

# GAIA-S 10 HOME ENERGY STORAGE



## INTRODUCTION

Home energy storage using high quality catl lithium battery cell, equipped with BMS battery management system, mainly used in small capacity home energy storage, there are 100ah, 150ah, 200ah, 250ah and other capacity options, up to more than 10 years of service life, lightweight design, efficient power

## APPLICATION



Solar Energy



Residential Area



Industrial Area



New Energy Vehicle



GAIA-S 10

## VALUE



### More Usable Energy

90% Depth of Discharge  
Pack Level Energy Optimization



### Easy Installation

Standard design with helpful  
pulling ear quick stacking



### Smart BMS system

Each module is equipped  
with an independent BMS system



### Longer Lifetime

6000 cycles, 10 years design life



### Safe & Reliable

Safe lithium iron phosphate cell



### Modular design

Compact size and light weight

ELECTRIAL CHARACTERISTICS

| Project         | Description                          |                                                                           |
|-----------------|--------------------------------------|---------------------------------------------------------------------------|
| Basic Parameter | Battery Type                         | LifePO4(Iron Phosphate Battery)                                           |
|                 | Total Energy Capacity                | 10.3 kWh                                                                  |
|                 | Usable Energy Capacity               | 10.3 kWh                                                                  |
|                 | Battery Capacity                     | 202Ah                                                                     |
|                 | Operating Voltage Capacity           | 47 to 55 V DC                                                             |
|                 | Nominal Voltage                      | 51.2 V DC                                                                 |
|                 | Charge/Discharge Current             | 200A                                                                      |
|                 | Max. Charge/Discharge Power          | 10kW                                                                      |
|                 | Battery Pack Round-Trip Efficiency   | >95% (under specific condition)                                           |
|                 | Communication Interface              | CAN 、 RS232、 RS485                                                        |
|                 | DC Disconnect                        | Circuit Breaker, Contactor, Fuse                                          |
|                 | Battery Discharge Rate               | 0.5C                                                                      |
|                 | Expected Life Time                   | 10 years                                                                  |
|                 | Calendar Life(cycles)                | 6000@25°C, 90%DOD                                                         |
|                 | Cell Type                            | LifePO4(LFP,Iron Phosphate Lithium Battery)                               |
|                 | Cell Nominal Voltage                 | 3.2V                                                                      |
|                 | Cell Combination Method              | 1P16S                                                                     |
|                 | Recommend Charging Voltage           | 55V                                                                       |
|                 | Recommend Discharging Cutoff Voltage | 47V                                                                       |
|                 | Internal Resistance                  | 0.3mΩ                                                                     |
|                 | Charging Rate                        | 0.5C                                                                      |
|                 | Standard Charging Current            | 100A                                                                      |
|                 | Max Charging/Discharging Current     | 200A                                                                      |
|                 | Discharge Rate                       | 0.5C                                                                      |
|                 | Standard Discharging Current         | 100A                                                                      |
|                 | Max Discharging Current              | 200A                                                                      |
|                 | Scalability                          | ≤15 Units in Parallel                                                     |
|                 | Pros                                 | Can be Used in Both Off-grid and Hybrid Setups, Compact Design,LCD Screen |
|                 | Monitoring & Protection              | Built-in BMS,Breaker Embedded in System                                   |
|                 | Design Life Time                     | 10 Years                                                                  |

OPERATING CONDITION

| Project     |                                    | Description                                                                                                                                     |
|-------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment | Installation Location              | Indoor / Outdoor (Wall-mounted / Floor Standing)                                                                                                |
|             | Operating Temperature              | -10 to 50°C                                                                                                                                     |
|             | Operating Temperature(Recommended) | 15 to 30°C                                                                                                                                      |
|             | Storage Temperature                | -30 to 60°C : acceptable for 7 days in total<br>-20 to 45°C : acceptable for the first 6 months<br>-20 to 30°C : acceptable for 7th ~12th month |
|             | Humidity                           | 5% to 95%                                                                                                                                       |
|             | Altitude                           | Max.2,000 m                                                                                                                                     |
|             | Cooling Strategy                   | Natural Convection                                                                                                                              |
|             | Alarms                             | Overcharge, Over-discharge, Over-current, Over-temperature, Short Circuit                                                                       |
|             | Protection Level                   | IP30                                                                                                                                            |

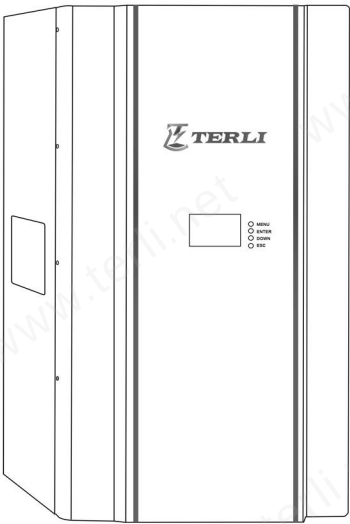
CERTIFICATION

| Project   |                     | Description                                    |
|-----------|---------------------|------------------------------------------------|
| Guarantee | Safety              | Cell      UL1642                               |
|           |                     | Battery Pack      IEC62619 /IEC60950(LVD) / CE |
|           | Emissions           | IEC61000-6-1, IEC61000-6-3                     |
|           | Hazardous Materials | Classification Class 9                         |
|           | Transportation      | UN38.3                                         |

- ※ Test Conditions - Temperature 25°C, at the beginning of life
- ※ Total Energy is measured under specific condition from LC (0.3CCCV/0.3CC)

MECHANICAL CHARACTERISTICS

|            |        | Battery | Package |
|------------|--------|---------|---------|
| Dimensions | Length | 623mm   | 700mm   |
|            | Width  | 400mm   | 450mm   |
|            | Height | 263mm   | 300mm   |
| Weight     |        | 81.5kg  | 90kg    |
| Color      | White  |         |         |



COMPATIBLE STORAGE INVERTERS WITH GAIA-S 10





SRNE 碩日



德業





victron energy  
BLUE POWER





POWER<sup>TEK</sup>





精石科技  
GSSTES



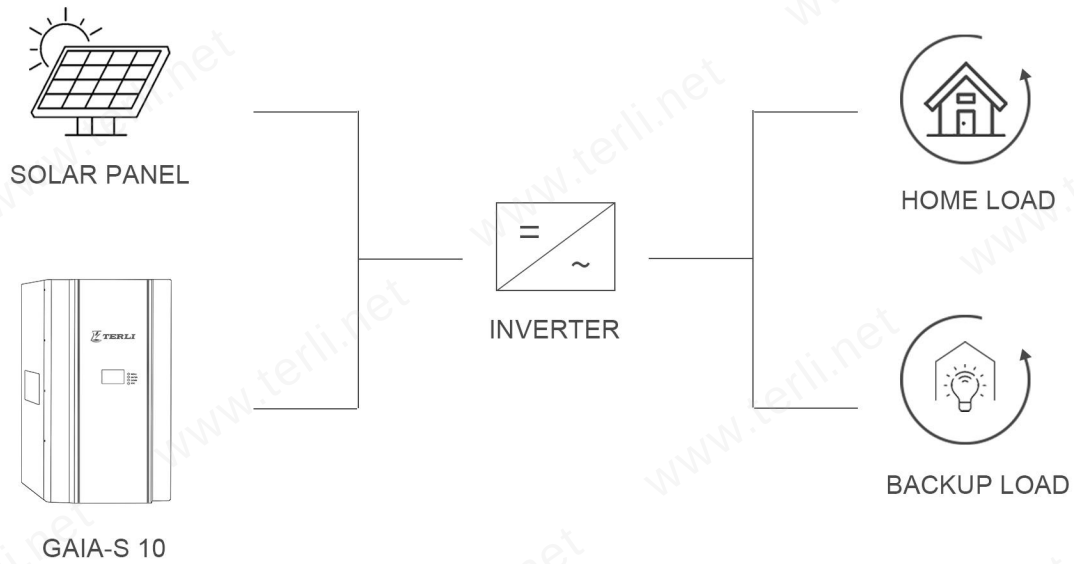


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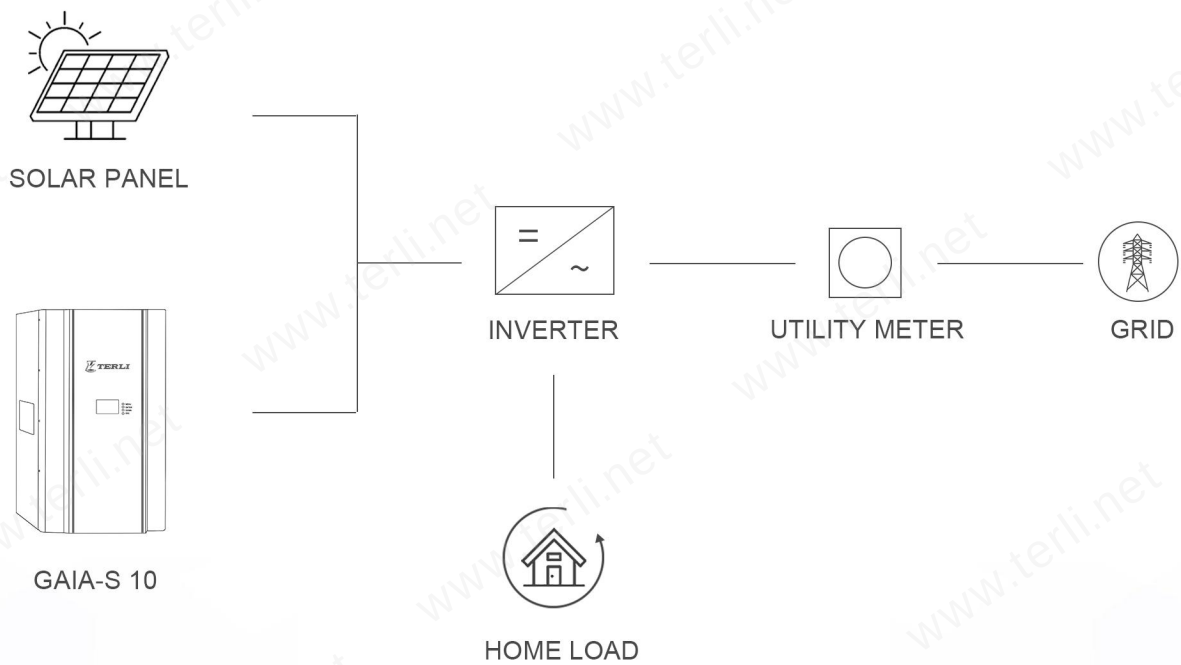


Power Solutions Expert

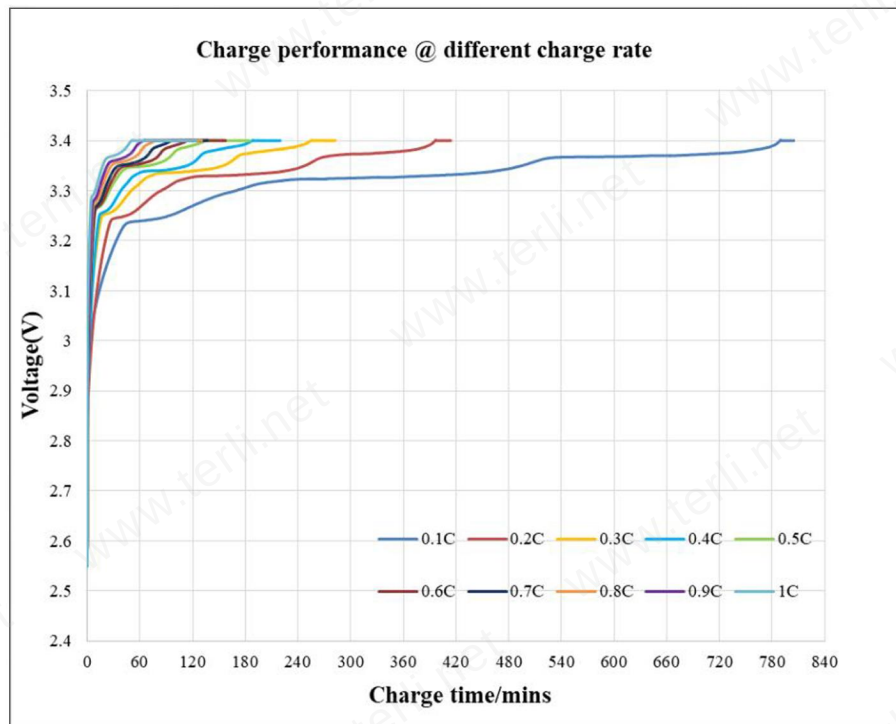
## OFF-GRID SYSTEM



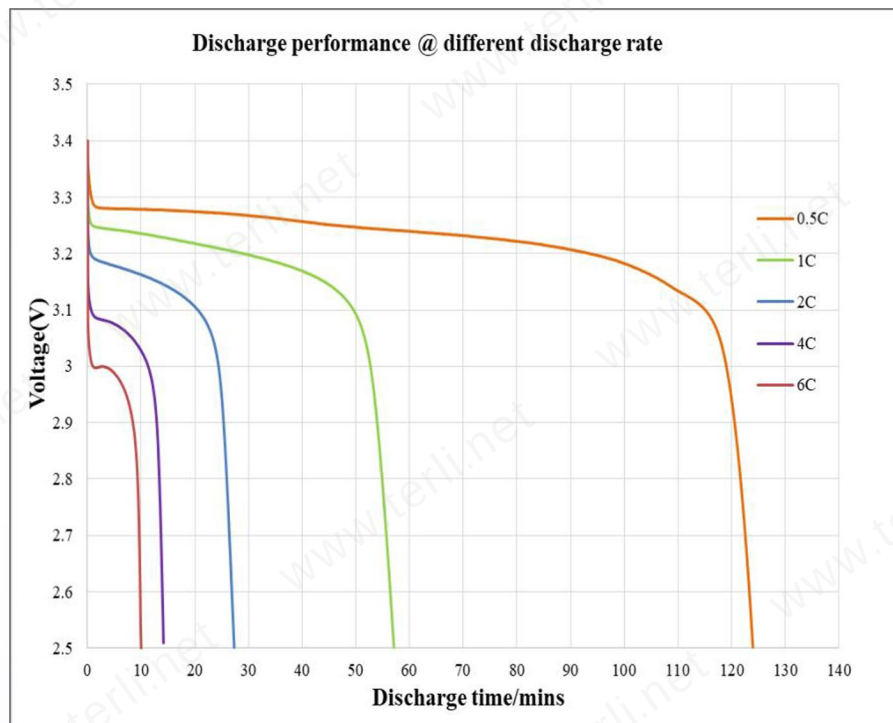
## HYBRID SYSTEM



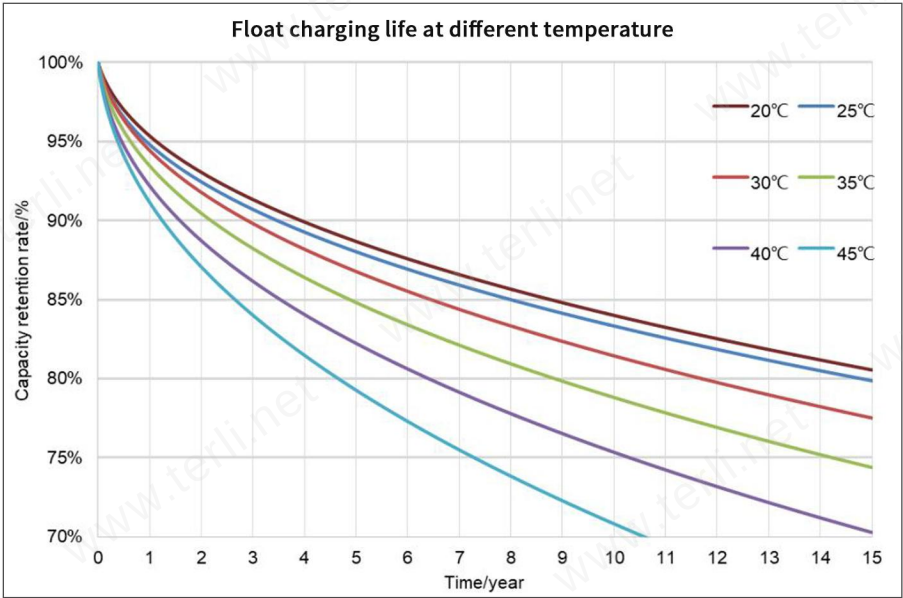
## CHARGING CURVES UNDER DIFFERENT CHARGING RATES



## DISCHARGE CURVE UNDER DIFFERENT DISCHARGE RATES



## FLOATING CHARGING LIFE CURVES AT DIFFERENT TEMPERATURES



## CYCLE LIFE CURVES AT DIFFERENT TEMPERATURES AND DOD CONDITIONS

