



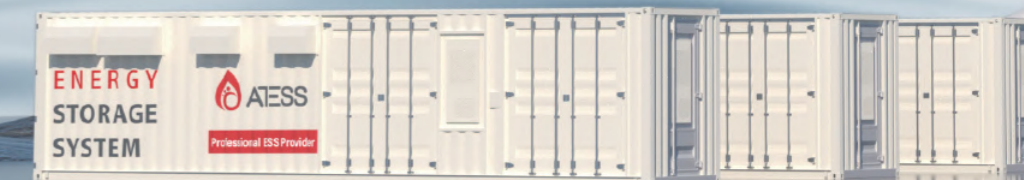
# EnerMatrix Container ESS Brochure

Turn-key solution at one stop

Shenzhen ATESS Power Technology Co., Ltd.  
GROWATT-ATESS Industrial Park, No.23 Zhulongtian Road, Shuitian Community,  
Shiyan Street, Baoan District, Shenzhen

Tel: +86 755 2998 8492  
Email: [info@atesspower.com](mailto:info@atesspower.com)

Fab: +86 755 2998 5623  
Web: [www.atesspower.com](http://www.atesspower.com)



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The ATESS EnerMatrix outdoor containerized solution is a total turn-key solution with an IP54 protection level to handle harsh environment conditions. It's inbuilt with batteries, inverters, accessories, safety protection system and monitoring system.



Microgrid



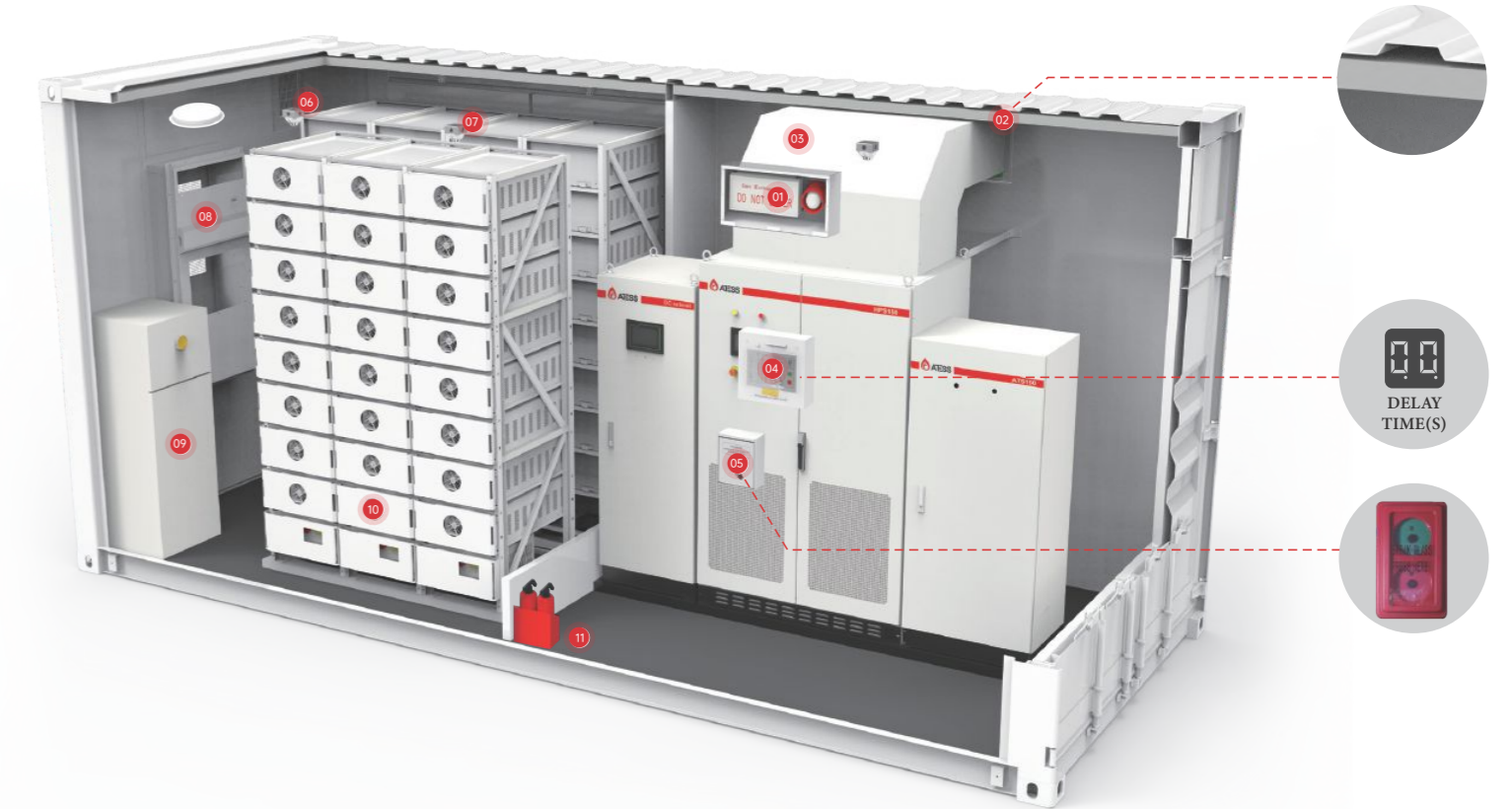
Backup power



Peak shaving



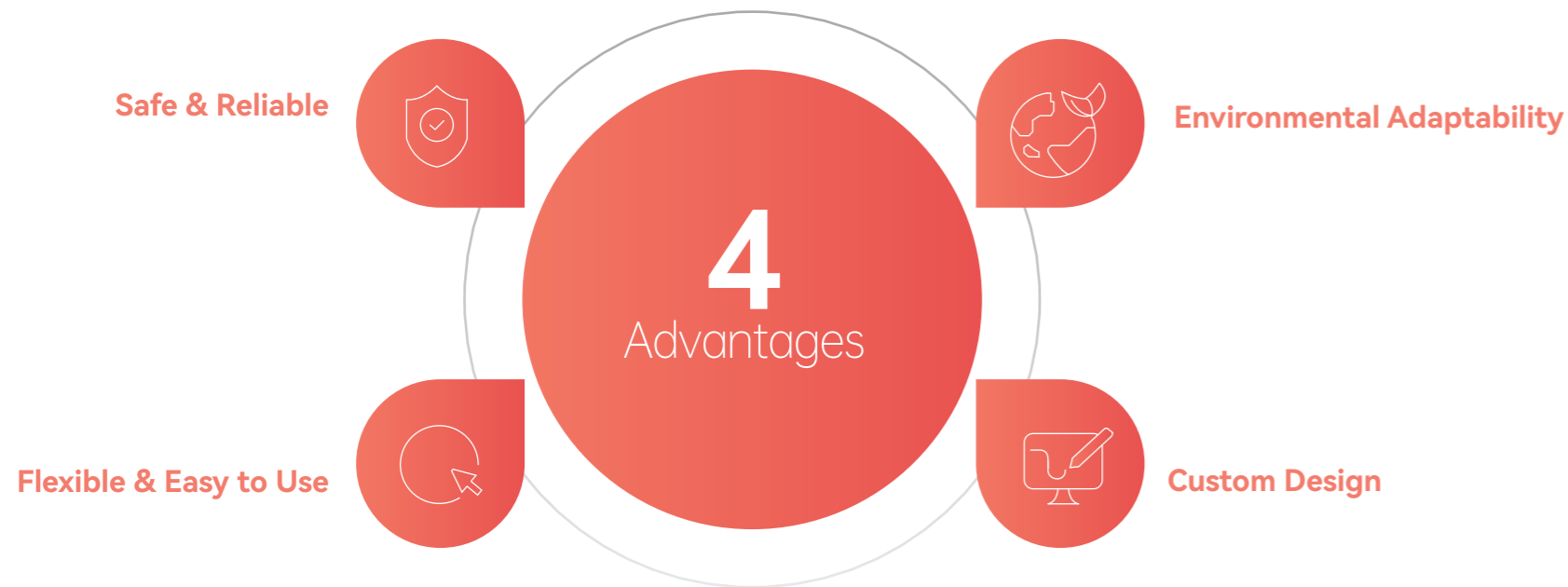
Grid support



## Comprehensive Protection

- |                                |                          |                                 |
|--------------------------------|--------------------------|---------------------------------|
| 01 Audible and visual alarm    | 05 Emergency button      | 09 HFC-227ea/FM200              |
| 02 50mm rock wool              | 06 Smoke sensor          | 10 Battery                      |
| 03 Air flue                    | 07 Temperature sensor    | 11 Dry powder fire extinguisher |
| 04 Extinguishing control panel | 08 Smart air conditioner |                                 |

# Advantages



## Safe & Reliable

- High-precision smoke and temperature sensors for real-time monitoring of the container's internal environment.
- Fire linkage control: the energy storage system shuts down immediately when the fire system is triggered, ensuring equipment safety.
- Delayed sprinkler design (adjustable time): allows personnel inside the cabinet time to assess and escape in case of fire.
- External emergency stop button: shut down the system without entering the container.
- Combustible gas discharge and explosion-proof design.



## Environmental Adaptability

- Intelligent temperature control system with dual temperature and humidity adjustment to ensure optimal operating conditions.
- 50mm rock wool layer (customizable thickness) for insulation and anti-freeze, with a thermal conductivity of  $\leq 0.04W/m.k$ .
- High protection level: IP54 for equipment cabin; IP65 for battery cabin.
- Corrosion resistance suitable for coastal environments.



## Flexible & Easy to Use

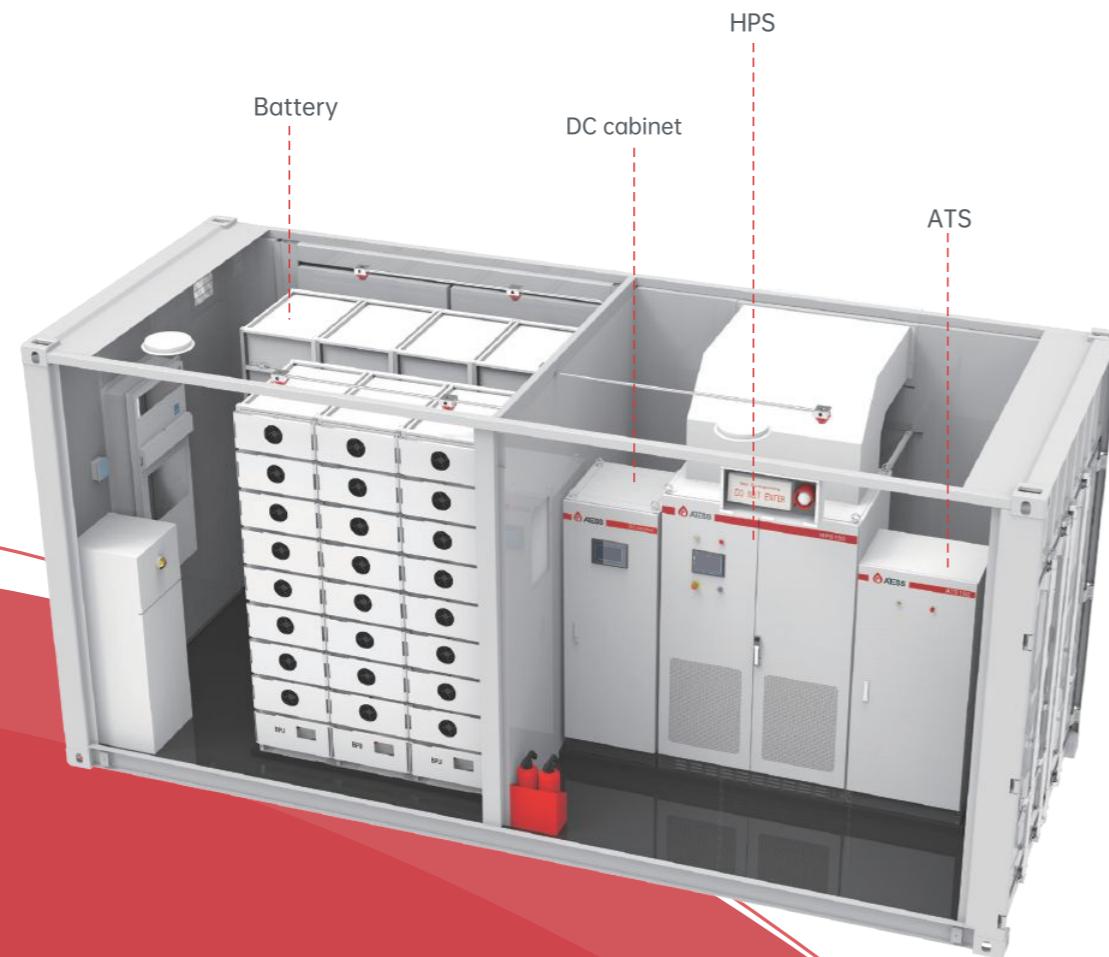
- Matrix design for flexible configuration.
- Easy expansion to reduce initial investment.
- Pre-assembled and pre-wired for plug-and-play installation.
- OSS platform for remote upgrades and maintenance, reducing on-site workload.



## Custom Design

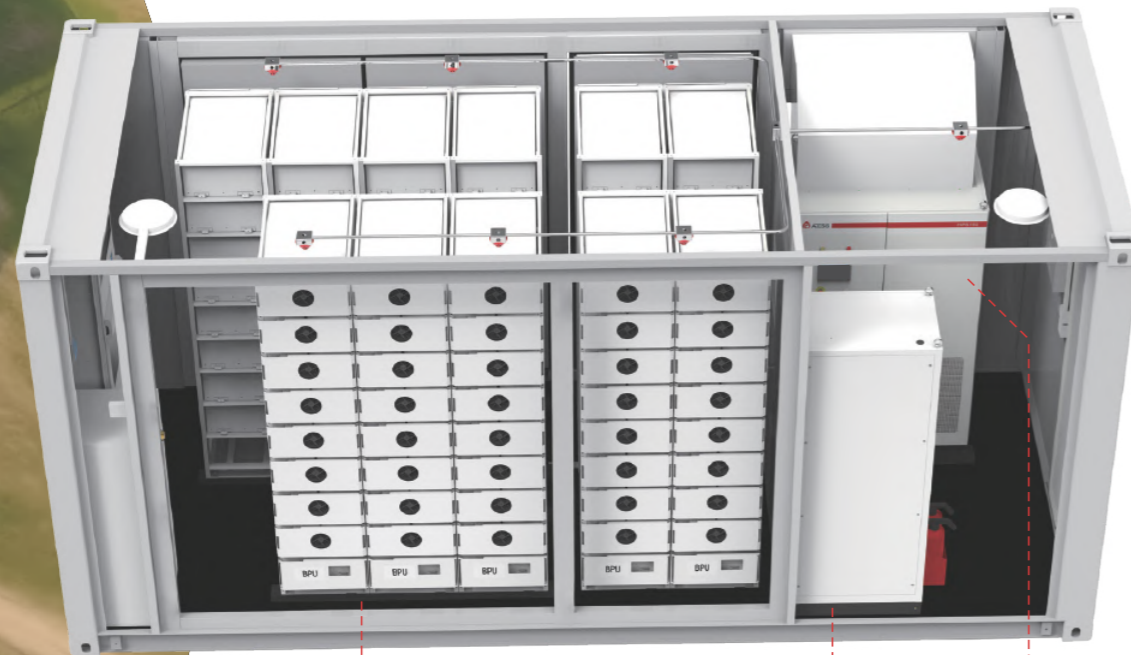
- Appearance: open design showcasing your extraordinary creativity.
- Auxiliary power distribution: pre-reserved local standard power distribution interface for worry-free auxiliary power.
- Equipment configuration: modules configured as needed to meet diverse requirements.
- Internal space design: optimized space layout with customized design for each container.

# 20FT BESS Container



	1*HPS50+ATS50	1*HPS100+ATS100	1*HPS150+ATS150	2*HPS50	2*HPS100	2*HPS150
<b>Power Converter Compatibility</b>						
Rate power	50KW	100KW	150KW	100KW	200KW	300KW
AC voltage	Rate: 380V/400V, Range: 360V~440V					
<b>Compatible Battery System</b>						
Battery Capacity range	114~802.2kWh	129~802.2kWh	229~802.2 kWh	129~802.2 kWh	258~802.2 kWh	387~802.2 kWh
Battery type	LFP					
Battery Voltage Range	352V~600V DC					
Crate	0.5C,1C(Opt)					
<b>Optional PV System connection</b>						
Max. PV power	75KWp	150KWp	225KWp	150KWp	300KWp	450KWp
PV MPPT voltage range	480V~800V					
<b>General data</b>						
Size (W×H×D)	6058×2591×2438mm / 20 * 8.6 * 8 ft					
Max. weight	12930kg	13216kg	13618kg	13463kg	14139kg	14743kg
Noise	70dB					
Degree of protection	IP54					
Max elevation	6000m (derate over 3000m)					
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)					
Humidity	0~95% (No condensing)					
Cooling	Forced air cooling for power electronics. Air conditioned for battery system with heater and dehumidifier					
FIRE safety	FM200 (HFC-227ea) or ABC					
<b>Other</b>						
AC connection	3-Phase 4-wire+PE at AC connection					
Communication	RS485, CAN, Ethernet / MODBUS TCP/IP					

# 20FT BESS Container



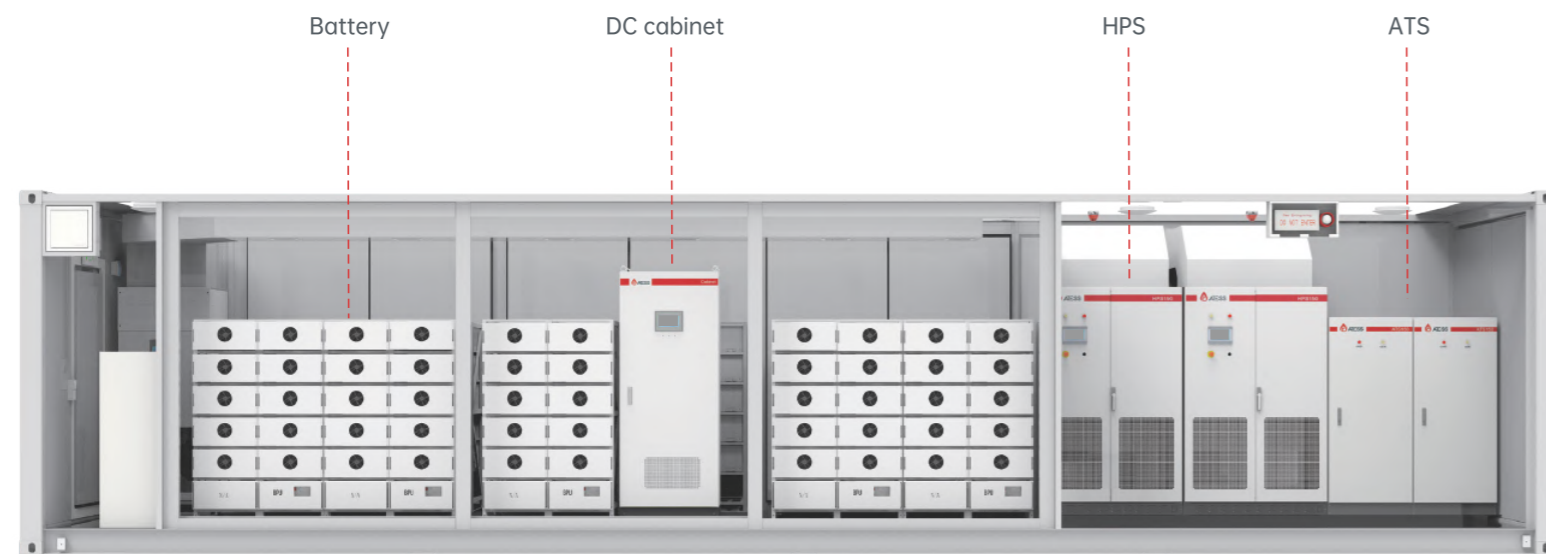
Battery

DC cabinet

HPS

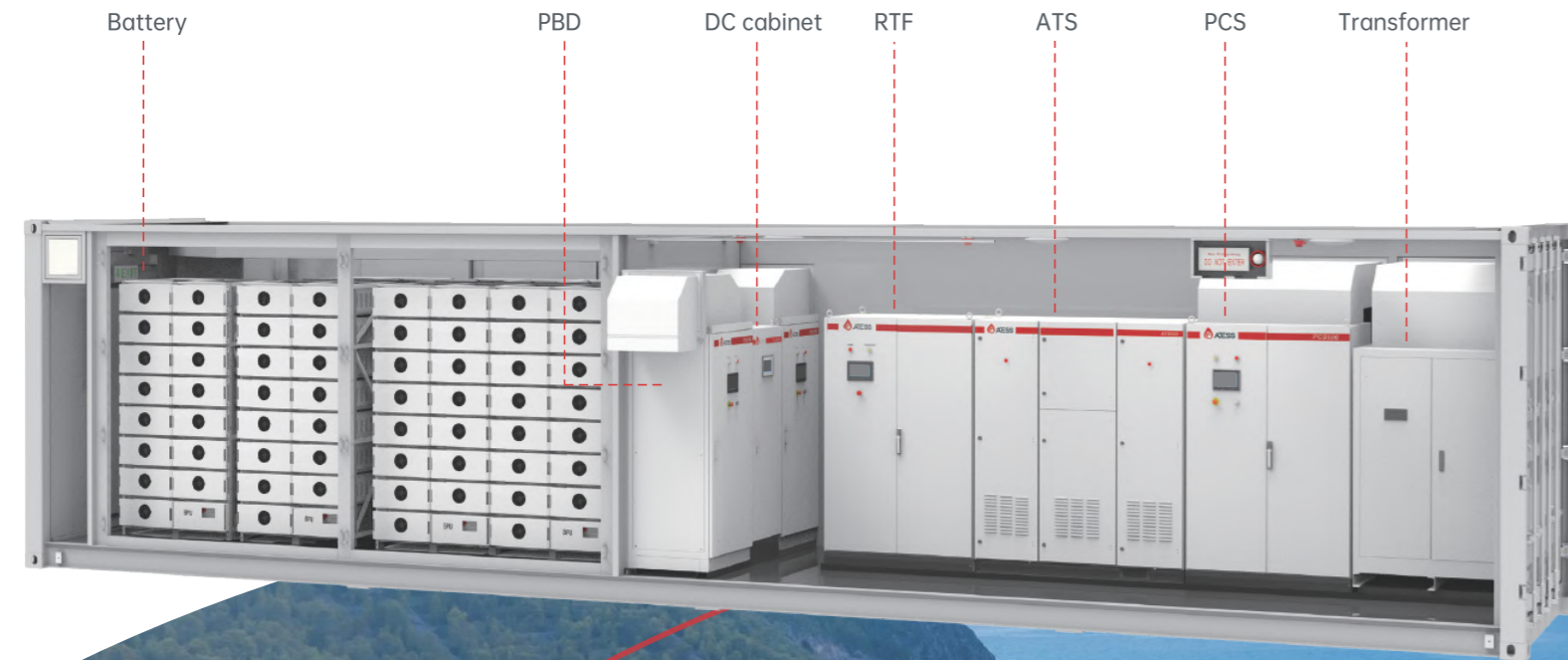
	HPS50	HPS100	HPS150
<b>Power Converter Compatibility</b>			
Rate power	50KW	100KW	150KW
AC voltage	Rate: 380V/400V, Range: 360V~440V		
<b>Compatible Battery System</b>			
Battery Capacity range	114~1260.6kWh	129~1260.6kWh	229~1260.6kWh
Battery type	Lithium iron phosphate battery		
Battery Voltage Range	352V~600V DC		
Crate	0.5C,1C(Opt)		
<b>Optional PV System connection</b>			
Max. PV power	75KWp	150KWp	225KWp
PV MPPT voltage range	480V~800V		
<b>General data</b>			
Size (W×H×D)	6058×2591×2438mm / 20 * 8.6 * 8 ft		
Max. weight	16849kg	176817kg	17489kg
Noise	70dB		
Degree of protection	IP54		
Max elevation	6000m (derate over 3000m)		
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)		
Humidity	0~95% (No condensing)		
Cooling	Forced air cooling for power electronics. Air conditioned for battery system with heater and dehumidifier		
FIRE safety	FM200 (HFC-227ea) or ABC		
<b>Other</b>			
AC connection	3-Phase 4-wire+PE at AC connection		
Communication	RS485, CAN, Ethernet / MODBUS TCP/IP		

# 40FT BESS Container



	2*HPS100+2*ATS100	2*HPS150+2*ATS150
<b>Power Converter Compatibility</b>		
Rate power	200KW	300KW
AC voltage	Rate: 380V/400V, Range: 360V-440V	
<b>Compatible Battery System</b>		
Battery Capacity range	429-1727kWh	785-1727kWh
Battery type	Lithium iron phosphate battery	
Battery Voltage Range	352V-600V DC	
Crate	0.5C,1C(Opt)	
<b>Optional PV System connection</b>		
Max. PV power	300KWp	450KWp
PV MPPT voltage range	480V-800V	
<b>General data</b>		
Size (W×H×D)	12192×2591×2438mm / 40 * 8.6 * 8 ft	
Max. weight	24973kg	25537kg
Noise	70dB	
Degree of protection	IP54	
Max elevation	6000m (derate over 3000m)	
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)	
Humidity	0-95% (No condensing)	
Cooling	Forced air cooling for power electronics. Air conditioned for battery system with heater and dehumidifier	
FIRE safety	FM200 (HFC-227ea) or ABC	
<b>Other</b>		
AC connection	3-Phase 4-wire+PE at AC connection	
Communication	RS485, CAN, Ethernet / MODBUS TCP/IP	

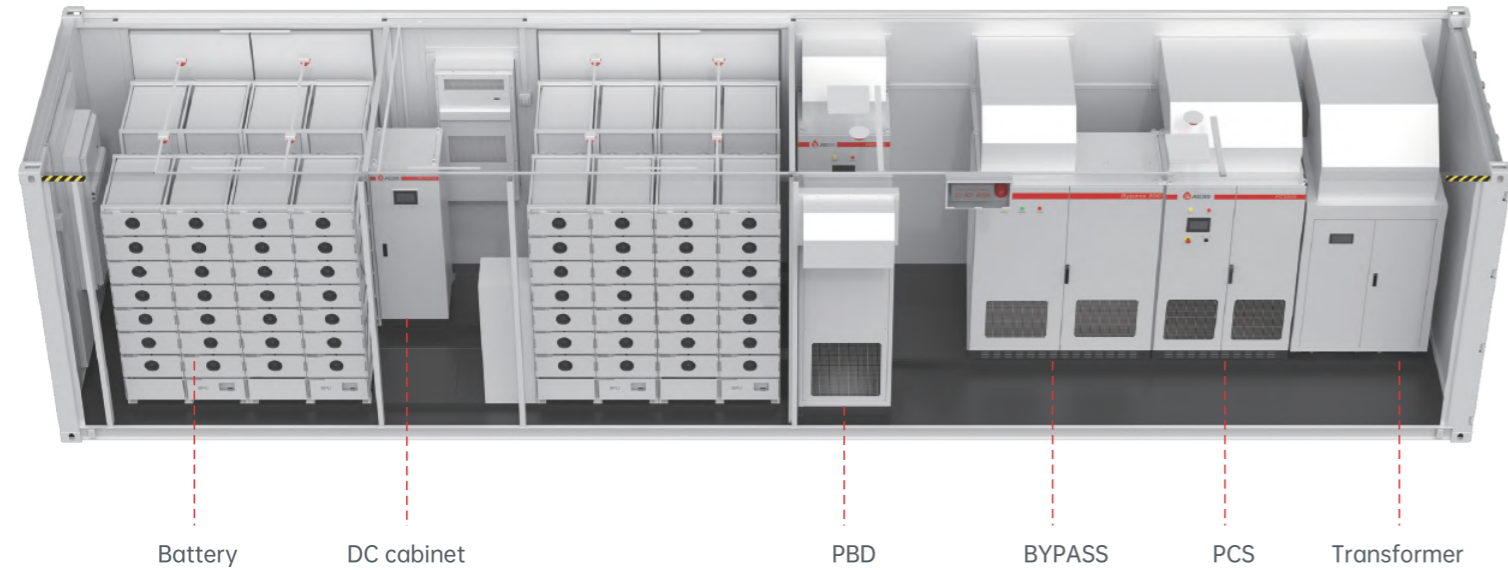
# 40FT BESS Container



1\*PCS500+1\*Transformer500+1\*RTF600+1\*ATS630+2\*PBD250

1*PCS500+1*Transformer500+1*RTF600+1*ATS630+2*PBD250	
<b>Power Converter Compatibility</b>	
Rate power	500KW
AC voltage	Rate: 380V/400V, Range: 360V~440V
<b>Compatible Battery System</b>	
Battery Capacity range	602.1~1505KW
Battery type	Lithium iron phosphate battery
Battery Voltage Range	600V~900V DC
Crate	0.5C,1C(Opt)
<b>Optional PV System connection</b>	
Max. PV power	500KWp
PV MPPT voltage range	480V~850V
<b>General data</b>	
Size (W×H×D)	12192×2591×2438mm / 40 * 8.6 * 8 ft
Max. weight	24385Kg
Noise	70dB
Degree of protection	IP54
Max elevation	6000m (derate over 3000m)
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)
Humidity	0~95% (No condensing)
Cooling	Forced air cooling for power electronics. Air conditioned for battery system with heater and dehumidifier
FIRE safety	FM200 (HFC-227ea) or ABC
<b>Other</b>	
AC connection	3-Phase 4-wire+PE at AC connection
Communication	RS485, CAN, Ethernet / MODBUS TCP/IP

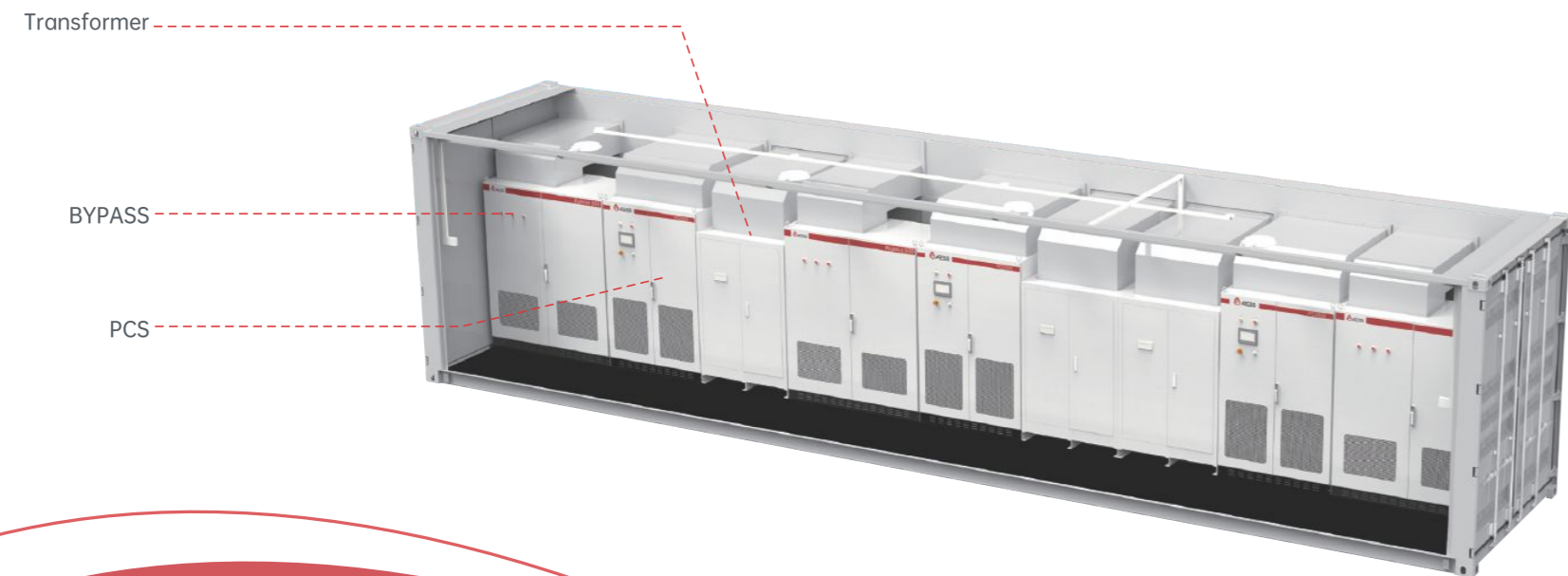
# 40FT BESS Container



1\*PCS500+1\*Transformer500+1\*BYPASS500+2\*PBD250

<b>Power Converter Compatibility</b>	
Rate power	500KW
AC voltage	Rate: 380V/400V, Range: 360V~440V
<b>Compatible Battery System</b>	
Battery Capacity range	602.1~1720KW
Battery type	Lithium iron phosphate battery
Battery Voltage Range	600V-900V
Crate	0.5C,1C(Opt)
<b>Optional PV System connection</b>	
Max. PV power	500KWp
PV MPPT voltage range	480V~850V
<b>General data</b>	
Size (W×H×D)	12192×2591×2438mm / 40 * 8.6 * 8 ft
Max. weight	26275Kg
Noise	70dB
Degree of protection	IP54
Max elevation	6000m (derate over 3000m)
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)
Humidity	0~95% (No condensing)
Cooling	Forced air cooling for power electronics. Air conditioned for battery system with heater and dehumidifier
FIRE safety	FM200 (HFC-227ea) or ABC
<b>Other</b>	
AC connection	3-Phase 4-wire+PE at AC connection
Communication	RS485, CAN, Ethernet / MODBUS TCP/IP



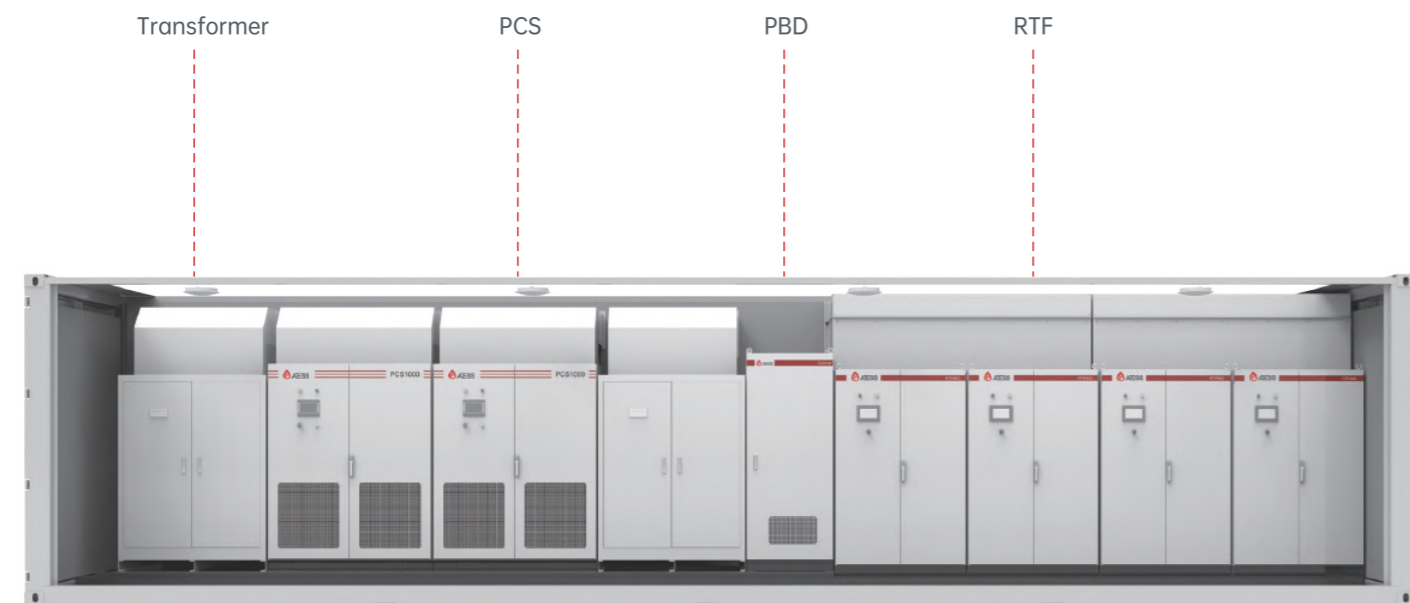


# 40HC Device Container

3\*PCS500+3\*Transformer500+3\*Bypass500

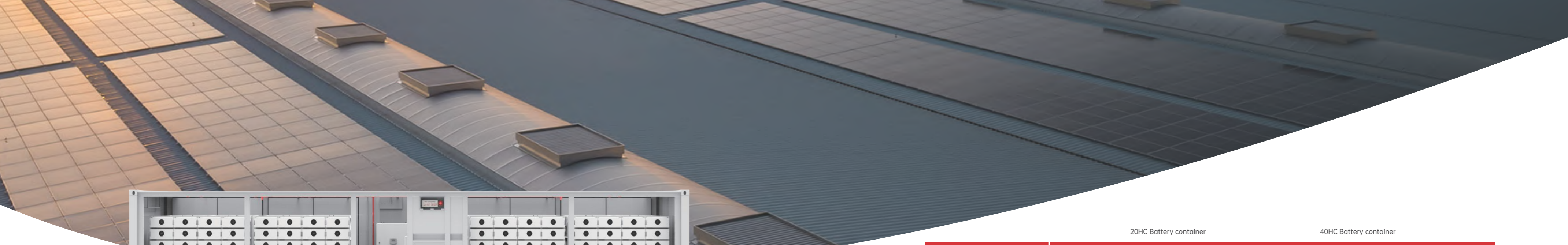
3*PCS500+3*Transformer500+3*Bypass500	
<b>Power Converter Compatibility</b>	
Rate power	1500KW
AC voltage	Rate: 380V/400V, Range: 360V~440V
<b>General data</b>	
Size (W×H×D)	12192×2591×2438mm / 40 * 8.6 * 8 ft
Max. weight	16310kg
Noise	70dB
Degree of protection	IP54
Max elevation	6000m (derate over 3000m)
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)
Humidity	0~95% (No condensing)
Cooling	Smart air cooling
FIRE safety	ABC
<b>Other</b>	
AC connection	3-Phase 4-wire+PE at AC connection
Communication	RS485, CAN, Ethernet / MODBUS TCP/IP

# 40HC Device Container



PCS1000\*2+Transformer1000\*2+RTF600\*4

PCS1000*2+Transformer1000*2+RTF600*4	
<b>Power Converter Compatibility</b>	
Rate power	2000KW
AC voltage	Rate: 380V/400V, Range: 360V~440V
<b>General data</b>	
Size (W×H×D)	12192×2591×2438mm / 40 * 8.6 * 8 ft
Max. weight	17300kg
Noise	70dB
Degree of protection	IP54
Max elevation	6000m (derate over 3000m)
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)
Humidity	0~95% (No condensing)
Cooling	Smart air cooling
FIRE safety	ABC
<b>Other</b>	
AC connection	3-Phase 4-wire+PE at AC connection
Communication	RS485, CAN, Ethernet / MODBUS TCP/IP



# 40HC Battery Container

	20HC Battery container	40HC Battery container
<b>Compatible battery system</b>		
Max. capacity	1720KWh	3440KWh
Battery type	Lithium iron phosphate battery	
Battery voltage range	600-900V DC	
C rate	0.5,1C(Opt)	
	20HC container	40HC container
<b>General data</b>		
Size (W×H×D)	6058×2591×2438mm / 20 * 8.6 * 8 ft	12192×2591×2438mm / 40 * 8.6 * 8 ft
Max. weight	19327kg	37906kg
Noise	70dB	
Degree of protection	IP54	
Max elevation	6000m (derate over 3000m)	
Operating ambient temperature	-20°C to 50°C (De-rating over 45°C)	
Humidity	0-95% (No condensing)	
Cooling	Air conditioned with heater and dehumidifier	
Fire safety	FM200(HFC-227ea) or ABC	
<b>Other</b>		
AC connection	3-Phase 4-wire+PE at AC connection	
Communication	RS485, CAN, Ethernet / MODBUS TCP/IP	



## Power station for beverage factory

Location: South Africa  
Capacity: 1.5MW / 3MWh



## Off-grid power plant for farm irrigation

Location: South Africa  
Capacity: 1.5MW / 2.8MWh



## Olifantskop farm irrigation project

Location: South Africa  
Capacity: 630kW / 800kWh



## Off-grid power plant for farm irrigation

Location: South Africa  
Capacity: 1.5MW / 2.8MWh

# Rayong water purification plant project

Location: Thailand  
Capacity: 250kW / 583 kWh



## Hybrid power station for factory

Location: Thailand  
Capacity: 2.5MW / 2.5MWh



## Micro system for village

Location: Myanmar  
Capacity: 100kW / 200kWh



## Kamphaeng phet solar farm storage system

Location: Thailand  
Capacity: 250kW / 1.8MWh



## Twin containerized power plant

Location: Singapore  
Capacity: 300kW / 318kWh

ASIA  
S  
I  
O

# Caymanas park off-grid solar plant

Location: Jamaica  
Capacity: 1.7MW / 5MWh



America



# Asparagus processing factory

Location: Germany  
Capacity: 450kW / 464kWh

EUROPE



# Containerized power station for office

Location: Poland  
Capacity: 100kW / 138kWh



# Hybrid power plant

Location: Poland  
Capacity: 250kW / 500kWh