# NexPack

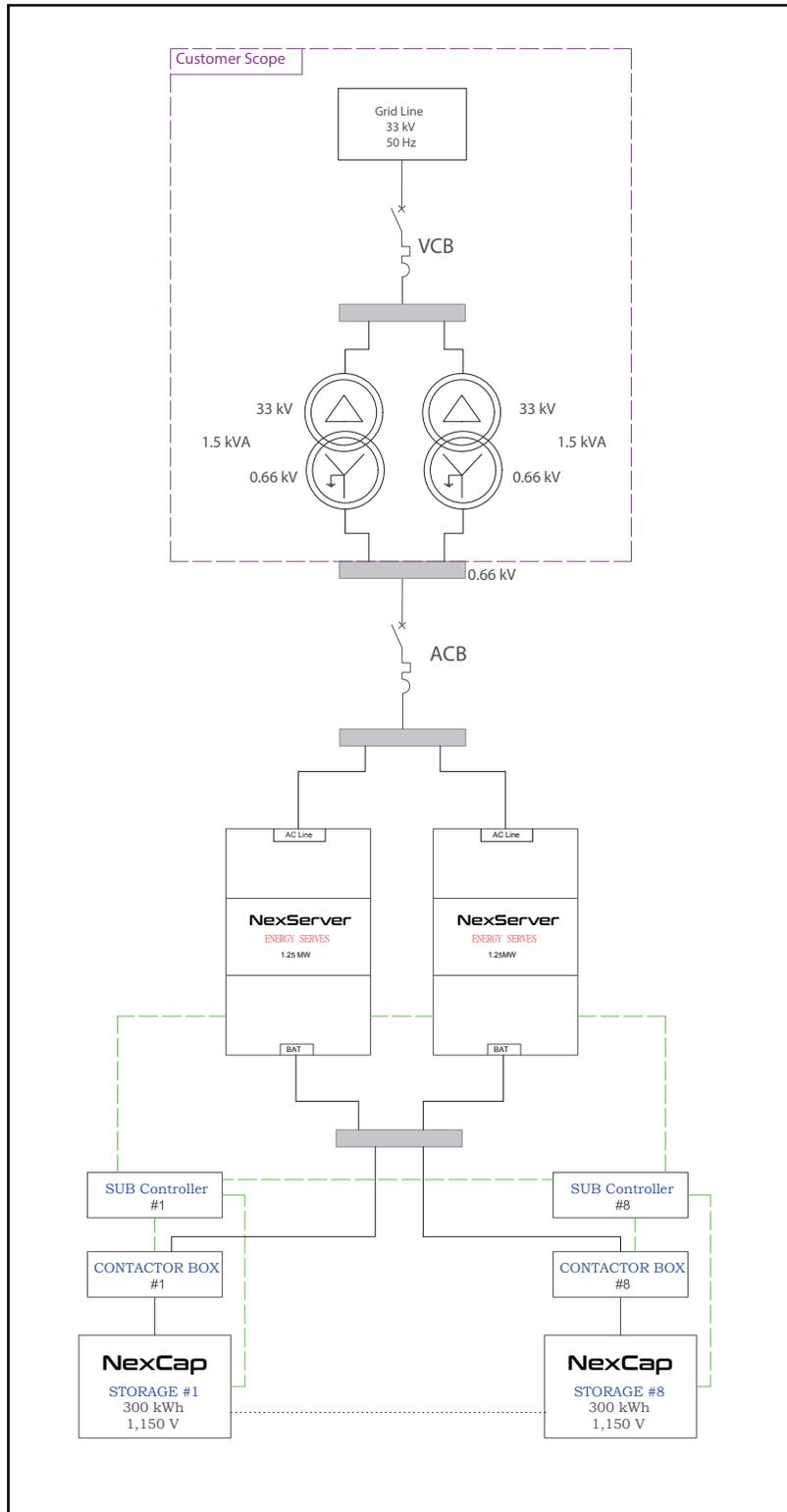## Data Center & Critical Infrastructure BESS Specifications

NexEnergy delivers the next generation of long-duration storage solutions which are engineered to meet the unique challenges of mission-critical infrastructure, hyperscale expansion, and virtually any energy utilization application or need.
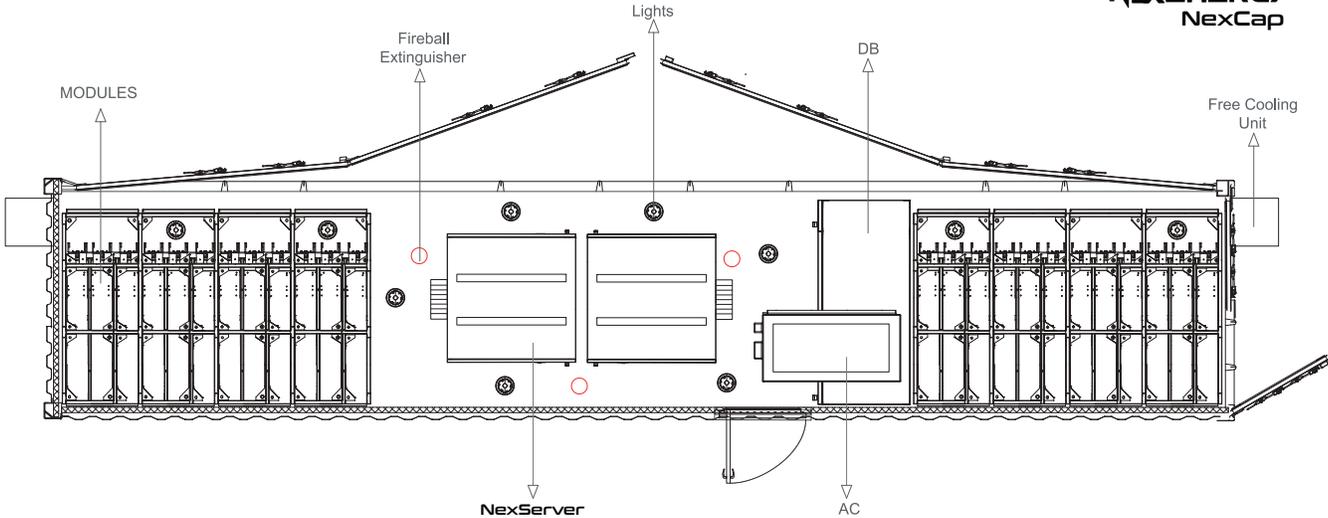
NexEnergy's solid-state graphene energy solution is not just another battery, it's the post-lithium power platform. Purpose-built for AI workloads, hyperscale campuses, and mission-critical uptime, it fuses the instant response of a supercapacitor with the energy density and scalability of long-duration storage.

# Floor Plan
## Container Single Line Diagram

**Customer Scope**

Grid Line
33 kV
50 Hz

VCB

33 kV
1.5 kVA
0.66 kV

33 kV
1.5 kVA
0.66 kV

0.66 kV

ACB

AC Line

AC Line

**NexServer**
ENERGY SERVES
1.25 MW

**NexServer**
ENERGY SERVES
1.25MW

BAT

BAT

SUB Controller
#1

SUB Controller
#8

CONTACTOR BOX
#1

CONTACTOR BOX
#8

**NexCap**
STORAGE #1
300 kWh
1,150 V

**NexCap**
STORAGE #8
300 kWh
1,150 V

# Container Layout



CONTAINER 40ft High Cube Side door Open:

8 Strings Each（23 Modules x 13kWh)
+2 **NexServer** Each 1.25 MW （660 V)

# Tech Power Sheet
## Container Specs

## Performance

| | |
|---|---|
| Voltage (Nominal) | 1150 Vdc |
| Maximum Charge Voltage | 1250 Vdc (Adjustable) |
| Discharge Cut-Off Voltage | 1050 Vdc (Adjustable) |
| Total Energy | 2.4 MWh |

## Smart Features

| | |
|---|---|
| Monitoring Data | Temperature, Total Voltage, Current and Energy |
| Remote Control (optional) | Via Centauri View App |
| Communication and Connectivity | CANBUS |
| Alarm | Audible alarms in the event of Over/under-Voltage, Over-Current, Over Temperature |

## Environmental Specifications

| | |
|---|---|
| Cell Operating Temperature | -22°F to 158°F |
| Operating Humidity | Non-Condensing |

## Centauri View Software

| | |
|---|---|
| Module Monitoring | Current, Voltage, Temperatures, CAN ID, Graphs, Daily Energy Consumed |
| System Monitoring | Instant Generator Solar Power, Daily Generated Solar Energy, Daily Consumption Solar Energy, Total Generated Solar energy from the start, Daily Consumption Energy |

## Safety Performance

| | |
|---|---|
| Over/Under Voltage | Hardware protection, DC line will be disconnected |
| Over Current | Hardware protection, DC line will be disconnected |
| Over Temperature | Hardware protection, DC line will be disconnected |

## Compliance Information

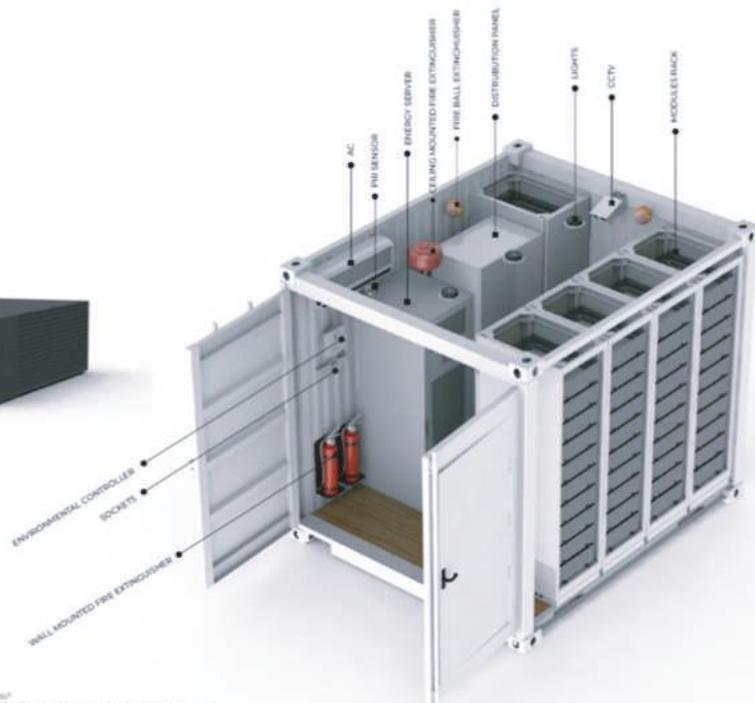| | |
|---|---|
| Standards | EN55032:2015, EN55024:2010, EN61000-4-2:2009, EN61000-4-2:2009, EN61000:2008+A2:2010 |

**CE Certification**

# Equipment List

| S/N | Items | Description | Quantity |
|---|---|---|---|
| 1 | 40ft Container, High Cube, Side Door Open | | 1 Unit |
| 2 | Energy Server | 1.25MW AC Input/Output 660V, 50Hz | 2 Units |
| 3 | Module Racks | No. of Racks | 8 Units |
| | | NEXCAP Modules 13kWh 48V | 184 Units |
| | | Contactor box | 8 Units |
| | | Sub-Controller | 8 Units |
| 4 | EN-Master | | 1 Unit |
| 5 | EN-Controller | | 2 Units |
| 6 | Monitoring & Distribution Rack | No. of Racks | 1 Unit |
| | | Industrial WIFI Router | 1 Unit |
| | | HIKVISION NVR (DS-7600NI-K1(B) SERIES NVR) | 1 Unit |
| | | Industrial PC Resistive Square Screen 19 Inch I3-4040 CPU+8GB RAM+256GB | 1 Unit |
| 7 | Auxiliary Inverter | 3kW, 48V | 1 Unit |
| 8 | Auxiliary Module | NEXPACK 10kWh, 48V | 1 Unit |
| 9 | CCTV Dome Camera | IPC6415SR-X5UPW | 4 Units |
| 10 | AC Unit | AC Unit 5 Ton Duct Type (Inverter), 48000BTU | 1 Unit |
| 11 | Fire Ball | | 4 Units |
| 12 | Fire Extinguisher | 6 kg Dry Powder | 2 Units |
| 13 | Smart Alarm controller | | 1 Unit |
| 14 | Heat Detectors | | 1 Unit |
| 15 | Surface Light | 18W LED Round Surface Mount Ceiling Panel Cool White | 8 Units |
| 16 | T&T Infrared Motion Sensor | Roof Mounted | 1 Unit |
| 17 | Emergency Exit Light | | 1 Unit |
| 18 | Free Cooling Unit | | 2 Units |
| 19 | Free Cooling Unit Controller | | 1 Unit |
| 20 | ACB Breaker | 3P/2500A | 1 Unit |

# NexPack

NexENERGY Module



MODULES RACK

FREE COOLING UNIT

CONTAINER RARE VIEW

AC

FIRE SENSOR

ENERGY SERVER

CEILING MOUNTED FIRE EXTINGUISHER

FIRE BALL EXTINGUISHER

DISTRIBUTION PANEL

LIGHTS
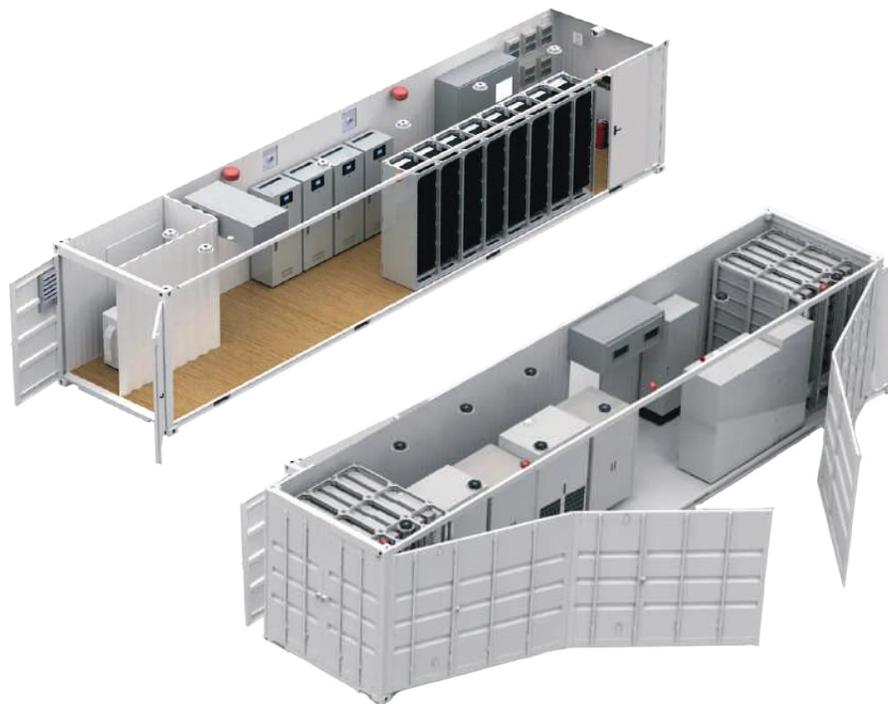
CCTV

MODULES RACK

ENVIRONMENTAL CONTROLLER

SOCKETS

WALL MOUNTED FIRE EXTINGUISHER

Container Exterior Dimensions:
- 3048mm x 2438mm x 2591mm (L x W x H)
- Insulated and operational Container cargo doors
- Exterior Jotun Marine paint RAL 7035
- Interior insulated with Fire rated Class-B2 Polyurethane 38-40kg/m³
- Bottom skin: Alu. Foil - surface 0.5mm GI polyester coated RAL 9002 (off white) 50 mm both sides & 100mm on roof

# NexPack
# Containerized Energy Storage

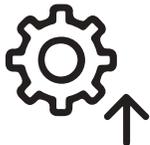Reliable, scalable, and maintenance-free power for any application

### Affordable & Turnkey

• Available in 10 ft, 20 ft, and 40 ft containerized systems
• Fully integrated, >95% pre-assembled "plug-and-play" solution
• Delivers stable, consistent, and maintenance-free electricity from kWh to multi-GWh

### Safe & Reliable

• Multi-layered protection with DC fast-break and anti-arc safeguards
• Integrated fire suppression, HVAC, and distribution systems
• IP54-rated enclosure for harsh environments

### Efficient & Flexible

• Over 500,000 cycles at 1C with zero degradation
• Modular, scalable design supports parallel connection and easy expansion
• Bi-directional PCS with multiple operating modes (on-grid and off-grid)
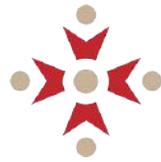
### Smart & Robust

• Intelligent energy storage management with real-time monitoring
• Automated fault detection, recording, and diagnostics
• Integrated performance logging for predictive maintenance

### Key Features

• 10-40 ft turnkey container with battery system, PCS, HVAC, fire suppression, and transformer
• Nanosecond switching for UPS ride-through and uninterrupted AI workloads
• Bi-directional PCS for optimized charge/discharge and grid interaction
• Extreme environment operation (–22 °F to +158 °F / –30 °C to +70 °C)
• Scalable capacity from 400 kWh racks to 2GWh+ (45.5 MWh skids)

## TW CONSULTING & TRADE LTD.

TW Consulting & Trade Ltd. (Malta)

Wolfgang Tweraser
CEO/President

Tel EU:   +356 2701 9052 (office)
Tel EU:   +356 9942 9829 (mobile)
Tel UAE:  +971 50 209 3055

wolfgang@twctmt.com
www.twctmt.com