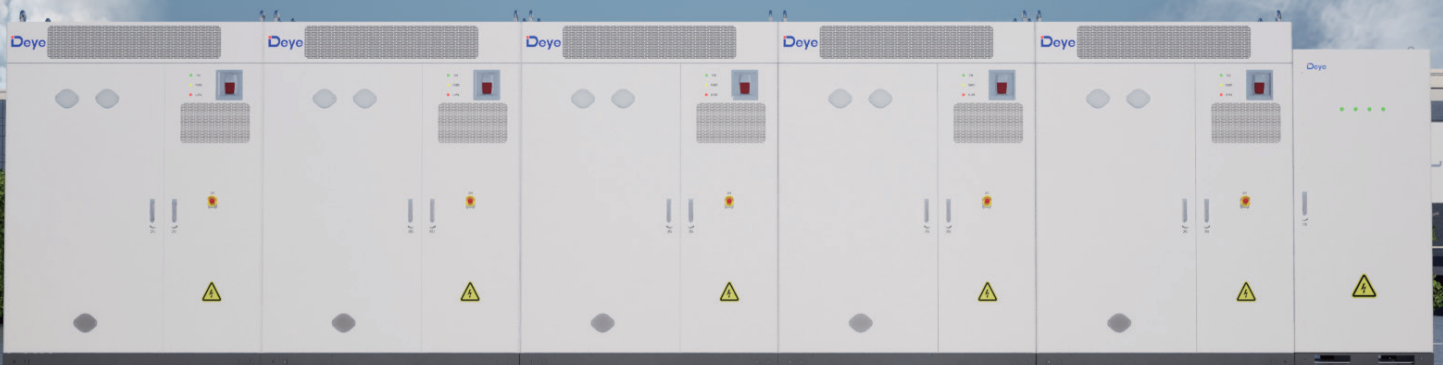


# C&I ESS SOLUTION

DEYE WINTER MS SERIES



## Scalable

- Support up to 5 units off-grid backup, maximum 500kW/1MWh
- Support up to 20 units on-grid in parallel, maximum 2MW/4.3MWh
- Support up to 10 units off-grid in parallel, maximum 1MW/2.15MWh



## Safer

- LFP batteries
- System supports aerosol fire extinguishing
- Battery compartment with auto venting & explosion-proof



## Intelligent Control

- Thermal management keeps battery < 35°C
- Peak-valley mgmt, anti-backflow, overload protection
- Load tracking, demand control, backup power, phase separation



## Multi-Fusion

- Integrated EMS, PCS, and BMS
- Support expansion of MPPT module
- Support off-grid backup



## Reliable

- Operating temp : -20°C to 50°C
- IP54 & C5 protection rating
- Operate up to 3000m altitude
- 1.1x overload capacity
- Balancing solutions extend battery life
- Triple auxiliary power design for stable supply

≥6000

Cycles

C5

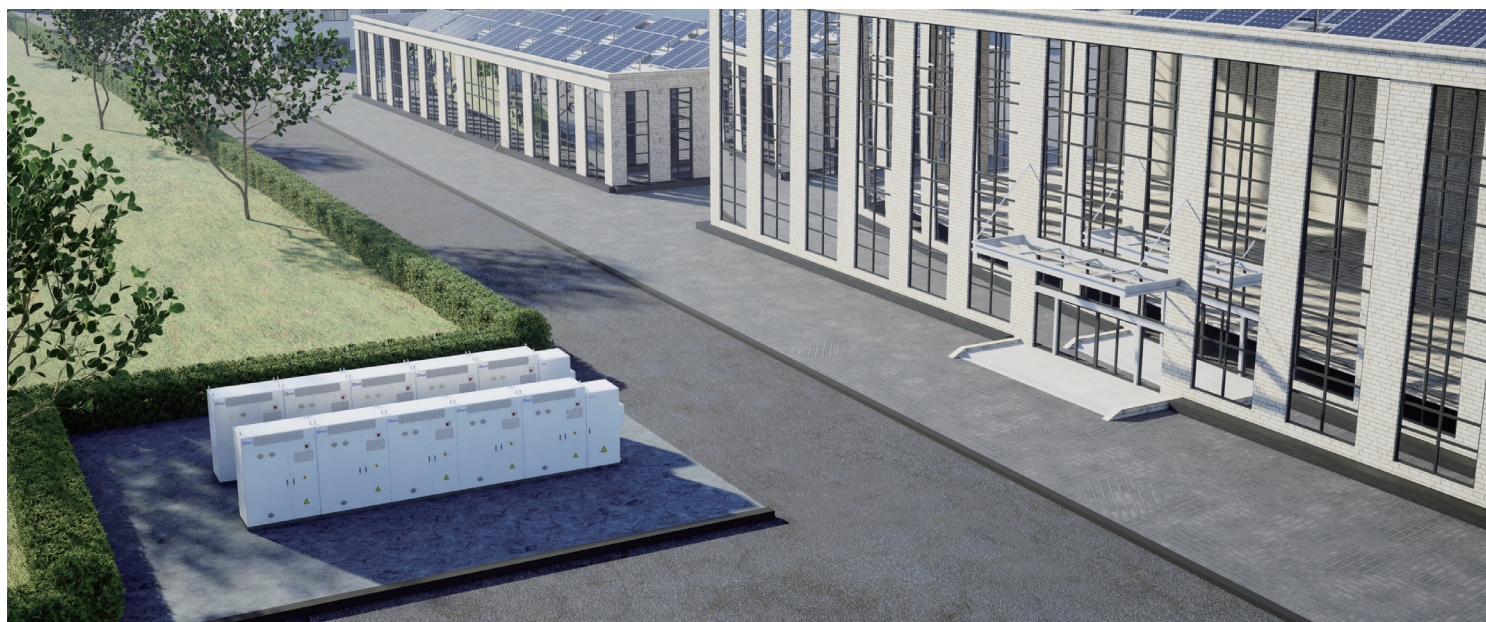
Protection Rating

70%

EOL

10 Years

Warranty

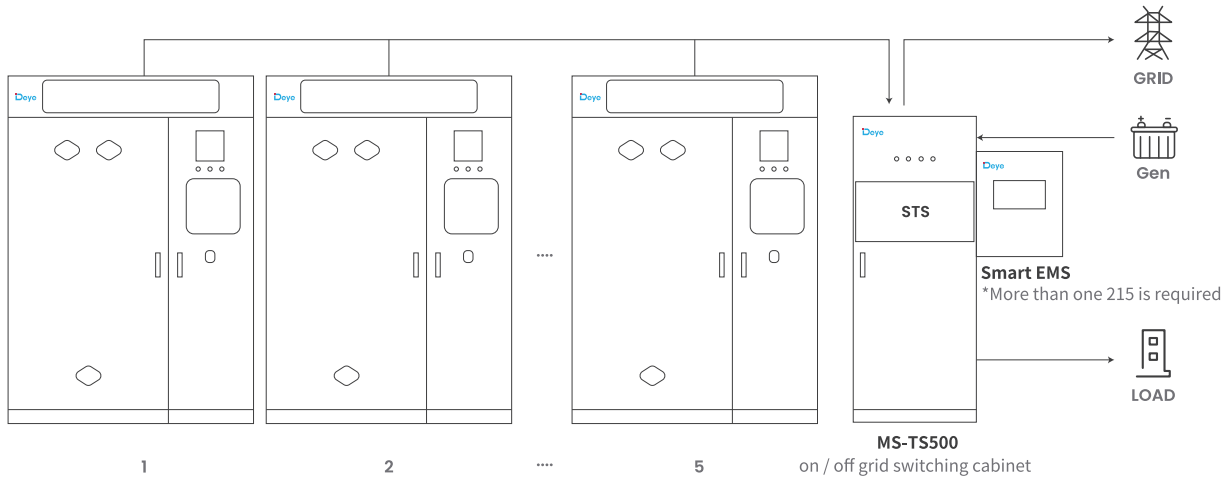

**Model : MS-G215-2H2 | Battery energy storage system, supporting on and off grid operation**
**Main Parameter**

AC Output Power ( kW )	100
AC Output Frequency and Voltage	50 / 60Hz; 380 / 400Vac
Grid Type	3L / N / PE
Battery Operating Voltage ( Vd.c. )	660 ~ 864
Energy ( kWh )	215
Dimension ( W × D × H, mm )	1865 × 1000 × 2500
Weight Appr. ( kg )	2700
Max. RTE	88%
System Communication	ETH / 4G
System Operating Temperature Range ( °C )	-20 ~ 50 ( >45 Derating )
Max. Working Altitude ( m )	≤3000
IP Rating of Enclosure	IP54
Anti-Corrosion Grade	≤C5
System Certification	UN3536,IEC 61000,IEC62477,IEC 60730
Warranty	10 years or Cycle Life≥6000 ( @25°C±2°C, 0.5C / 0.5C, 70%EOL )

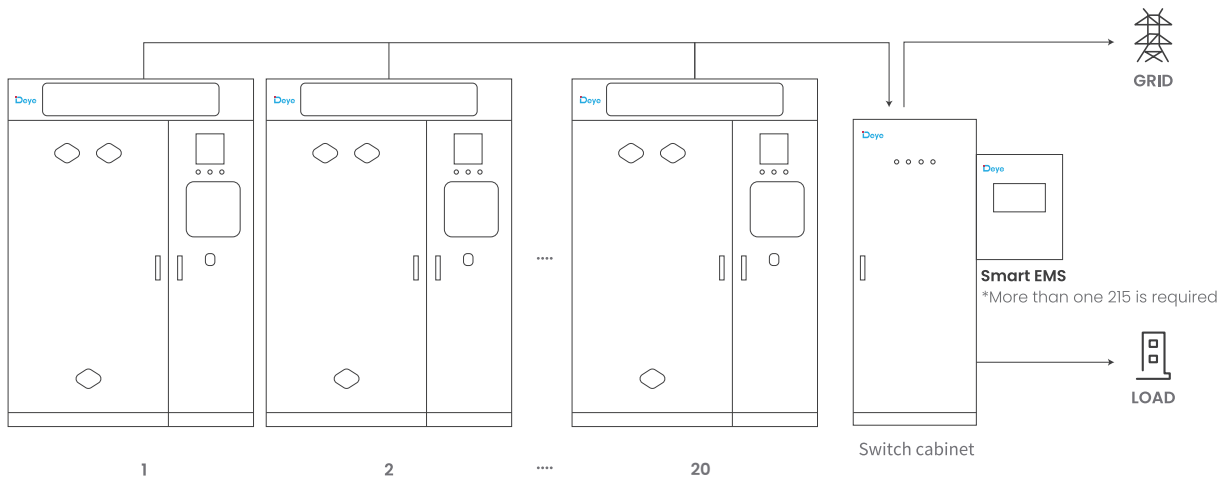
**Converter Specification**

AC Output Rated Current ( A )	152
Max. AC Output Current ( A )	167
Max.Number of Parallel ( off-grid )	10 pcs ( off-grid )
Peak Power	1.1 times of rated power
Power Factor	-1 ~ 1
THD	<3%
DC Injection Current	<0.5In
Display	LCD
Relative Humidity	15% ~ 85% ( No Condensing )
Dimension ( W × D × H, mm )	506 × 772 × 310
Communication	CAN, RS485, ETH
Overvoltage Protection	DC Type II / AC Type II
Protection Level	Class 1
Grid Regulation	EN50549, AS4777.2, CEI 0-21, CEI-016, NRS097
Max. Efficiency	97.6%

**MS-G215-2H2 | Battery storage on-grid back up solution**



**MS-G215-2H2 | Battery storage on-grid solution**



**Model : MS-GS215-2H2 | Solar & Battery energy storage system, supporting on and off grid operation**
**Main Parameter**

AC Output Power ( kW )	100
AC Output Frequency and Voltage	50 / 60Hz; 380 / 400Vac
PV Input Power ( kWp )	200
Grid Type	3L / N / PE
Battery Operating Voltage ( Vd.c. )	660 ~ 864
Energy ( kWh )	215
Dimension ( W × D × H, mm )	1865 × 1000 × 2500
Weight Appr. ( kg )	2732
Max. RTE	88%
System Communication	ETH / 4G
System Operating Temperature Range ( °C )	-20 ~ 50 ( >45 Derating )
Max. Working Altitude ( m )	≤3000
IP Rating of Enclosure	IP54
Anti-Corrosion Grade	≤C5
System Certification	UN3536,IEC 61000,IEC62477,IEC 60730
Warranty	10 years or Cycle Life≥6000 ( @25°C±2°C, 0.5C / 0.5C, 70%EOL )

**Converter Specification**

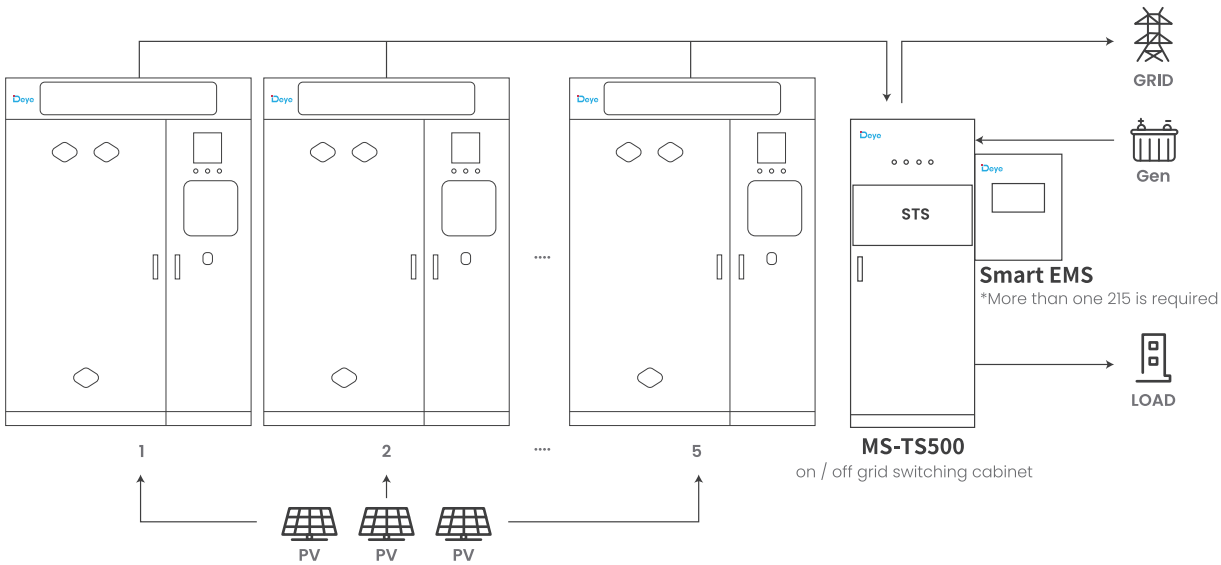
AC Output Rated Current ( A )	152
Max. AC Output Current ( A )	167
Max. Number of Parallel ( off-grid )	10 pcs ( off-grid )
Peak Power	1.1 times of rated power
Power Factor	-1 ~ 1
THD	<3%
DC Injection Current	<0.5In
Display	LCD
Relative Humidity	15% ~ 85% ( No Condensing )
Dimension ( W × D × H, mm )	506 × 772 × 310
Communication	CAN, RS485, ETH
Overvoltage Protection	DC Type II / AC Type II
Protection Level	Class 1
Grid Regulation	EN50549, AS4777.2, CEI 0-21, CEI-016, NRS097
Max. Efficiency	97.6%

**PV Specification**

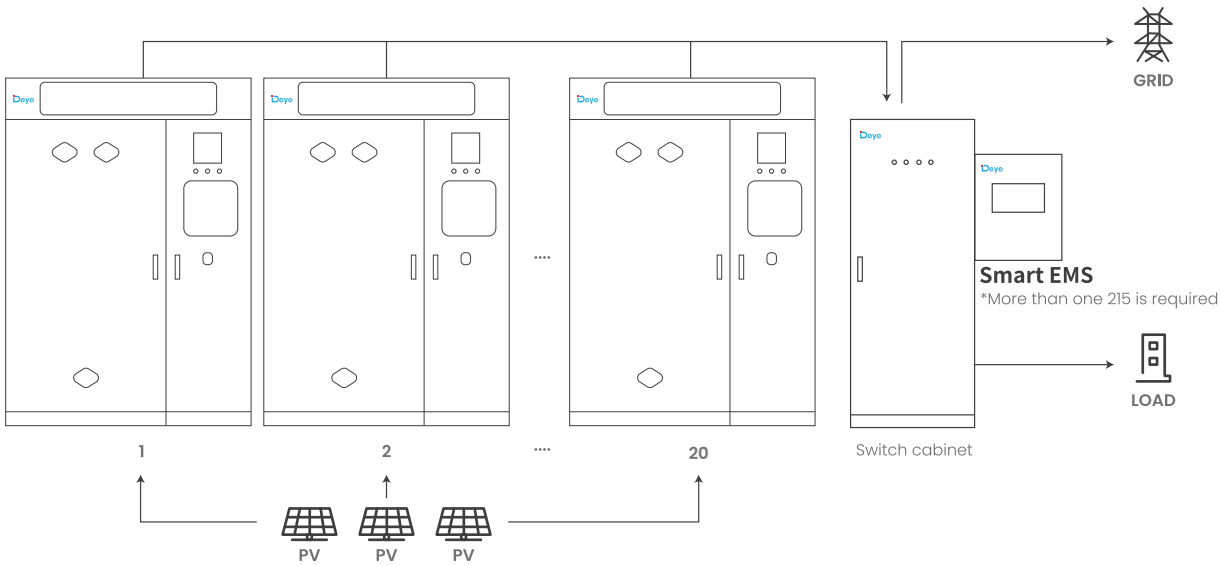
Out Rated Power ( kW )	150 ( dc )
Max. Input Voltage ( V )	1000
Start Voltage ( V )	200
MPPT Voltage Range ( V )	180 ~ 880
Full Load Voltage Range ( V )	450 ~ 850
Number of MPPT	8 pcs
MPPT Max.Current / Short Current ( A )	40 / 60
Dimension ( W × D × H, mm )	440 × 610 × 178
Weight Appr. ( kg )	32

# Typical Application Scenarios

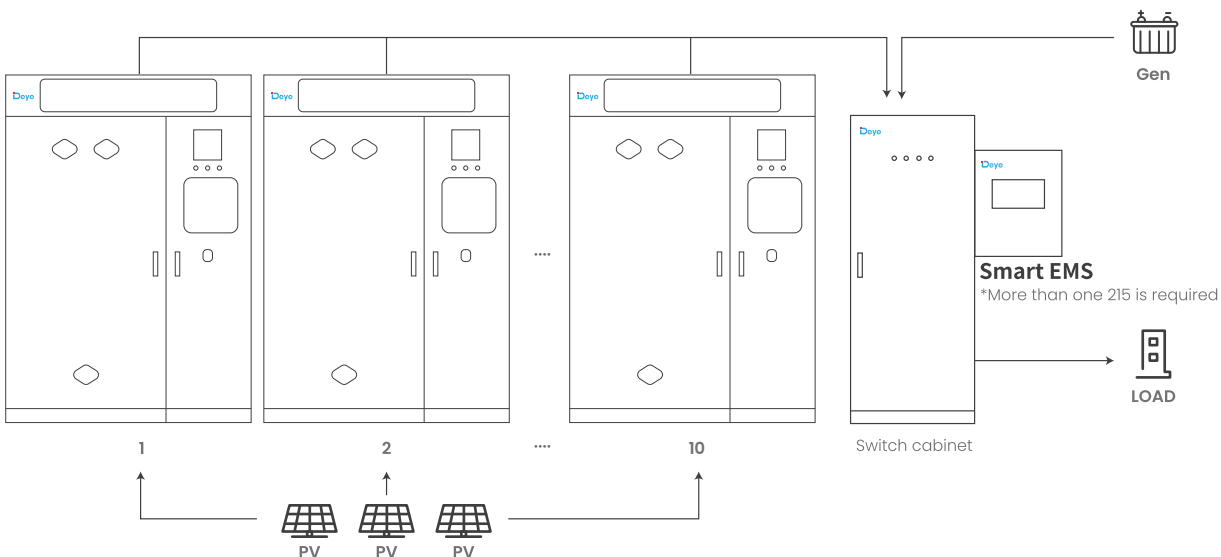
## MS-GS215-2H2 | Solar & battery energy storage on-grid back up solution



## MS-GS215-2H2 | Solar & battery energy storage on-grid solution



## MS-GS215-2H2 | Solar & battery energy storage off-grid solution




**Model : MS-TS500 | <20ms off-grid switching and diesel generator & backup load access**
**Basic Parameters**

Rated Insulation Voltage ( V )	DC1000
Rated Working Voltage ( V )	AC400
Auxiliary Equipment Operating Voltage ( V )	AC220, DC24
Rated Current of Busbar ( A )	1000
Rated Current of Branch Busbar ( A )	200
Frequency	50Hz
Load Rated Power ( kW )	500
Grid Rated Power ( kW )	500
Rated Power of Oil Engine ( kW )	500
Switching Time	20ms
Dimension ( W × D × H, mm )	1000 × 1000 × 2365
Weight Appr. ( kg )	≤700kg
System Operating Temperature Range	-20°C ~ 55°C
Max. Working Altitude ( m )	≤3000m
IP Rating of Enclosure	IP54

**Model : MS-BCP500 | 5 units of 100kw/215kWh access**
**Basic Parameters**

Rated Insulation Voltage ( V )	DC1000
Rated Working Voltage ( V )	AC400
Auxiliary Equipment Operating Voltage ( V )	AC220, DC24
Rated Current of Busbar ( A )	1000
Rated Current of Branch Busbar ( A )	200
Frequency	50Hz
Load Rated Power ( kW )	500
Grid Rated Power ( kW )	500
Dimension ( W × D × H, mm )	1000 × 1000 × 2365
Weight Appr. ( kg )	≤650kg
System Operating Temperature Range	-20°C ~ 55°C
Max. Working Altitude ( m )	≤3000m
IP Rating of Enclosure	IP54



### AI Intelligence

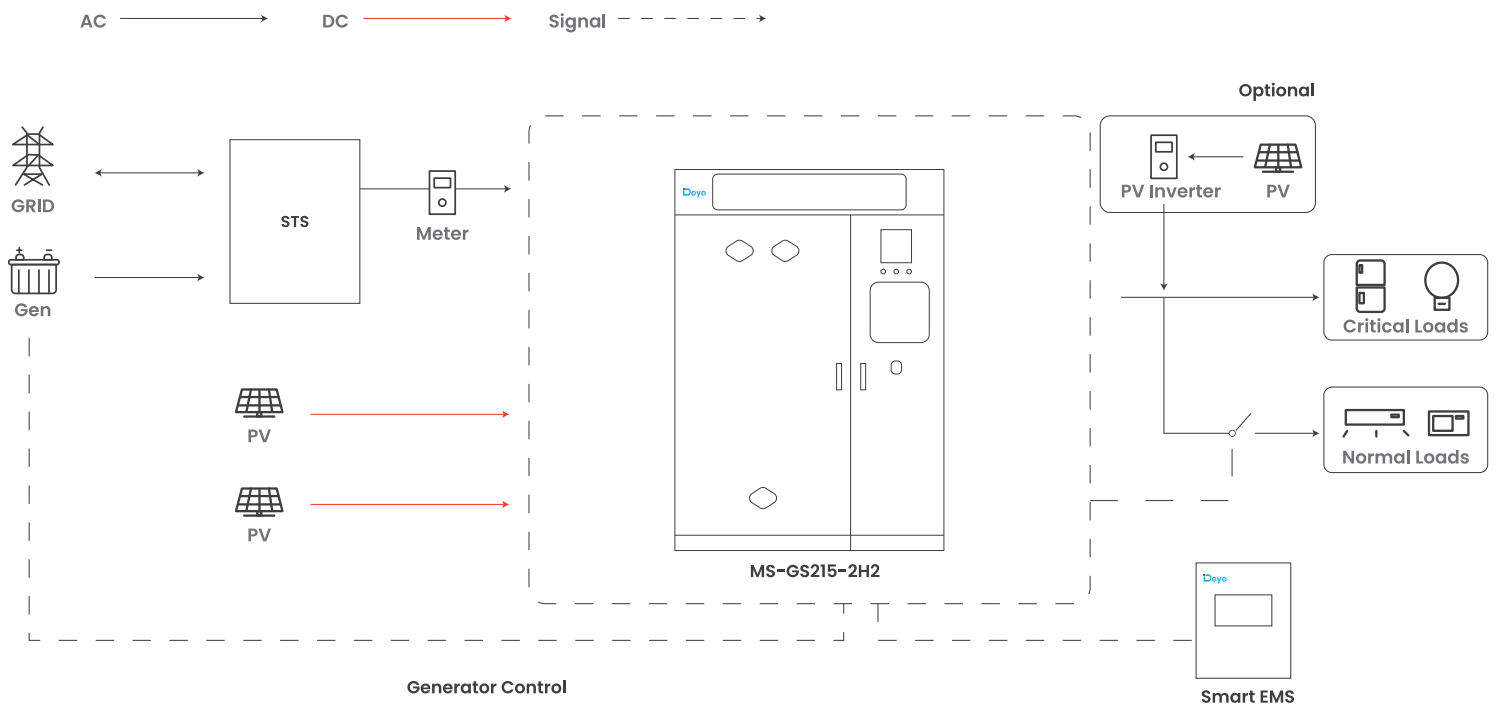
- Large capacity energy aggregation
- Real-time electricity price revenue calculation
- One click generation of statistical charts
- Maximum profit charging and discharging strategy

### Efficient Operation and Maintenance

- Provide local / cloud operation and maintenance to ensure stable device operation
- Combination of multiple operation and maintenance methods for WEB / APP

### Safe and Reliable

- Real-time alarm for equipment malfunction
- Support SOC balance management



Model	MS-EMS
<b>System</b>	
Configuration	EMS controller, lightning protection module, switch power supply, UPS module, switch
Single Point Access Capacity	Energy storage : $\leq 3.44\text{MWh}$ Photovoltaic : $\leq 1.6\text{MWp}$
Function	Basic functions : peak valley arbitrage, anti backflow, main transformer overload protection, load tracking, demand control, backup power function, phase separation control, SOC balancing, Deye Cloud monitoring Advanced features : load forecasting, production planning, electricity price planning, optimal economic curv
<b>Communicate</b>	
Ethernet ( 5 channels )	10 / 100 / 1000 Mbps
SFP ( 2 channels )	1Gbps
USB ( 2 channels )	Host
CAN ( 3 channels )	Isolation, with 2 channels supporting CAN-FD
RS485 ( 8 channels )	Isolation
RS232 ( 3 channels )	2 isolated channels, 1 non isolated debugging channel ( DB9 socket )
TF Card ( 1 channel )	Standard TF card holder
LVDS ( 1 channel )	The physical interface is DVI ( including 1 USB for touch )
M. 2 Interfaces ( 1 channel )	PCIe2.0 X1, Scalable SSD ( standard 1TB )
DI ( 17 channels )	Optocoupler isolation
DO ( 8 channels )	Relay isolation
WLAN	802.11 b / AC g n, HT 20 / 40, 2.4 GHz 5 GHz
<b>Power Supply</b>	
Communication Input	220Vac
DC IN	24Vdc
UPS Backup Power	24Vdc
Consumption	Max 25W
<b>Environmental parameters</b>	
Operation Temperature	-15°C ~ +50°C
Storage Temperature	-15°C ~ +50°C
Working Humidity	5% ~ 95%
Max. Working Altitude ( m )	$\leq 3000\text{m}$
IP Rating of Enclosure	IP54
Anti-Corrosion Grade	$\geq \text{C4}$
<b>Mechanical parameters</b>	
Dimension ( W × D × H, mm )	488 × 188 × 588
Weight Appr. ( kg )	$\leq 24.5\text{kg}$
Installation Location	Indoor or outdoor, wall-mounted
Box Material	Metal
Incoming Specifications	AC power cord : Recommended wire sectional area $1.5\text{mm}^2$ DC power cord : Recommended wire sectional area $1.5\text{mm}^2$ Eight core Ethernet cable: Recommended CAT5e Ethernet cable RS485 : Recommended $0.75\text{mm}^2 \sim 1.5\text{mm}^2$ outdoor UV protection with shielding layer twisted pair cable length < 1000m ( baud rate 9600 )