of 3-phase US 60 Hz or international 50 Hz power
- **Charge anywhere** Grid power, up to 19.6 kW of solar PV panels and 60-120 kW fuel generators
- **Go anywhere** Service in U.S. 60 Hz or reconfiguration for international 50 Hz
- **Worry-free** LFP battery lasts for 2000 cycles or 10 years
- **Stay connected** Remote monitoring and tracking options
- **Reliable** Two-year warranty backed by ZeroBase Energy, a U.S. company.

SPECIFICATION

SYSTEM INCLUDES	
AC Service	86.4 kW continuous 102 kW 30-min 3-phase 120/208 V, 60 Hz
AC Output	2 x 200 A 3-phase outlets
AC Input	2 x 200 A 3-phase inputs for generator or grid
Generator Management	Automatic start/stop for 60-120 kW generators with remote capability
Battery	83.2 kWh Lithium Iron Phosphate 10 year / 2000+ cycle life
Solar	8.6 kW Ground-mount solar array Two - person setup
Monitoring & Management	System control panel Battery bank monitoring Generator run scheduling Silent watch scheduling

GENERAL	
Model number	MXP-ZB-910-01
Enclosure	EAC Four-door
Environment	-20 to 140 F / -4 to 60 C
IP Rating	IP 65 / NEMA 4
Gross Weight	8,500 lbs / 3,856 kg
Size	L108x W88 x H92 inches L457 x W223 x H233 cm
Transport	Intermodal – air, sea, land, rail Forklift entry from all sides
Includes	Solar cables Gen comm cable



POWER SYSTEM

The ZeroBase MX-SERIES power system is a proven microgrid solution for remote and austere environments

- Outputs digital-quality pure sine-wave power with frequency and voltage regulation
- AC rated power is 86.4 kW with a 100 kW 30-min and 144 kW 60-sec peak capacity
- Sources AC power from two generators or one generator and grid
- Automatically manages generators with remote start capability to optimize generator cycling and fuel conservation
- Automatic switches between on-grid and off-grid modes for locations with an unreliable grid
- Has the option to source U.S. and International voltages and frequencies
- Included in the AC distribution panel are connections for two 200 amp 3-phase loads and two 120 V service loads

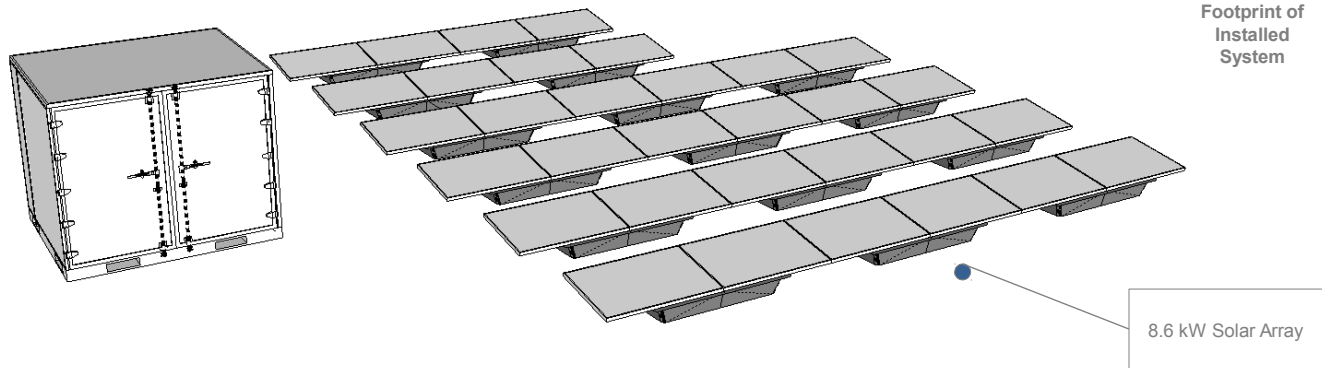
BATTERY

The ZeroBase MX-SERIES uses a stable LiFePO4 battery chemistry. Each battery module has an independent management system that protects from overcurrent and overcharging.

- The 83.2 kWh battery has 99% usable capacity
- The battery can be fully charged or discharged in 1 hour
- The battery life is greater than 2000 cycles or 10 years
- Battery performance is not effected by high temperatures

SPECIFICATION

SERVICE	
AC Service	86.4 kW continuous 102 kW 30-min 3-phase 120/208 V, 60 Hz
AC Power Type	Pure Sine Wave, THD < 5% at rated power
AC Outlets	2 x 200 A 3-phase outlets
AC Inputs	2 x 200 A 3-phase inputs for 60-120kW generators
Generator Management	Automatic start/stop Generator run scheduling Silent watch scheduling
BATTERY	
Battery Type	Lithium Iron Phosphate (LiFePO4)
Capacity	83.2 kWh / 1 hour at rated capacity
Voltage	48 Volt DC
Modules	16 x 5.2 kWh with integrated BMS
Lifecycle	2000 Cycles or 10 Years
ENCLOSURE	
Enclosure	EAC Four-door
Payload	10,000 lb. payload capacity
Size	L108x W88 x H92 inches L457 x W223 x H233 cm
Certification	Internal Air Compatible with standard MIL equipment
Handling	Forklift access of four sides Sling-loadable Single 463L pallet footprint



SOLAR ARRAY

The ZeroBase MX-SERIES ground-mount solar array is designed for assembly and disassembly in the field

- The 8.6 kW solar PV array is included with the MX-100 Power System in a single EAC container
- An additional 21.6 kW fits in a second EAC for a total of 30.2 kW of solar PV power
- Ground-mount array supports panels at 10 degrees and passed wind tunnel testing up to 170 mph
- Array and panels can be assembled by two persons without the need for lifting equipment
- Tier-one mono-crystalline PV panels are rated for 20-year life

ZeroBase MICROGRID

US Army, NAVY, USMC

Since 2009, over 200 ZeroBase hybrid power system have been forward deployed to Afghanistan, Africa and Central America



Owen's Lake, CA USA

Five installations at a dry lake bed each with an 80 kWh LFP battery and 9 kW of solar PV. System has been subjected to desert heat, freezing, 120 MHP winds and alkaline desert air.

SPECIFICATION

SOLAR ARRAY	
PV Rated Power	32 x 270 Watts 8,600 Watts Pmax
Solar Charger	4 x 80 A, 600 V
String Sizing	2 x 12 panels, 374 V, 8.8 A 1 x 8 panels, 249 V, 8.8 A
Solar Module Type	270 Watt Mono-crystalline 31.1 Vmp
Solar Inputs	4 x 20 A
Solar Array	Quick connect/disconnect Non ground penetrating Made of High Molecular Weight Polyethylene (HMWPE)
Solar Array Rating	170 MPH
Footprint	33 ft by 37 ft. for standard array



Les Anglais, HAITI

100 kW Microgrid with 93 kW of ground mount solar PV and 400 kWh battery coupled with 30 kW diesel generator. The system provides power to 450 homes in this rural village.

