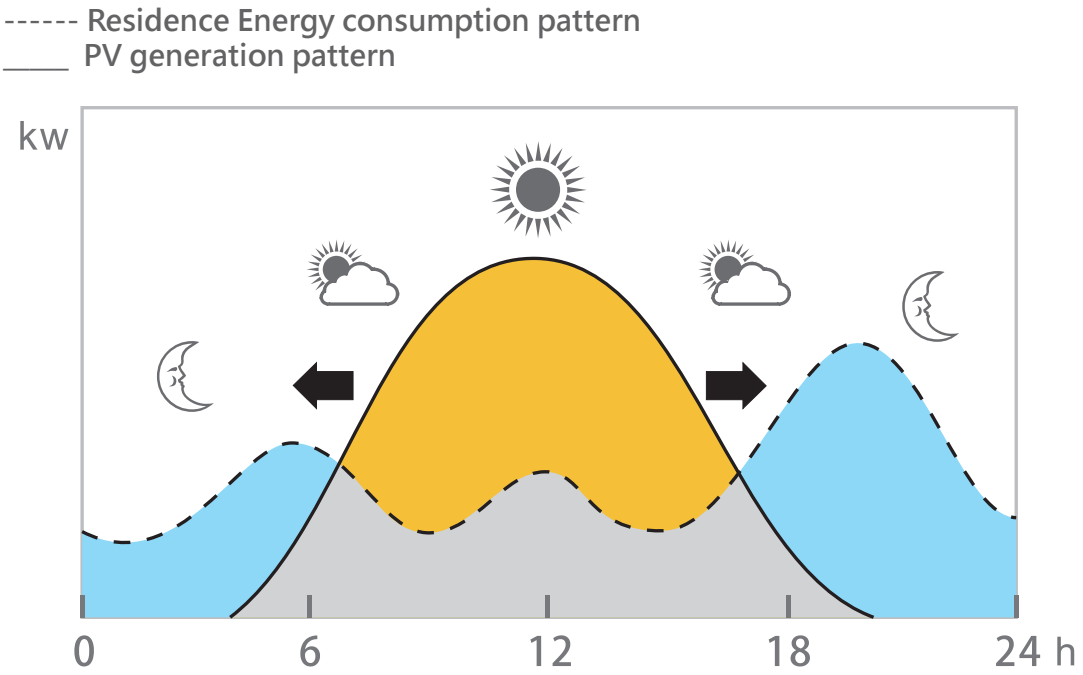


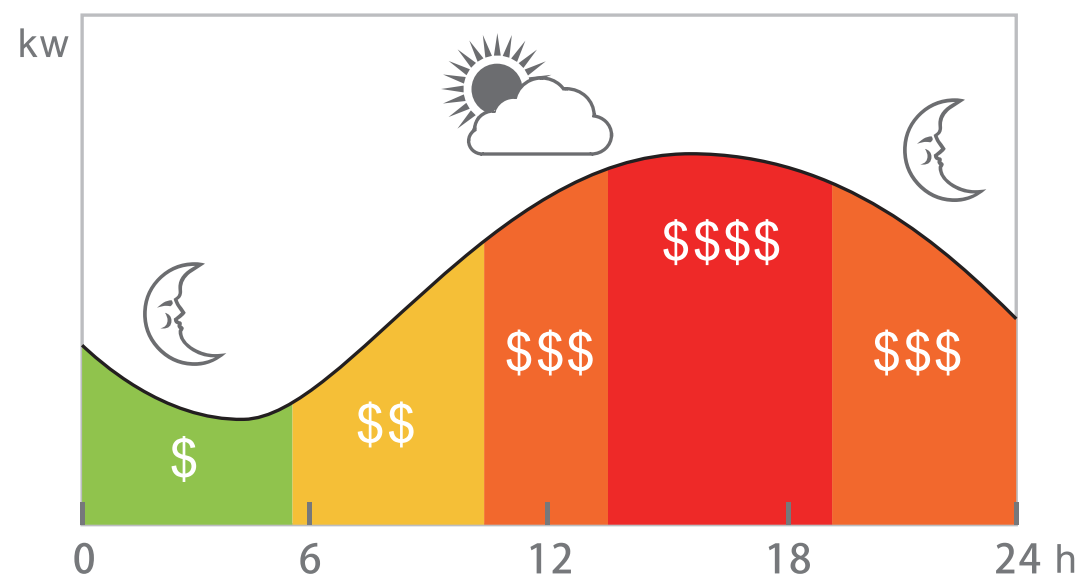
Energy Storage System

Energy Self-Consumption



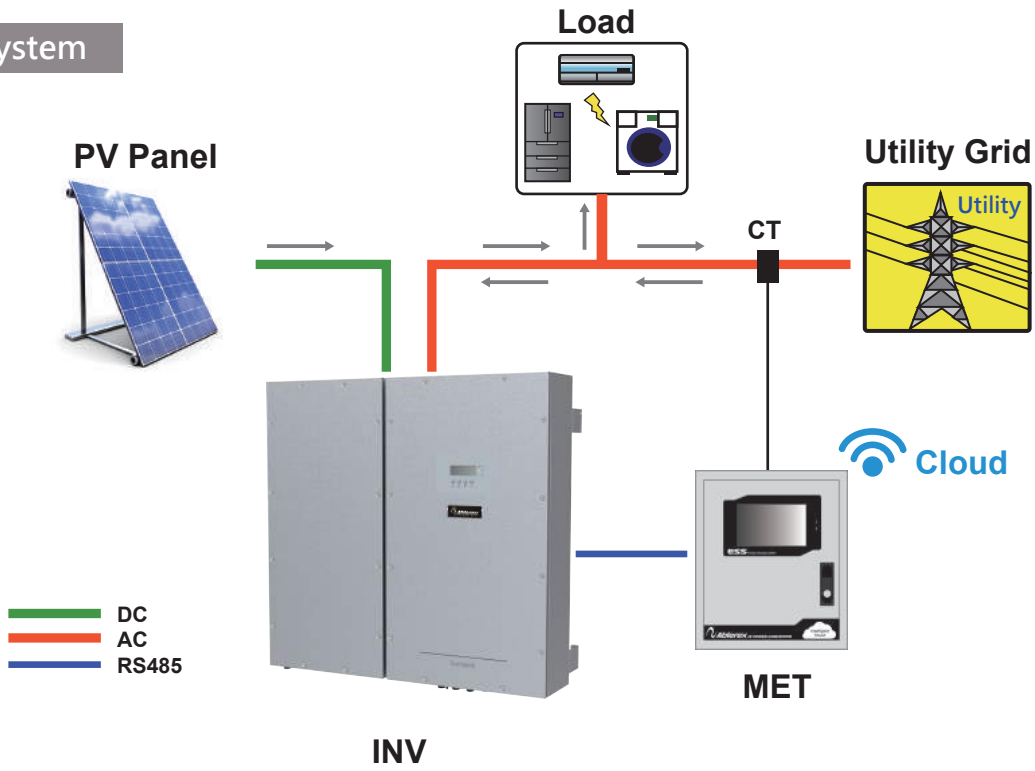
- Day: Charge and store energy generated by PV panel.
- Night: Consume the stored energy for home use.

Peak Hours Shaving

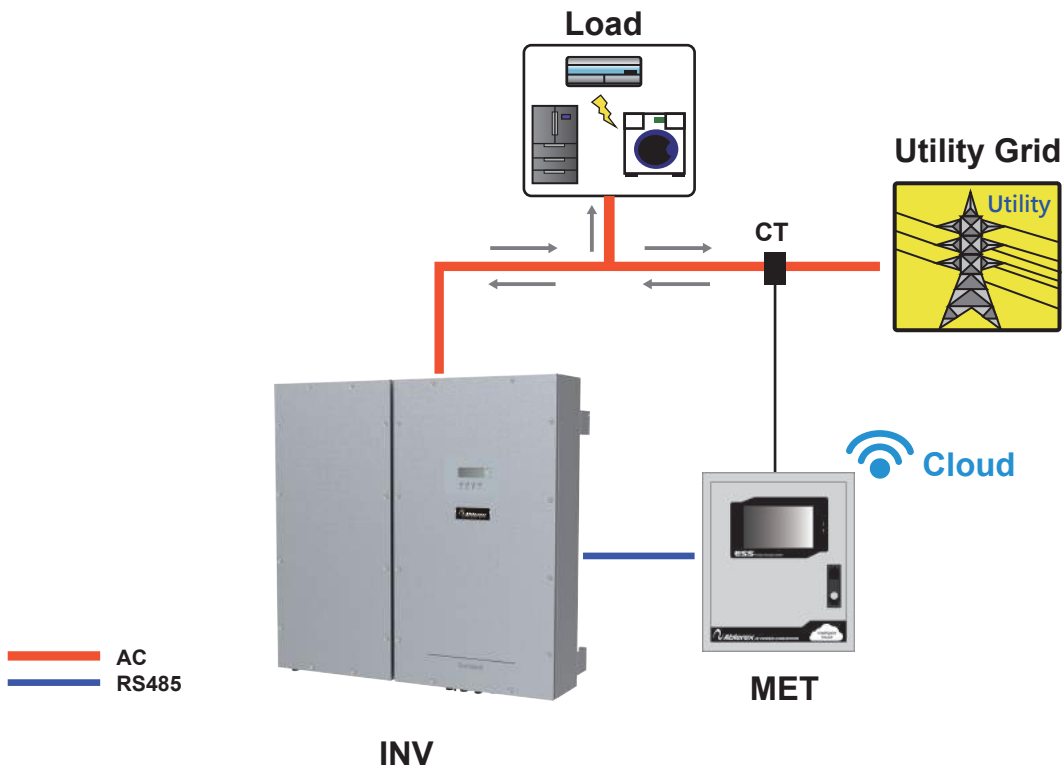


- Off-Peak Rate - Charge the battery pack during electricity off-peak rate hours.
- Peak Rate - Use the electricity from the battery pack during electricity peak rate hours.

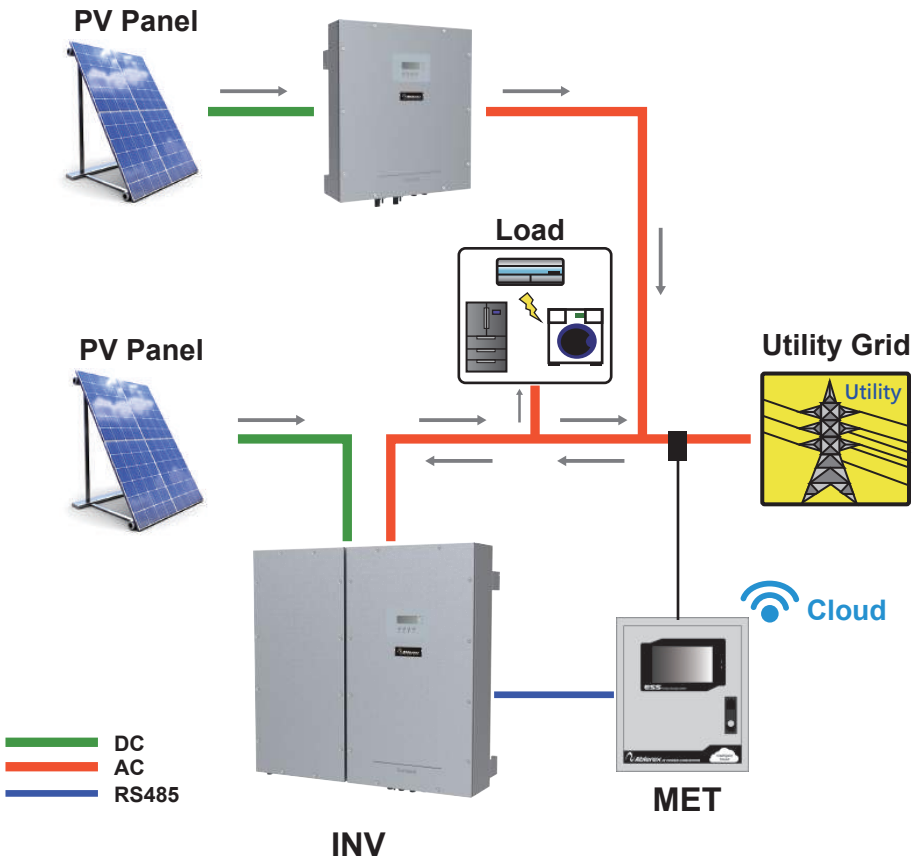
ESS System



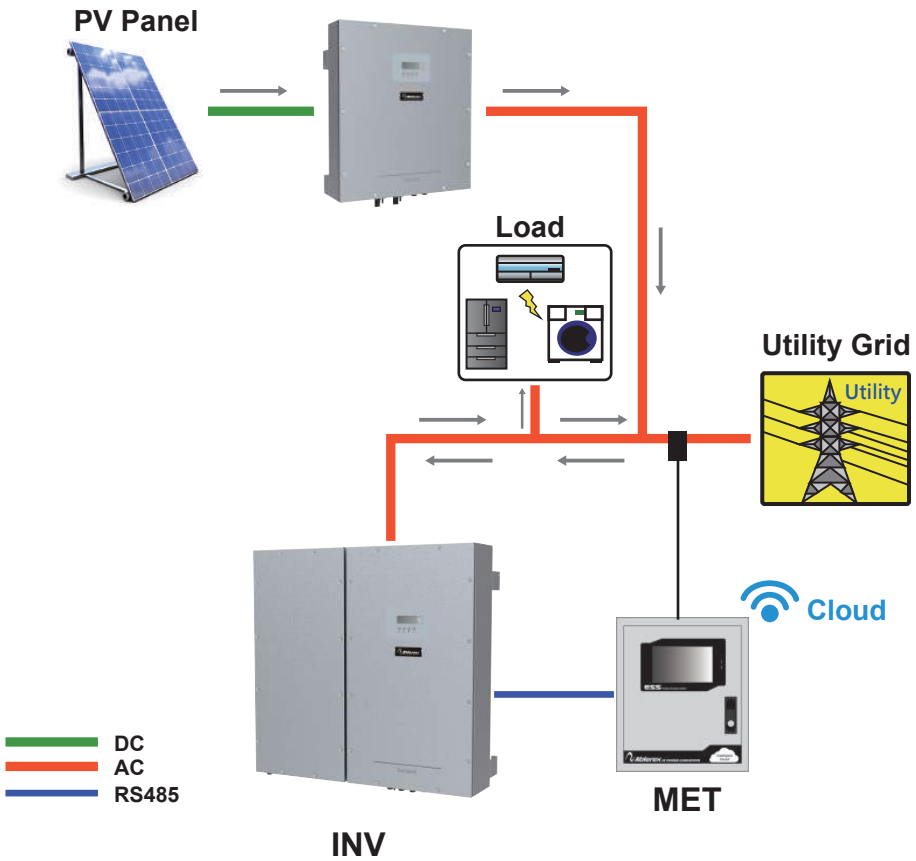
[Self-Consumption of Solar PV Power]



[Energy utilization without Solar PV Power]



[Integration with new and existing On Grid PV System]



[Integration with existing On Grid PV System]

Energy Storage System

ENERGY STORAGE SYSTEM	ESS-3300	ESS-4000	ESS-5000
System components	ESS-INV-3	ESS-INV-4	ESS-INV-5
	ESS-BAT		
	ESS-MET		
Model	ESS-INV-3	ESS-INV-4	ESS-INV-5
DC INPUT DATA			
Nominal DC input power	3300 W	4000 W	5000 W
Nominal DC Voltage	370 Vdc		
Maximum DC input Voltage	500 Vdc		
Max DC input current Per MPPT	15.8 A x 1	10.5 A x 2	13.2 A x 2
MPPT Range	120 - 450Vdc		
MPPT Trackers	1	2	
AC OUTPUT DATA			
Nominal AC output power	3000 W	3680 W	4600 W
Nominal AC output voltage 、 Frequency 、 Voltage range	230Vac 50/60Hz 184~264Vac		
Nominal AC output current	13A	16A	20A
Maximum AC output current	14.34A	17.39A	21.7A
Current Distortion	Total Harmonic current: <3%		
BATTERY			
Max. charger power	2500 W		
Max. discharger power	2500 W		
EFFICIENCY DATA			
Maximum Efficiency of the whole system(PV-Grid)	97.2%		
EU efficiency(PV-Grid)	96.5%		
Maximum Efficiency of the wholesystem(Battery-Grid)	94.3%		
ENVIRONMENTAL DATA			
Operating ambient temperature	-25°C ~ +50°C		
Relative Humidity	0 ~100% non-condensing		
Altitude	0~2000M 0~6600ft		
MECHANICAL			
Size (height x width x depth)	766*433*240mm		
Weight	30kg		
Cooling	Natural		
Enclosure type	IP65		
Audible Noise	<25dBA		
Mounting	Wall Mount (mounting bracket included)		
COMMUNICATION/FRONT PANEL			
Comm. Interface	RS485		
Display	Graphic LCD+LED panel(4.5")		
CERTIFICATION			
Grid standard	VDE-AR-N 4105, AS 4777.2:2015		
Safety	EN 62109-1,EN 62109-2, IEC 60529		
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		

MODEL	ESS-BAT
BATTERY Module	
Manufacturer	Panasonic/Samsung
Battery Type	Li-ion
Size (height x width x depth)	766*356*240 mm
Weight	60kg
Enclosure type	IP65
BATTERY CHARGER SPECS	
Max. charge Power	2500 W
Nominal Battery Voltage	51.2 Vdc
Maximum Battery Voltage	53.5 Vdc
Minimum Battery Amp Hours	40 Amp-hours/module
Max Battery Charging Current	55 Amps
Capacity	6kWh(3 modules) or 12kWh(6 modules)
Cycle Life	2000 (80% DoD/0.2C)
Battery Charge Stages	CC,CV
Operating Temperature	-25°C ~+50°C
BATTERY DISCHARGER SPECS	
Max. Discharge Power	2500 W
Max Battery discharging Current	55 Amps
Discharge End Voltage	45.5 V
Operating Temperature	-25°C ~ +50°C
MODEL	ESS-MET
Measures	P/Q/A/V/F
AC phases	1φ2W / 1φ3W / 3φ3W / 3φ4W
Rated grid voltage/ voltage range	230 V/ 184...265 V
Rated grid frequency/ frequency range	50-60 Hz/ 45....65Hz
Power supply and consumption	Integrated, <5W
Size (height x width x depth)	403*343*106mm
Weight	7kg
Enclosure type	IP20
Safety and EMC	IEC 61010-1, IEC 61326-1
Operating ambient temperature	0°C to +40°C
Storage ambient temperature	-20°C to +70°C
Relative Humidity	0 ~ 95 % non-condensing
Display size	7 inch
Display resolution	800x480
Display touch	Resistive Touch Screen
Display operating system	WinCE 6.0
Communication interface	RS485-1, RS485-2, Ethernet 10/100(RJ45)
torage	8G SD card (Up to 32G)

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Energy Storage System

Energy Self-Consumption

- Daytime: Stored energy generated by Solar Panel.
- Nighttime: Discharge stored energy for home use.

Peak Hours Shaving

- Reducing electricity consumption by using stored energy during electricity peak rate hours.

On-Grid Application

- Integration with existing On-Grid PV System.
- Use with or without PV Panel.

Ease of Use

- All-in-one Solution.
- (PV Inverter + Isolation DC/DC Converter + Lithium-ion Battery Pack)
- Wall Mount Installation Type

High Efficiency

- Peak efficiency 97.3% Bi-directional DC-DC converter for Battery Pack.

High Reliability

- 48Vdc Battery system with isolation safety.
- Maximized Reliability through Lithium-ion cells from Samsung or Panasonic.

Communication

- Smart Metering (MET) to control and monitor battery storage and load demand.
- Cloud integration enables data access via the internet.

Backup Power

- Supply backup power to emergency load in the event of grid failure.