

**ESS  
BROCHURE**

PROFESSIONAL  
ESS SOLUTION  
PROVIDER

# ESS BROCHURE



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### Hybrid Inverter

ATESS  
HPS5000TLS/7500TLS/  
10000TLS

ATESS  
HPS30/50/100/120/150

ATESS  
HPS7500TL/10000TL



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### Battery Inverter

ATESS  
PCS50/100/250/500/630



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### Battery Solutions

ATESS  
BC30/45/50/60/75/100

ATESS  
BR30/45/50/60/75/100/138/145



ATESS  
PCS250 Station

ATESS  
PCS250 Station

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### Accessories

ATESS  
PV-CB8M/PV-CB16M

ATESS  
ATS30/50/100/150



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### Solar Charge Controller

ATESS  
PBD250

ATESS  
PBD350



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### Bypass Cabinet

ATESS  
Bypass50/100/250/500



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### Monitoring

ATESS  
ShineMaster

ATESS  
EnerClo

ATESS  
EnerView



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### Projects



# Datasheet



**ATESS**  
**HPS5000TLS**  
**HPS7500TLS**  
**HPS10000TLS**

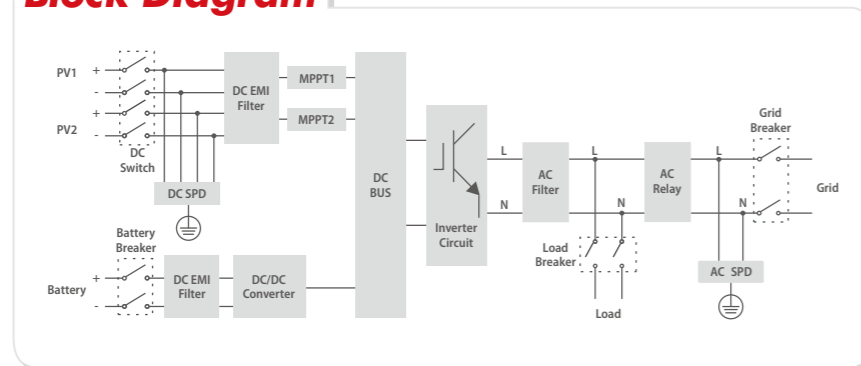
## Overview

5-10kW single phase all-in-one hybrid inverter for home, school or villa application

## Features

- All in one hybrid inverter
- Seamless on/off grid transfer
- Compact design
- Support remote control of DG
- Touchscreen LCD
- Programmable working mode

## Block Diagram



ATESS HPS5000TLS      ATESS HPS7500TLS      ATESS HPS10000TLS

### AC (Grid-connected)

Apparent power	6.25kVA	9.4kVA	12.5kVA
Rated power	5kW	7.5kW	10kW
Rated voltage	230V	230V	230V
Rated current	21.5A	32.6A	43.4A
Voltage range	210V - 250V	210V - 250V	210V - 250V
Rated frequency	50/60Hz	50/60Hz	50/60Hz
Frequency range	47~51.5/57~61.5Hz	47~51.5/57~61.5Hz	47~51.5/57~61.5Hz
THDI	<3%	<3%	<3%
PF	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading
AC connection	L/N/PE	L/N/PE	L/N/PE

### AC (Off-grid)

Apparent power	6.25kVA	9.4kVA	12.5kVA
Rated power	5kW	7.5kW	10kW
Rated voltage	230V	230V	230V
Rated current	21.5A	32.6A	43.4A
THDU	≤2%linear	≤2%linear	≤2%linear
Rated frequency	50/60Hz	50/60Hz	50/60Hz
Overload capability	110%-10 min 120%-1 min	110%-10 min 120%-1 min	110%-10 min 120%-1 min

### DC (Battery and PV)

Max PV Open-circuit voltage	600V	900V	900V
Recommended PV power	6kWp	9kWp	12kWp
PV MPPT voltage range	125V-550V	370V-720V	370V-720V
Number of MPPT	2	2	2
Recommended nominal battery voltage	300V	350V	400V
Battery voltage range	85-500V	280-700V	280-700V
Full load battery voltage range	250-500V	300-700V	350-700V
Max. charge/discharge power	5kW	7.5kW	10kW
Max. charge/discharge current	25A	25A	25A

### General Information

Protection devices	PV DC switch, battery breaker and fuse, PV fuse, grid breaker, load breaker		
Protection degree	IP65	IP65	IP65
Noise emission	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m
Operating temperature	-25 °C~+55 °C	-25 °C~+55 °C	-25 °C~+55 °C
Cooling	Forced-air	Forced-air	Forced-air
Relative humidity	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing
Maximum altitude	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)
Dimension (W/H/D)	600/700/250mm	600/700/250mm	600/700/250mm
Weight	50kg	50kg	50kg
Topology	Transformerless	Transformerless	Transformerless
Lighting protection	Type II	Type II	Type II
Transfer between on/off grid	Automatic≤20ms	Automatic≤20ms	Automatic≤20ms
Standby consumption	<20W	<20W	<20W

### Communication

Display	Touch screen	Touch screen	Touch screen
Communication	RS485/CAN	RS485/CAN	RS485/CAN

# Datasheet









**ATESS**  
HPS7500TL  
HPS10000TL

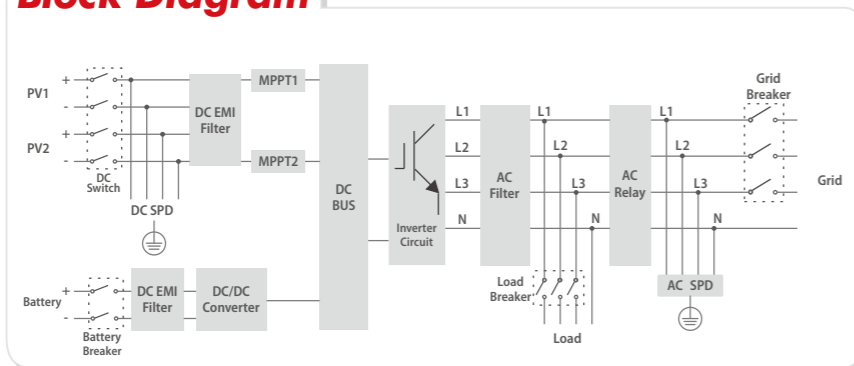
## Overview

Up to 10kW three phase all-in-one hybrid inverter for villa, school or small factory application

## Features

-  All in one hybrid inverter
-  Seamless on/off grid transfer
-  Compact design
-  Support remote control of DG
-  Touchscreen LCD
-  Programmable working mode

## Block Diagram



### ATESS HPS7500TL

### ATESS HPS10000TL

#### AC (Grid-connected)

Apparent power	9.4kVA	12.5kVA
Rated power	7.5kW	10kW
Rated voltage	400V	400V
Rated current	10.8A	14.4A
Voltage range	360V - 440V	360V - 440V
Rated frequency	50/60Hz	50/60Hz
Frequency range	47~51.5/57~61.5Hz	47~51.5/57~61.5Hz
THDI	<3%	<3%
PF	0.8lagging~0.8leading	0.8lagging~0.8leading
AC connection	3/N/PE	3/N/PE

#### AC(Off-grid)

Apparent power	9.4kVA	12.5kVA
Rated power	7.5kW	10kW
Rated voltage	400V	400V
Rated current	10.8A	14.4A
THDU	≤2%linear	≤2%linear
Rated frequency	50/60Hz	50/60Hz
Overload capability	110%-10 min 120%-1 min	110%-10 min 120%-1 min

#### DC (Battery and PV)

Max PV Open-circuit voltage	900V	900V
Recommended PV power	9kWp	12kWp
PV MPPT voltage range	370V-720V	370V-720V
Number of MPPT	2	2
Recommended nominal battery voltage	350V	400V
Battery voltage range	280-700V	280-700V
Full load battery voltage range	300-700V	350-700V
Max. charge/discharge power	7.5kW	10kW
Max. charge/discharge current	25A	25A

#### General Information

Protection devices	PV DC switch, battery breaker and fuse, PV fuse, grid breaker, load breaker	
Protection degree	IP65	IP65
Noise emission	<65dB(A)@1m	<65dB(A)@1m
Operating temperature	-25 °C~+55 °C	-25 °C~+55 °C
Cooling	Forced-air	Forced-air
Relative humidity	0-95% non-condensing	0-95% non-condensing
Maximum altitude	6000m (derate over 3000m)	6000m (derate over 3000m)
Dimension (W/H/D)	600/700/250mm	600/700/250mm
Weight	50kg	50kg
Topology	Transformerless	Transformerless
Lighting protection	Type II	Type II
Transfer between on/off grid	Automatic≤20ms	Automatic≤20ms
Standby consumption	<20W	<20W

#### Communication

Display	Touch screen	Touch screen
Communication	RS485/CAN	RS485/CAN

# Datasheet



**ATESS**  
HPS30/50  
HPS100/120/150

## Overview

Large capacity all-in-one hybrid inverter for commercial application, supporting up to 300kW system capacity

## Features



All in one hybrid inverter



Seamless on/off grid transfer



Programmable working mode



Support remote control of DG

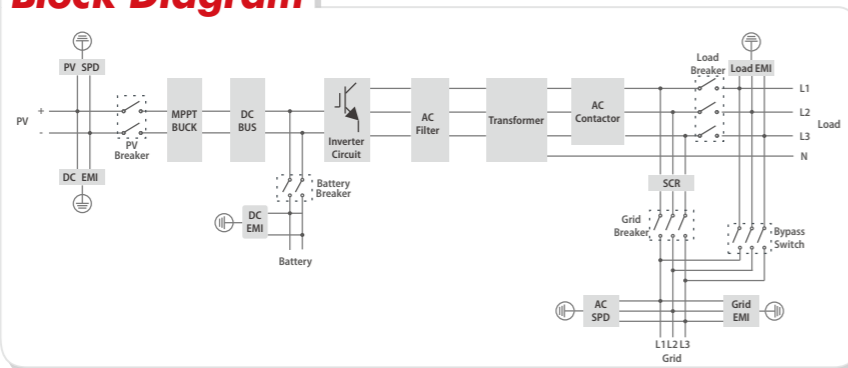


Touchscreen LCD



Doubled capacity by paralleling 2 units

## Block Diagram



	ATESS HPS30	ATESS HPS50	ATESS HPS100	ATESS HPS120	ATESS HPS150
<b>AC (Grid-connected)</b>					
Apparent power	33kVA	55kVA	110kVA	132kVA	165kVA
Rated power	30kW	50kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
Voltage range	360V - 440V	360V - 440V	360V - 440V	360V - 440V	360V - 440V
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Frequency range	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz
THDI	<3%	<3%	<3%	<3%	<3%
PF	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading
AC connection	3/N/PE	3/N/PE	3/N/PE	3/N/PE	3/N/PE
AC input	60kVA	100kVA	200kVA	240kVA	240kVA

<b>AC(Off-grid)</b>					
Apparent power	33kVA	55kVA	110kVA	132kVA	165kVA
Rated power	30kW	50kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
THDU	≤2%linear	≤2%linear	≤2%linear	≤2%linear	≤2%linear
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Overload capability	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min

<b>DC (Battery and PV)</b>					
Max PV open-circuit voltage	1000V DC	1000V DC	1000V DC	1000V DC	1000V DC
MAX PV power	45kWp	75kWp	150kWp	180kWp	225kWp
PV MPPT voltage range	480V-800V DC	480V-800V DC	480V-800V DC	480V-800V DC	480V-800V DC
Battery voltage range at Max.charge power	450V-600V	500V-600V	500V-600V	517V-600V	500V-600V
Battery voltage range	352-600V	352-600V	352-600V	352-600V	352-600V
Max.charge power	45kW	75kW	150kW	180kW	225kW
Max.discharge power	33kW	55kW	110kW	132kW	165kW
Max.charge current	100A	150A	300A	350A	450A
Max.discharge current	93A	156A	313A	374A	467A

<b>General Information</b>					
Protection degree	IP20	IP20	IP20	IP20	IP20
Noise emission	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m
Operating temperature	-25 °C~+55 °C	-25 °C~+55 °C	-25 °C~+55 °C	-25 °C~+55 °C	-25 °C~+55 °C
Cooling	Forced-air	Forced-air	Forced-air	Forced-air	Forced-air
Relative humidity	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing
Maximum altitude	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)	6000m (derate over 3000m)
Dimension (W/H/D)	950/1860/750mm	950/1860/750mm	1200/1900/800mm	1200/1900/800mm	1200/1900/800mm
Weight	505kg	610kg	948kg	1025kg	1230kg
Build-in transformer	Yes	Yes	Yes	Yes	Yes
Transfer between on/off grid	Automatic≤10ms	Automatic≤10ms	Automatic≤10ms	Automatic≤10ms	Automatic≤10ms
Standby consumption	<30W	<30W	<30W	<30W	<30W

<b>Communication</b>					
Display	Touch screen	Touch screen	Touch screen	Touch screen	Touch screen
Communication	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN

**Certificate** CE, MEA, PEA, EN 61000-6-4:2007+A1:2011, EN61000-6-2:2005, EN62109-1:2010, EN62109-2:2011

\* Battery voltage is determined by the following equation:  
 $V_{min} = 352 \times V_n / V1$ ,  $V_{max} = (V_{mpp} - 100) \times V_n / V2$ ,  $V_{max} < 600VDC$   
 $V1$  is battery cell discharge cut-off voltage,  $V2$  is battery cell boost charge voltage,  $V_n$  is battery cell nominal voltage.





**ATESS**  
**PCS50/100**  
**PCS250/500/630**

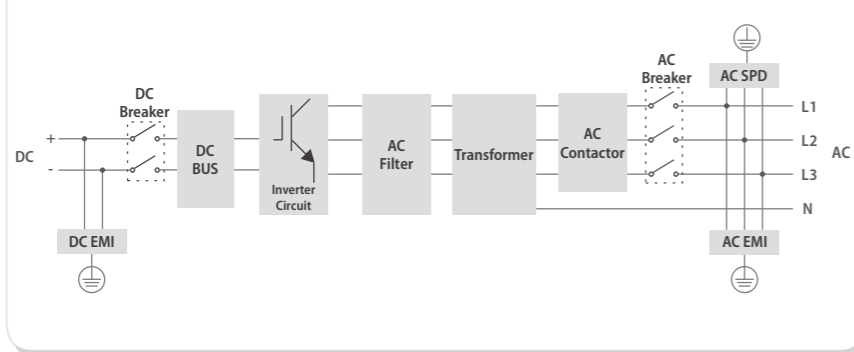
## Overview

Bidirectional battery inverter from 50kW to 630kW, can be used alone or with solar charger and other accessories for different application scenario

## Features

- Paralleling multiple units
- Flexible Configuration
- Programmable working mode
- Support remote control of DG
- Touchscreen LCD

## Block Diagram



# Datasheet

	ATESS PCS50	ATESS PCS100	ATESS PCS250	ATESS PCS500	ATESS PCS630
<b>AC (Grid-connected)</b>					
Apparent power	55kVA	110kVA	275kVA	550kVA	693kVA
Rated power	50kW	100kW	250kW	500kW	630kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	72A	144A	361A	722A	909A
Voltage range	360V - 440V	360V - 440V	360V - 440V	360V - 440V	360V - 440V
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Frequency range	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz
THDI	<3%	<3%	<3%	<3%	<3%
PF	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading
AC connection	3/N/PE	3/N/PE	3/N/PE	3/PE	3/PE

<b>AC(Off-grid)</b>					
Apparent power	55kVA	110kVA	275kVA	550kVA	693kVA
Rated power	50kW	100kW	250kW	500kW	630kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	72A	144A	361A	722A	909A
THDU	≤2% linear	≤2% linear	≤2% linear	≤2% linear	≤2% linear
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Max	110%-10min 120%-1min	110%-10min 120%-1min	110%-10min 120%-1min	110%-10min 120%-1min	110%-10min 120%-1min

<b>DC (Battery)</b>					
Rated power	50kW	100kW	250kW	500kW	630kW
Current regulation	±1%	±1%	±1%	±1%	±1%
Voltage regulation	±1%	±1%	±1%	±1%	±1%
Voltage ripple	<3%	<3%	<3%	<3%	<3%
Current ripple	<2%	<2%	<2%	<2%	<2%
Voltage range	500V-820V	500V-820V	500V-820V	600V-900V	600V-900V
Max. charge/discharge current	110A	220A	550A	917A	1155A

<b>General Information</b>					
Maximum efficiency	95.50%	97.10%	97.30%	98.50%	98.50%
Protection degree	IP20	IP20	IP20	IP20	IP20
Noise emission	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m	<65dB(A)@1m
Operating temperature	-25°C~+55°C	-25°C~+55°C	-25°C~+55°C	-25°C~+55°C	-25°C~+55°C
Cooling	Forced-air	Forced-air	Forced-air	Forced-air	Forced-air
Relative humidity	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing
Maximum altitude	6000m (derate above 3000m)	6000m (derate above 3000m)	6000m (derate above 3000m)	6000m (derate above 3000m)	6000m (derate above 3000m)
Dimension(W/H/D)	600/1630/800mm	1100/1890/850mm	1600/2080/850mm	1200/1900/800mm	1200/1900/800mm
Weight	450kg	820kg	1465kg	900kg	900kg
Build-in transformer	Yes	Yes	Yes	NO	NO
Transfer between on/off grid	Manual(default) Automatic(optional) ≤10ms	Manual(default) Automatic(optional) ≤10ms	Manual(default) Automatic(optional) ≤10ms	Manual(default) Automatic(optional) ≤10ms	Manual(default) Automatic(optional) ≤10ms

<b>Communication</b>					
Display	Touch screen	Touch screen	Touch screen	Touch screen	Touch screen
Communication	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN

**Certificate** CE, MEA, PEA, EN 61000-6-4:2007+A1:2011, EN61000-6-2:2005, EN62109-1:2010, EN62109-2:2011

# Datasheet



**ATESS**  
**PBD250**

## Overview

1000V level DC to DC solar charge controller, used together with ATESS PCS and bypass for large scale solar project

## Features



Multiple units parallelable



Up to 5 MPPT

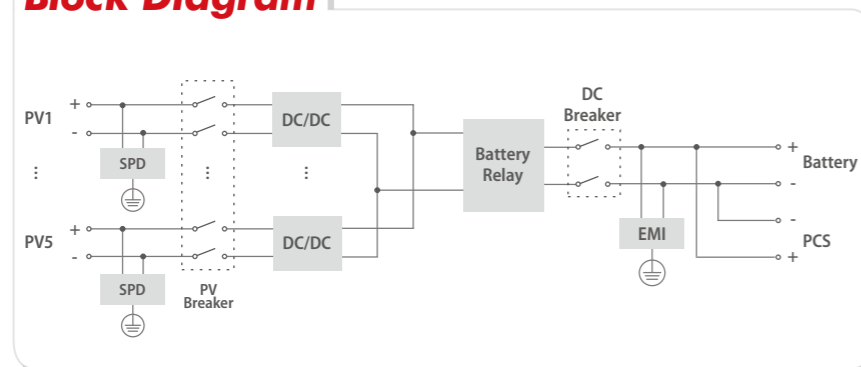


Modular design



Transformerless design

## Block Diagram



## ATESS PBD250

### Input (PV)

Recommended PV power	250kW
MPPT voltage range	350V-850V
Full load MPPT voltage range	480V-850V
Max input current	575A(115A*5)
Number of MPPT	5

### Output (Battery and PCS)

Output voltage	600V-900V
Max. charge power	250kW
Max. charge current	416A
Max. charge efficiency	99%

### Protection

Input & output OV/UV protection	Yes
Input & output OC protection	Yes
Short circuit protection	Yes
Over temperature protection	Yes
Lightning protection	Type II
DC breaker	Yes
Emergency stop	Yes

### General Information

Protection degree	IP20
Noise emission	<65dB(A)@1m
Operating temperature	-25°C~+55°C
Cooling	Forced-air
Relative humidity	0-95% non-condensing
Maximum altitude	6000m (derate above 3000m)
Dimension (W/H/D)	850/1900/700mm
Weight	600kg
Topology	Transformerless
Standby power	<100W

### Communication

Display	Touch screen
Communication	RS485/ CAN

# Datasheet



**ATESS**  
**PBD350**

## Overview

1400V level DC to DC solar charge controller, used together with ATESS PCS and bypass for large scale solar project

## Features



Multiple units parallelable



Up to 2 MPPT

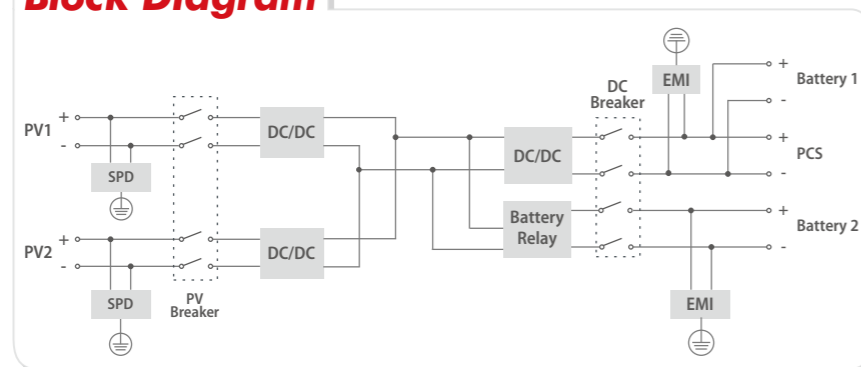


Modular design



Transformerless design

## Block Diagram



## ATESS PBD350

### Input (PV)

Recommended PV power	350kW
MPPT voltage range	800V-1100V
Max input current	480A(240A*2)
Number of MPPT	2

### Output (Battery and PCS)

Battery voltage	500-900V
Output voltage ( to PCS)	450-900V
Max. charge power	350kW
Max. charge current	700A
Max. charge efficiency	98%
Max. discharge efficiency	98%

### Protection

Input & output OV/UV protection	Yes
Input & output OC protection	Yes
Short circuit protection	Yes
Over temperature protection	Yes
Lightning protection	Type II
DC breaker	Yes
Emergency stop	Yes

### General Information

Protection degree	IP20
Noise emission	<65dB(A)@1m
Operating temperature	-25°C~+55°C
Cooling	Forced-air
Relative humidity	0-95% non-condensing
Maximum altitude	6000m (derate above 3000m)
Dimension (W/H/D)	1200/1905/850mm
Weight	650kg
Topology	Transformerless
Standby power	<100W

### Communication

Display	Touch screen
Communication	RS485/ CAN



# Datasheet



**ATESS**  
Bypass50/100  
Bypass250/500

## Overview

ATESS bypass cabinet is designed to be used together with bidirectional battery inverter realize seamless transfer between on and off grid mode automatically

## Features



Zero-export inbuild



Seamless on/off grid transfer

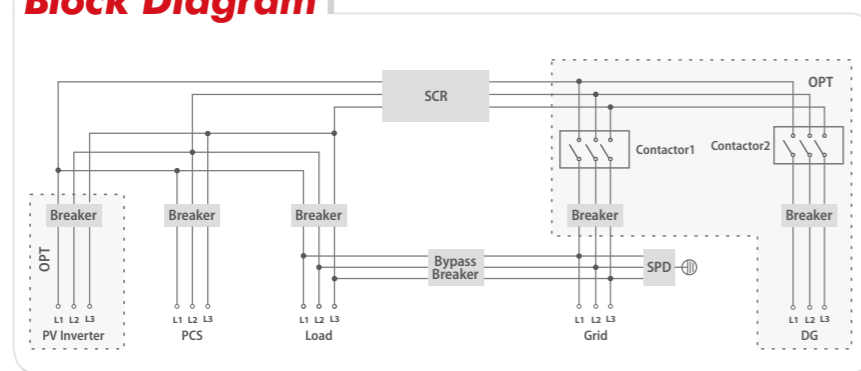


Flexible Management



DG connection supported

## Block Diagram



### ATESS Bypass50

### ATESS Bypass100

### ATESS Bypass250

### ATESS Bypass500

	ATESS Bypass50	ATESS Bypass100	ATESS Bypass250	ATESS Bypass500
Rated voltage	400V	400V	400V	400V
Rated current	73A	144A	360A	722A
Rated frequency	50Hz	50Hz	50Hz	50Hz
Rated power	50KVA	100KVA	250KVA	500KVA
Max current	90A	175A	435A	866A
Transfer between on/off grid	Automatic≤10ms	Automatic≤10ms	Automatic≤10ms	Automatic≤10ms
Zero export function	Opt	Opt	Opt	Opt
PV inverter breaker	Opt	Opt	Opt	Opt
PCS breaker	160A	250A	630A	1250A
Grid breaker	160A	250A	630A	1250A
Load breaker	160A	250A	630A	1250A
Bypass breaker	160A	250A	630A	1250A
DG breaker	Opt	Opt	Opt	Opt
Load breaker	160A	250A	630A	1250A
Lightning protection	Type II	Type II	Type II	Type II
Protection degree	IP20	IP20	IP20	IP20
Relative humidity	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing
Operating temperature	-25 °C~+55 °C	-25 °C~+55 °C	-25 °C~+55 °C	-25 °C~+55 °C
Dimension (W/H/D)	700/1630/500mm	700/1630/500mm	750/1800/500mm	1600/1900/800 mm
Weight	105kg	115kg	165kg	610 kg
Communication	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN



**ATESS**

BC30/45/50/60  
BR30/45/50/60

## Overview

Outdoor battery cabinet with IP54 protection level, indoor battery rack with IP20 protection level, inbuild lithium-ion battery and BMS

## Features



### Easy installation and maintenance

Local and remote management, standard rack & module design, front maintenance



### Safety first

Self-developed 3-level BMS, complex protection, safe and reliable



### High density

LFP high-capacity Li-Ion battery with aluminum shell, over 130wh/kg



### Long lifespan

Long cycle life, 6000 cycles \*

Note: at specific test condition

# Datasheet

ATESS BC30   ATESS BR30   ATESS BC45   ATESS BR45   ATESS BC50   ATESS BR50   ATESS BC60   ATESS BR60

## Battery module specification

	ATESS BC30	ATESS BR30	ATESS BC45	ATESS BR45	ATESS BC50	ATESS BR50	ATESS BC60	ATESS BR60
Configuration	24S1P		24S1P		12S2P		24S1P	
Rated capacity	100Ah		100Ah		200Ah		100Ah	
Rated energy	7.68kWh		7.68kWh		7.68kWh		7.68kWh	
Rated voltage	76.8V		76.8V		38.4V		76.8V	
Voltage range	67.2-87.6V		67.2-87.6V		33.6-43.8V		67.2-87.6V	
Nominal charge/discharge	0.5C		0.5C		0.5C		0.5C	
Max charge/discharge	1C		1C		1C		1C	
AC internal resistance	≤15mΩ		≤15mΩ		≤10mΩ		≤15mΩ	
Dimension (W/H/D)mm	360/300/515		360/300/515		360/300/515		360/300/515	
Weight	≤65kg		≤65kg		≤65kg		≤65kg	

## Battery cabinet/rack specification

	ATESS BC30		ATESS BR30		ATESS BC45		ATESS BR45		ATESS BC50		ATESS BR50		ATESS BC60		ATESS BR60	
Configuration	4 battery modules +1 BPU		6 battery modules +1 BPU		7 battery modules +1 BPU		8 battery modules +1 BPU		4 battery modules +1 BPU		6 battery modules +1 BPU		7 battery modules +1 BPU		8 battery modules +1 BPU	
Rated capacity	100Ah		100Ah		200Ah		100Ah		100Ah		200Ah		100Ah		100Ah	
Rated energy	30.72kWh		46.08kWh		53.76kWh		61.44kWh		30.72kWh		46.08kWh		53.76kWh		61.44kWh	
Rated voltage	307.2V		460.8V		268.8V		614.4V		307.2V		460.8V		268.8V		614.4V	
Voltage range	268.8V-350.4V		403.2V-525.6V		235.2V-306.6V		537.6V-700.8V		268.8V-350.4V		403.2V-525.6V		235.2V-306.6V		537.6V-700.8V	
Nominal charge/discharge	0.5C		0.5C		0.5C		0.5C		0.5C		0.5C		0.5C		0.5C	
Max charge/discharge	1C		1C		1C		1C		1C		1C		1C		1C	
AC internal resistance	≤50mΩ		≤80mΩ		≤70mΩ		≤100mΩ		≤50mΩ		≤80mΩ		≤70mΩ		≤100mΩ	
Display	7" Touch screen		7" Touch screen		7" Touch screen		7" Touch screen		7" Touch screen		7" Touch screen		7" Touch screen		7" Touch screen	
BMS	Included		Included		Included		Included		Included		Included		Included		Included	
Communication	RS485/CAN		RS485/CAN		RS485/CAN		RS485/CAN		RS485/CAN		RS485/CAN		RS485/CAN		RS485/CAN	
Dimension (W/H/D)mm	600/2150/880	385/1888/586	950/1950/880	752/1548/586	950/1950/880	752/1548/586	950/2150/880	752/1888/586	600/2150/880	385/1888/586	950/1950/880	752/1548/586	950/2150/880	752/1888/586	600/2150/880	385/1888/586
Weight	≤400kg	≤360kg	≤650kg	≤500kg	≤730kg	≤580kg	≤850kg	≤650kg	≤400kg	≤360kg	≤650kg	≤500kg	≤730kg	≤580kg	≤850kg	≤650kg
Protection degree	IP54	IP20	IP54	IP20	IP54	IP20	IP54	IP20	IP54	IP20	IP54	IP20	IP54	IP20	IP54	IP20

## BMS parameters on LCD

	ATESS BC30	ATESS BR30	ATESS BC45	ATESS BR45	ATESS BC50	ATESS BR50	ATESS BC60	ATESS BR60
Cell voltage	Yes		Yes		Yes		Yes	
Cell high voltage	Yes		Yes		Yes		Yes	
Cell low voltage	Yes		Yes		Yes		Yes	
Cell temperature	Yes		Yes		Yes		Yes	
Charge and discharge current	Yes		Yes		Yes		Yes	
Total battery voltage	Yes		Yes		Yes		Yes	
Battery SOC	Yes		Yes		Yes		Yes	
Fault warning	Yes		Yes		Yes		Yes	

## Protection

	ATESS BC30	ATESS BR30	ATESS BC45	ATESS BR45	ATESS BC50	ATESS BR50	ATESS BC60	ATESS BR60
Short circuit protection	Yes		Yes		Yes		Yes	
Over current protection	Yes		Yes		Yes		Yes	
Over charge protection	Yes		Yes		Yes		Yes	
Over discharge protection	Yes		Yes		Yes		Yes	
Cell over voltage protection	Yes		Yes		Yes		Yes	
Cell under voltage protection	Yes		Yes		Yes		Yes	
Over temperature protection	Yes		Yes		Yes		Yes	

Certificate CE, UL, UN38.3, IEC62619, MSDS, ROHS



**ATESS**  
BC75/100  
BR75/100/138/145

## Overview

Outdoor battery cabinet with IP54 protection level, indoor battery rack with IP20 protection level, inbuild lithium-ion battery and BMS

## Features



### Easy installation and maintenance

Local and remote management, standard rack & module design, front maintenance



### Safety first

Self-developed 3-level BMS, complex protection, safe and reliable



### High density

LFP high-capacity Li-Ion battery with aluminum shell, over 130wh/kg



### Long lifespan

Long cycle life, 6000 cycles \*

Note: at specific test condition

# Datasheet

	ATESS BC75	ATESS BR75	ATESS BC100	ATESS BR100	ATESS BR138	ATESS BR145
<b>Battery module specification</b>						
Configuration	12S2P		12S2P		12S2P	12S2P
Rated capacity	200Ah		200Ah		200Ah	200Ah
Rated energy	7.68kWh		7.68kWh		7.68kWh	7.68kWh
Rated voltage	38.4V		38.4V		38.4V	38.4V
Voltage range	33.6-43.8V		33.6-43.8V		33.6-43.8V	33.6-43.8V
Nominal charge/discharge	0.5C		0.5C		0.5C	0.5C
Max charge/discharge	1C		1C		1C	1C
AC internal resistance	≤10mΩ		≤10mΩ		≤10mΩ	≤10mΩ
Dimension (W/H/D)mm	360/300/515		360/300/515		360/300/515	360/300/515
Weight	≤65kg		≤65kg		≤65kg	≤65kg

	10 battery modules +1 BPU	14 battery modules +1 BPU	18 battery modules +1 BPU	19 battery modules +1 BPU
<b>Battery cabinet/rack specification</b>				
Configuration	10 battery modules +1 BPU	14 battery modules +1 BPU	18 battery modules +1 BPU	19 battery modules +1 BPU
Rated capacity	200Ah	200Ah	200Ah	200Ah
Rated energy	76.8kWh	107.52kWh	138.24kWh	145.92kWh
Rated voltage	384V	537.6V	691.2V	729.6V
Voltage range	336V-438V	470.4V-613.2V	604.8V-766.8V	638.4V-832.2V
Nominal charge/discharge	0.5C	0.5C	0.5C	0.5C
Max charge/discharge	1C	1C	1C	1C
AC internal resistance	≤100mΩ	≤140mΩ	≤180mΩ	≤190mΩ
Display	7" Touch screen	7" Touch screen	7" Touch screen	7" Touch screen
BMS	Included	Included	Included	Included
Communication	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN
Dimension (W/H/D)mm	1310/2150/850	1119/1548/586	1310/2150/950	1119/1888/586
Weight	≤1060kg	≤780kg	≤1340kg	≤1050kg
Protection degree	IP54	IP20	IP54	IP20
			1486/1888/586	1486/1888/586
			≤1710kg	≤1775kg
			IP20	IP20

	10 battery modules +1 BPU	14 battery modules +1 BPU	18 battery modules +1 BPU	19 battery modules +1 BPU
<b>BMS parameters on LCD</b>				
Cell voltage	Yes	Yes	Yes	Yes
Cell high voltage	Yes	Yes	Yes	Yes
Cell low voltage	Yes	Yes	Yes	Yes
Cell temperature	Yes	Yes	Yes	Yes
Charge and discharge current	Yes	Yes	Yes	Yes
Total battery voltage	Yes	Yes	Yes	Yes
Battery SOC	Yes	Yes	Yes	Yes
Fault warning	Yes	Yes	Yes	Yes

	10 battery modules +1 BPU	14 battery modules +1 BPU	18 battery modules +1 BPU	19 battery modules +1 BPU
<b>Protection</b>				
Short circuit protection	Yes	Yes	Yes	Yes
Over current protection	Yes	Yes	Yes	Yes
Over charge protection	Yes	Yes	Yes	Yes
Over discharge protection	Yes	Yes	Yes	Yes
Cell over voltage protection	Yes	Yes	Yes	Yes
Cell under voltage protection	Yes	Yes	Yes	Yes
Over temperature protection	Yes	Yes	Yes	Yes

Certificate CE, UL, UN38.3, IEC62619, MSDS, ROHS



**ATESS**

## PCS250 Station



### Overview

Outdoor containerized solution with IP54 protection level to handle harsh environment condition, inbuilt with battery, inverter, solar charge controller and bypass cabinet, total turn-key solution

### Features



Cost effective



plug and play

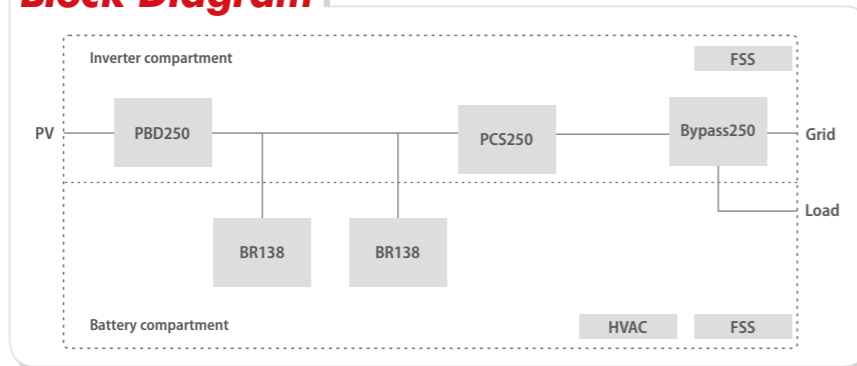


Highly integrated



Easy installation and maintenance

### Block Diagram



# Datasheet

## ATESS PCS250 Station

### AC

Apparent power	275kVA
Rated power	250kW
Rated voltage	400V
Rated current	361A
Grid voltage range	310V-450V
Rated frequency	50/60Hz
Frequency range	45-55/55-65Hz
Isolation method	Transformer
Overload capability	110%-10min 120%-1min
AC connection	3/N/PE

### DC(Battery)

Cell type	3.2V/100Ah
Configuration of battery module	12S2P
Configuration of battery bank	18S2P
Battery capacity	276kWh
Rated voltage	691.2V
Battery voltage range	604.8V-766.8V
Rated current	417A
Nominal charge/discharge	0.5C
Max charge/discharge	1C
Communication	CAN

### DC(PV)

Max PV open circuit voltage	1000VDC
Recommended PV power	250kWp
MPPT voltage range	350V-850V
Full load MPPT voltage range	480V-850V
Max input current	575A(115A*5)
Number of MPPT	5

### General Information

Configuration	PCS250+PBD250+BP250+BR138*2
Dimension(W/H/D)	6058/2591/2438mm
Weight	10000kg
Operating temperature	-25°C~+55°C
Relative humidity	0-95% non-condensing
Protection degree	IP54
Maximum altitude	6000m(derate over 3000m)
Standby consumption	<100W
Lighting system	LED Lighting
Fire fighting system	Industrial grade
Cooling of battery chamber	HVAC
Cooling of PCS chamber	Forced-air
Transfer between on/off grid	Automatic≤10ms

# Datasheet



**ATESS**  
ATS30/50  
ATS100/150

## Overview

ATS is an accessory of HPS, when both the grid and the DG need to access HPS, ATS will be used to switch between grid and DG automatically

## Features



HPS compatible



Seamless grid and DG transfer

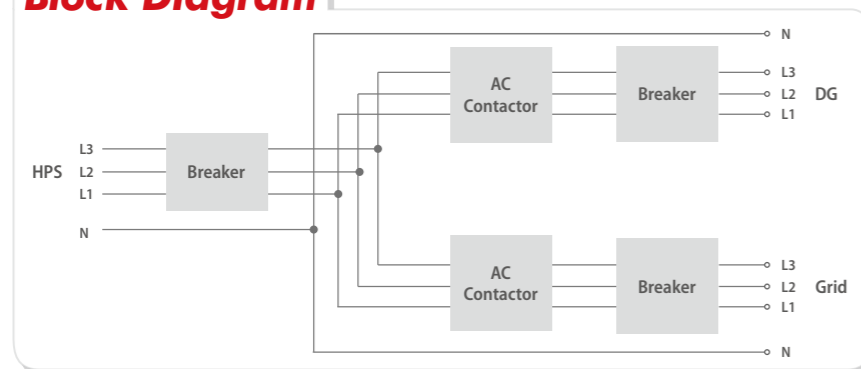


Flexible Management



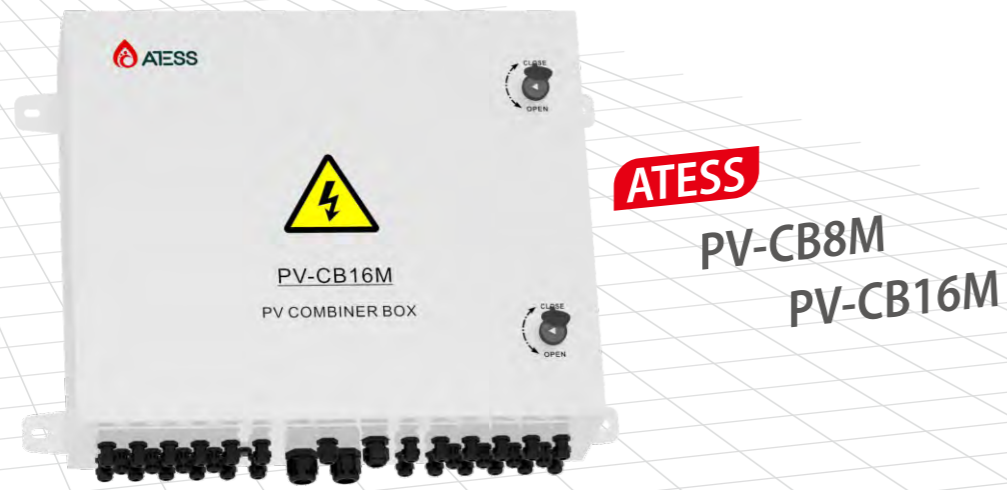
DG connection supported

## Block Diagram



	ATS30	ATS50	ATS100	ATS150
Rated voltage	400V	400V	400V	400V
Rated current	86A	144A	288A	346A
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Rated power	60kWA	100kWA	200kWA	240kWA
Zero export function	Opt	Opt	Opt	Opt
Output breaker	100A	250A	400A	400A
Grid breaker	100A	250A	400A	400A
DG breaker	100A	250A	400A	400A
Lightning protection	Type II	Type II	Type II	Type II
Protection degree	IP20	IP20	IP20	IP20
Relative humidity	0~95% non-condensing	0~95% non-condensing	0~95% non-condensing	0~95% non-condensing
Operating temperature	-25°C~+55°C	-25°C~+55°C	-25°C~+55°C	-25°C~+55°C
Dimension (W/H/D)	600/1500/450mm	600/1500/450mm	700/1650/500mm	700/1650/500mm
Weight	75kg	77kg	125kg	125kg
Communication	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN







# Datasheet



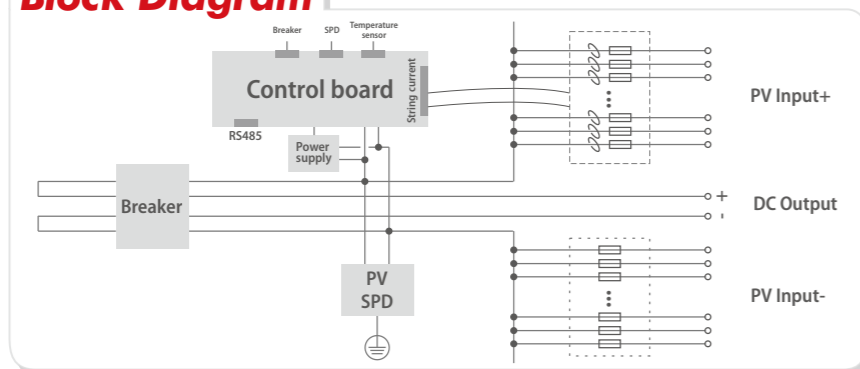
## Overview

ATESS PV combiner box is an accessory for multiple PV strings connection, it is with smart controller inbuilt for monitoring, along with comprehensive protections including fuse and SPD

## Features

-  **Lightning protection**
-  **Optional string monitoring function**
-  **IP65 environment compatibility**
-  **Flexible design, 8, 16 inputs optional**
-  **RS485 communication interface**
-  **Input fuse for over current protection**

## Block Diagram



### ATESS PV-CB8M

### ATESS PV-CB16M

#### Input DC

Max input voltage	1000V	1000V
Max string Isc	10A	10A
Number of input string	8	16
Input fuse	1 on negative and positive pole of each string, 15A, 10*38mm	
Input cable gland	4mm - 8mm cable diameter	4mm - 8mm cable diameter
Input cable terminal	4mm <sup>2</sup> - 6mm <sup>2</sup>	4mm <sup>2</sup> - 6mm <sup>2</sup>

#### Output DC

Number of output	1	1
Max output current	160A	160A
Output breaker	200A	200A
Output cable terminal	50mm <sup>2</sup>	50mm <sup>2</sup>
Output cable gland	13mm-18mm cable diameter	13mm-18mm cable diameter

#### General Information

Dimension (W/H/D)	700/640/192mm	700/640/192mm
Weight	25kg	25kg
Enclosure material	Galvanized steel	Galvanized steel
Degree of protection	IP65	IP65
Operating temperature	-25°C~55°C	-25°C~55°C
Humidity	0~99%	0~99%
Altitude	2000m without derating	2000m without derating
Lightning protection	Type II	Type II
Cooling	Natural convection	Natural convection
Mounting	Wall-mount	Wall-mount
Monitoring	String current, string voltage, breaker status, surge arrestor status, internal temperature	
Power supply	DC300V~1000V	DC300V~1000V
Power consumption	14W	14W
Communication	RS485	RS485



# Datasheet

## ATESS ShineMaster

### Hardware Parameters

Power adapter	Input: 100-240V, 50/60Hz AC Output 5V(+/-15%), 1A DC
Power consumption	2.5W

### Application Parameters

Max. communication range	500m
Communication with inverters	RS485
Communication with server	TCP(Modbus TCP protocol)
Support network	WLAN
Data transfer interval	5 Minutes
Default server URL	ess-server.atesspower.com

### General Information

Dimensions(W/H/D)	130/84/25mm
Weight	180g
Language	English
Mounting options	Wall-mounted
Operating temperature	-30°C~+60°C
Degree of protection	IP30
Warranty	1 year
Certificate	CE



**ATESS**  
ShineMaster

## Overview

Datalogger for overall system monitoring, collect operation data from different units via Modbus RS485 and communicate with ATESS Server via internet

## Features



Up to 32 inverters connection



Multi-function and high performance

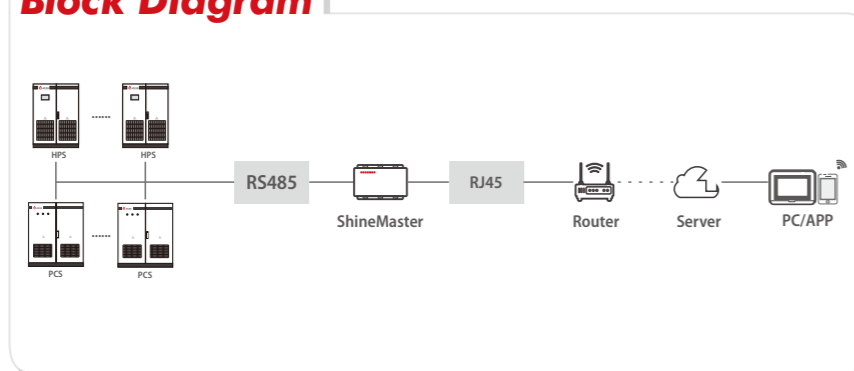


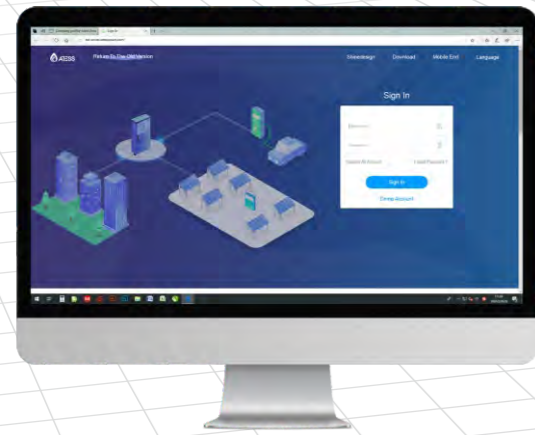
Inbuilt storage card



Local webservice for easy configuration

## Block Diagram





**ATESS**  
EnerClo

## Overview

ATESS monitoring cloud platform for different applications including residential, commercial and utility grade on and off grid solar storage systems

## Features



Quick and easy overview



Real-time monitoring



Professional analysis



Detail report downloadable



PC and mobile phone accessible



Online control and maintenance

# Datasheet

## ATESS EnerClo

### Languages

Available languages

Chinese, English, French, Greek, German, Netherlands, Italian, Japanese, Polish, Portuguese, Spanish, Turkish, Vietnamese, Korean

### System Requirements

Supported operating systems

All

Recommended browsers

Internet explore as of version 8, firefox as of version 5, Google chrome as of version 14, safari as of version 5, opera as of version 11

Supported data logger

ATESS ShineMaster

### Access

Website

ess-server.atesspower.com

### Plant Information

Plant overview

Quick yield overview of all your PV plants

Specified plant

All important data at a glance including energy output, yield gains, environment status

Plant installation data

Summary of all plant information which contains installation data, location data and other key devices

Device overview

Display of all important data about data logger, environment monitor or other key devices

Time periods

5 mins

### Plant Management

Account

User could manage all PV plants with one same account

### Monitoring

Inverter status

All Inverter running status are recorded automatically, the warning of fault is highlighted and immediate

### Status Reporting

Event reports

Timely e-mail reports on system fault and plant error

### Background Operating

Plant management

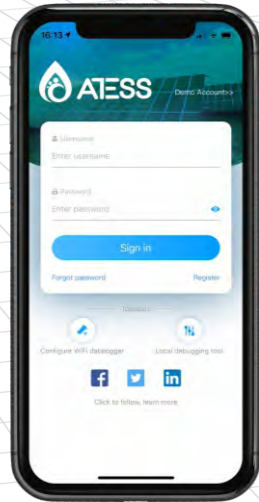
Add new plant, edit and delete existed plant

Device management

Intuitive operation to manage all devices

Inverter setting

Simple parameters setting for inverters including power management



**ATESS**  
EnerView

## Overview

Mobile phone app available on both IOS and Android to access ATESS EnerView for online monitoring and maintenance

## Features



Quick and easy overview



Real-time monitoring



Professional analysis



Detail report downloadable



PC and mobile phone accessible



Online control and maintenance

# Datasheet

## ATESS EnerView

### General Data

Available languages	English, Chinese
Supported operating systems	Android/iOS
Recommended browsers	All
Source of data	ess-server.atesspower.com
Supported data logger	ATESS ShineMaster

### Plant Information

Plant overview	Quick yield overview of all your pv plants
Specified plant	All important data at a glance including energy output, yield gains, environment status
Device overview	Display of all important data about data logger, inverter, environment monitor, smart meter and other key devices
Plant event log	Display of all the warning events of the plant

### Device Information

Inverter status	All inverter running status are recorded automatically, the warning of fault is highlighted and immediate
Event reports	Timely e-mail reports on system fault and plant error
Plant management	Add new plant, edit and delete existed
Device management	Intuitive operation to manage all devices
Inverter setting	simple parameters setting for inverters including power management



# Projects



## Okayama Power Plant

Location Japan  
 Capacity 1MW/3.4MWh  
 Inverter Model ATESS PCS500  
 Date of Operation 2020/3



## Indonesia Bintan Island Storage System

Location Indonesia  
 Capacity 500kW/500kWh  
 Inverter Model ATESS PCS500  
 Date of Operation 2016/7



## Xinjiang Military Storage System

Location Xinjiang  
 Capacity 100kW/200kWh  
 Inverter Model ATESS PCS100  
 Date of Operation 2015/6



## ACME India Factory Storage System

Location India  
 Capacity 500kW/270kWh  
 Inverter Model ATESS PCS500  
 Date of Operation 2017/1



## Songkla University Project

Location Thailand  
 Capacity 200kW/1612.8kWh  
 Inverter Model ATESS HPS100/ATESS HPS50  
 Date of Operation 2019/11



## Renjiang Storage System

Location Xinjiang  
 Capacity 100kW/200kWh  
 Inverter Model ATESS PCS100  
 Date of Operation 2016/7



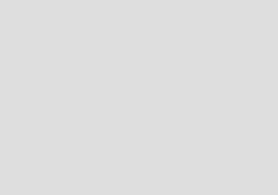
## Nari Wanjiangkeng Storage System

Location Shenzhen  
 Capacity 100kW/200kWh  
 Inverter Model ATESS PCS100  
 Date of Operation 2016/1



## Royal Thai Airforce Storage Project

Location Thailand  
 Capacity 1.9MW/2.7MWh  
 Inverter Model ATESS PCS100/ATESS CP100  
 Date of Operation 2016/4



## Sierra Leone Mine Project

Location Sierra Leone  
 Capacity 50kW/105kWh  
 Inverter Model ATESS HPS100  
 Date of Operation 2019/9



## CNBM Yingjisha Off-grid System

Location Xinjiang  
 Capacity 1MW/1MWh  
 Inverter Model ATESS PCS500  
 Date of Operation 2014/12



## Nari Rongchao Building Storage System

Location Shenzhen  
 Capacity 500kW/500kWh  
 Inverter Model ATESS PCS500  
 Date of Operation 2015/1



## Sierra Leone Mine Project

Location Sierra Leone  
 Capacity 50kW/105kWh  
 Inverter Model ATESS HPS100  
 Date of Operation 2019/9



## Putian Car Park Micro-grid

Location Shenzhen  
 Capacity 100kW/200kWh  
 Inverter Model ATESS PCS100  
 Date of Operation 2015/5



## Brazil Factory Storage System

Location Brazil  
 Capacity 250kW/500kWh  
 Inverter Model ATESS PCS250/ATESS Bypass250  
 Date of Operation 2019/6



## Zambia Resort Project

Location Zambia  
 Capacity 500kW/828kWh  
 Inverter Model ATESS PCS500  
 Date of Operation 2018/11



## South Africa Factory Storage System

Location South Africa  
 Capacity 100kW/200kWh  
 Inverter Model ATESS PCS100  
 Date of Operation 2015/11



## Argentina Solar Hybrid Plant

Location Argentina  
 Capacity 100kW/200kWh  
 Inverter Model ATESS HPS100  
 Date of Operation 2016/12



## Mombasa Port Project

Location Kenya  
 Capacity 500kW/730kWh  
 Inverter Model ATESS HPS150  
 Date of Operation 2020/3



## Enviroearth Hybrid Plant

Location Sierra Leone  
 Capacity 120kW/300kWh  
 Inverter Model ATESS HPS120  
 Date of Operation 2016/7



## Central America Factory Storage System

Location Jamaica  
 Capacity 100kW/200kWh  
 Inverter Model ATESS PCS100  
 Date of Operation 2016/8