

RS-CPORT-XXK

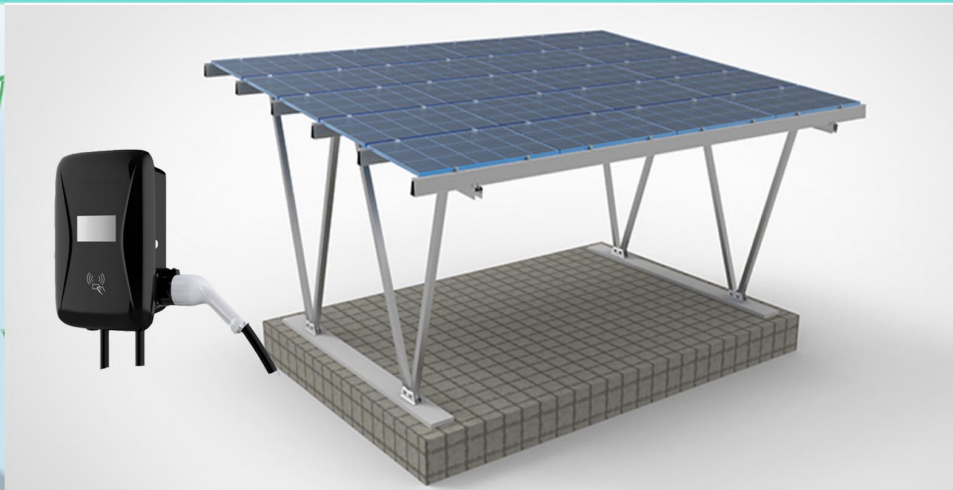
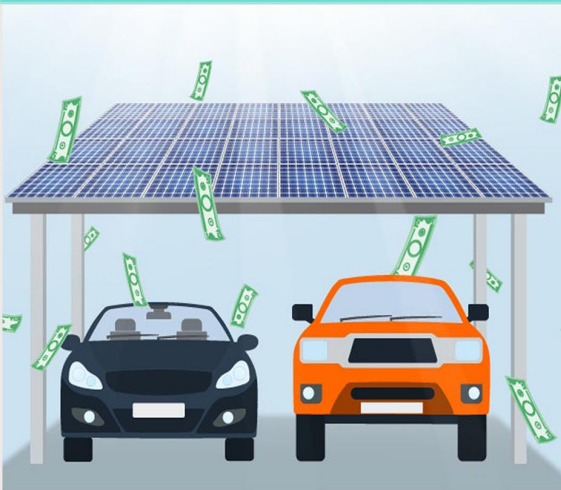


RAYSOL

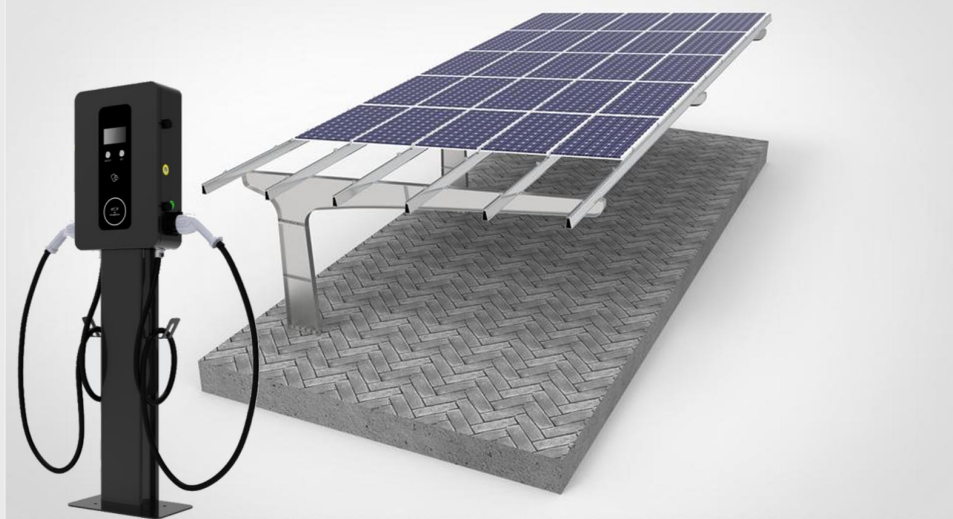
YOUR SOLAR SOLUTION PARTNER

CUSTOMIZED  
FLEXIBLE  
SUSTAINABLE

# RESIDENTIAL & COMMERCIAL SOLAR CARPORT ON-GRID/OFF-GRID/HYBRID



**SOLAR CARPORT** is an integration of ground mounting solar system and carport, shading the cars while making the money, can be configured for **on-grid system /off-grid storage/hybrid storage**, especially friendly for **EV charging...**



**RAYSOL NEW ENERGY CO.,LTD**

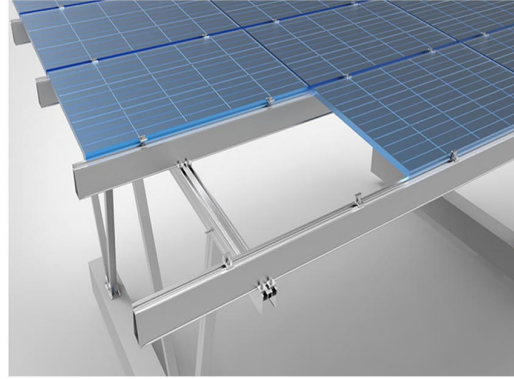
Building No. 4, 851 Zhongxing South Rd, Shaoxing 3120000, China.

Tel: (+86)575-89106177

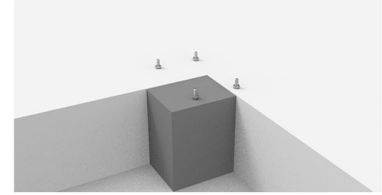
(+86)18358514915 (whatsapp)

www.raysolenergy.com

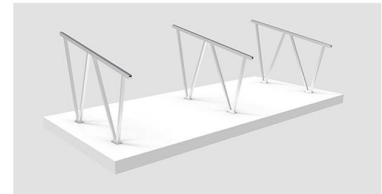
info@raysolenergy.com



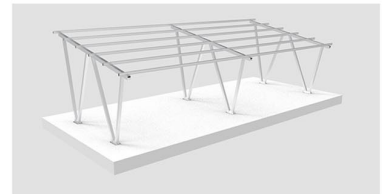
### Installation Steps



① Pre-buried foundation



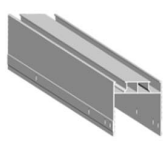
② Pre-assembled bracket mounting



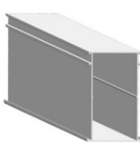
③ Ground Rail mounting



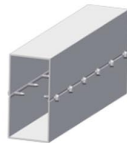
④ Install the solar and fix it with clamps



Supporting Beam



Rail



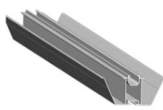
Rail splice



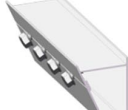
Big foot seat



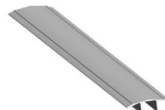
Small foot seat



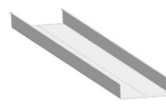
Water guide rail



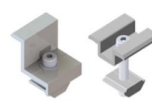
Water guide rail splice



Cover plate



Water guide gutter



End/inter clamp

### FEATURES

- Water-proof design / Light weight with high intensity
- high corrosion resistance & salt mist tolerance.
- Strictly machnical tested wind & snow.
- Pre-assembly packing for quick & easy installation.
- Suitable for variety of geological conditions.

### PARAMETERS

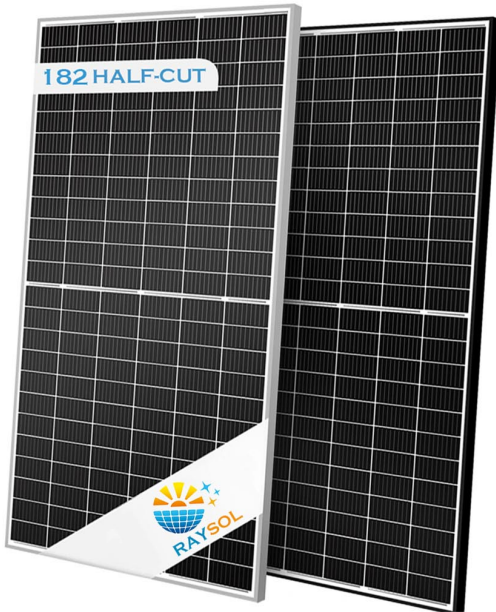
Material	Structure: Al6005-T5(Anodized) Components: SUS304 & Al6005-T5(Anodized)
Standard	AS/NZS 1170, DIN 1055, JIS C8955: 2017
Wind Load	216 KM/H =60 M/S
Snow Load	1.4 KN/M <sup>2</sup>
Applicable Module	Framed or Frameless
Module Orientation	Portrait or Landscape
Surface Treatment	Anodized
Certificate	ISO9001, CE
Installation Site	Ground
Foundation	Concrete Blocks or Ground Screw
Dimensions	Customized
Warranty	10 Years Warranty
Lifespan	25 Years

### OPTIONS

- \* Hot-dip Galvanized Steel materials avilible upon demand.



# SOLAR CARPORT SYSTEM SOLAR PANEL



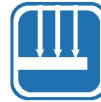
## Superior quality control

Full automatic production line  
100% three times EL and appearance inspection



## Excellent power generation performance

0~+5W positive power tolerance  
Improved low light irradiance performance and low degradation



## Stable mechanical performance

Passed rigorous hail test  
Withstands 5400Pa snow and 2400Pa wind loads



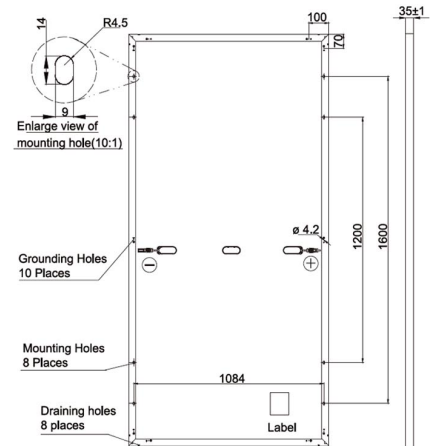
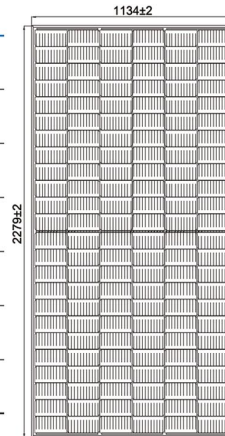
## Long weather resistance

Excellent anti-PID performance  
Certified in fireproofing for safety



## MECHANICAL PARAMETERS

Cell (mm)	182*91 Mono
Dimensions (L*W*H) (mm)	2279*1134*35
Weight (kg)	28.6
Cable Cross Section Size (mm <sup>2</sup> )	4
Cable Length (mm)	1300 / 1300
No. of Cells & Connections	144(6*24)
No. of Diodes	3



## ELECTRICAL PARAMETERS

	DSM144-530	DSM144-535	DSM144-540	DSM144-545	DSM144-550	
<b>STC</b> AM1.5, 1000W/m <sup>2</sup> Cell Temperature 25°C	Max. Power at STC (P <sub>mp</sub> /W)	530	535	540	545	550
	Output Tolerance (W)	0-+5	0-+5	0-+5	0-+5	0-+5
	Max. Power Voltage (V <sub>mp</sub> /V)	41.31	41.47	41.64	41.80	41.96
	Max. Power Current (I <sub>mp</sub> /A)	12.83	12.90	12.97	13.04	13.11
	Open Circuit Voltage (V <sub>oc</sub> /V)	49.30	49.45	49.60	49.75	49.90
	Short Circuit Current (I <sub>sc</sub> /A)	13.72	13.79	13.86	13.93	14.00
	Module Efficiency (%)	20.5	20.7	20.9	21.1	21.3
<b>NOCT</b> AM1.5, 800W/m <sup>2</sup> , Ambient Temperature 20°C, Wind Speed 1m/s	Max. Power at NOCT (P <sub>mp</sub> /W)	401	405	408	412	416
	Max. Power Voltage (V <sub>mp</sub> /V)	38.57	38.78	38.99	39.20	39.43
	Max. Power Current (I <sub>mp</sub> /A)	10.39	10.43	10.47	10.51	10.55
	Open Circuit Voltage (V <sub>oc</sub> /V)	46.18	46.31	46.43	46.55	46.68
	Short Circuit Current (I <sub>sc</sub> /A)	11.01	11.05	11.09	11.13	11.17

## OPTIONS

\*450w/550w/600w/660w optional, Flexible solar panels, dual-glass solar panes, bifacial solar panels available

Bloomberg Tier 1 brand solar panels available.



# SOLAR CARPORT SYSTEM ON-GRID/HYBRID INVERTER

## FEATURES

Single phase 3kw to 6kw, Three phase 5kw to 125kw

Max. efficiency 98.8%

Max. 10 MPPTs with 20 input strings

String current up to 25A

Export power control, data logger for max. 60 sets of inverter management

RS485, LAN, WiFi, GPRS communication, PC/APP monitoring

Certificate: G98 or G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1, VDE 0126

/ UTE C 15 / VFR:2019, RD 1699 / RD 244 / UNE 206006 / UNE 206007-1,

CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727,

IEC 60068, IEC 61683, EN 50530

IP 65 protection, warranty up to 10-year



Intelligent redundant fan-cooling  
Cooling concept



9/10  
MPPT



WiFi/GPRS  
Real time monitoring



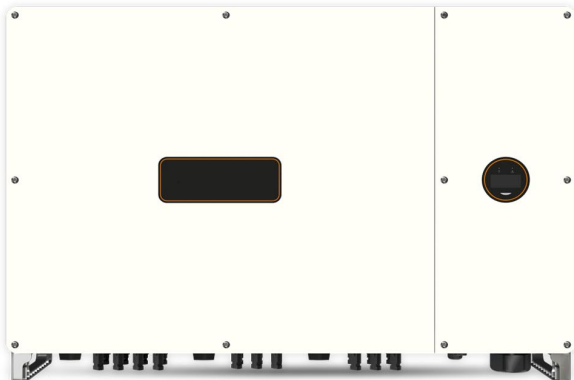
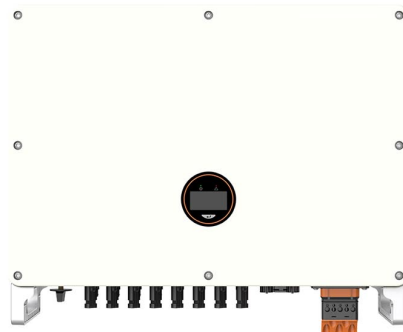
180-1000 V  
MPPT voltage range



IP66  
Ingress protection



App Store  
IOS/Android



## OPTIONS

\* 3kw to 125kw on-grid inverter available according to different system setup.

Other major brands of inverters also available upon demand, 10 years warranty optional.



# SOLAR CARPORT SYSTEM LFP BATTERY(HYBRID & OFF-GRID)



## Energy Storage LiFePO<sub>4</sub> Battery

### 48V Power wall Energy Storage battery Series

- 6000 times long cycle life
- 5kwh/10kwh energy capacity
- 100A Maximum continuous discharge current
- Ultra safe LiFePO<sub>4</sub> cells composition
- Integrated BMS overall protection

## FEATURES

Wall-mounted or stack style with strong adaptation // 5KWH/10KWH with single module

Modular design with great power flexibility maximum 18 pcs working in parallel to 180KWH

Quick & easy installation // Pre-Charge Dual-active protection

6000 Circles, 5 years warranty & 15 years lifespan // Safety Cert. UN38.3, MSDS, CE

## ELECTRICAL PARAMETERS

Model	M16S100BL-V	M16S200BL-V
Array Mode	16S	16S
Nominal Energy (KWh)	5.0	10.0
Minimum Energy (KWh)	≥5.0	≥10.0
Nominal Voltage (V)	51.2	
Charge Voltage (V)	58.4	
Discharge Cut-off Voltage (V)	45	45
Standard Charging Current (A)	20	40
Max. Continuous Charging Current (A)	100	100
Max. Continuous discharging Current (A)	100	100
Cycle Life	≥ 6000 Times@ 80%DOD, 25°C	
Communication Mode	RS485/CAN	RS485/CAN
Operating Temp.	Charge: 0~60°C; Discharge: -20°C~65°C	
Products Size (L×W×H) mm	445x170x510	445x206x675
Net weight (Kg)	47.5	85
Packing Size (L×W×H) mm	656x624x343	870x710x415
Gross weight (Kg)	69	112



## Communication Backup Battery

3U/4U standard size, you can use a universal 19-inch cabinet, configure different power levels, simple and convenient.	Multiple communication functions such as RS232, RS485, CAN. Communication are compatible with different brands of inverters, such as Deye, Growatt, Goodwe, Luxpower, Voltronicpower, etc.
Long life Equipped with charge balance ability, cycle life is more than 6000 times	Multi-machine parallel can support up to 15 standard batteries in parallel
5.0kw high power Single machine can achieve 5.0kw high power output.	Multiple sleep and wake modes 5 sleep modes, 3 wake-up methods, make the battery use smarter.



## OPTIONS

\* GEL battery also available for options.

Other major brands of batteries also available upon demand.



# SOLAR CARPORT SYSTEM EV CHARGER (OPTIONAL)



## FEATURES

- Wide power range: 1 & 3 Phase 7KW/11KW/22KW
- Plug or socket type optional, single or dual charger
- WIFI/4G/RFID Card connection optional
- Programmable charging mode
- Comprehensive protection
- Multiple communication modes
- Compact and exquisite
- European standard
- Flexible installation

## PARAMETERS

### Input & Output

Input voltage	230V AC	230V AC
Input frequency	50/60Hz	50/60Hz
Output voltage	230V AC	230V AC
Max.output power	7.3KW	7.3KW
Max.output current	32A	32A
Charging interface type	IEC62196-2,Type2	IEC62196-2,Type2
Connection	Plug	Socket
Cable Length	5m	/

### Protection

Over voltage protection	Yes	Yes
Under voltage protection	Yes	Yes
Over load protection	Yes	Yes
Short circuit protection	Yes	Yes
Earth leakage protection	6mA DC fault current protection	6mA DC fault current protection
Over-temp protection	Yes	Yes
Lightning protection	Yes	Yes

### Function & Accessory

Ethernet/WIFI/4G	Yes/Yes/Opt	Yes/Yes/Opt
LCD	Opt	Opt
Charging Mode	APP/RFID(Opt)/Plug and charge	APP/RFID(Opt)/Plug and charge
LED Indicator Light	Yes	Yes
Emergency stop button	Yes	Yes

## OPTIONS



# SOLAR CARPORT SYSTEM SOLAR CABEL & ACCESSORIES

## FEATURES

Solar panel cleaning machine: 3.5M/5.5M/7.5M  
Dual-brushless motor, 20000 working hours  
AC power & Lithium battery dual-power  
8m power cable, 20m water pipe  
DC cables: 4mm<sup>2</sup> to 6mm<sup>2</sup>.  
Materials: Tinned copper + XLPO insulation.  
Rated voltage: 1000/1800V DC; 600/1000v AC.  
Temperature rating: -40°C to 125°C, cold resistance.  
Life time > 25 years. UL and TUV certified.

## FEATURES

Mating safety with keyed housings.  
Multiple plugging and unplugging cycles.  
High mechanical endurance, Heat-resistant.  
Water/dust proof resistance design IP68.  
Flame-retardant & UV resistant for outdoor application.  
TUV & CE Certified.



## OPTIONS

## Why Choose Our Company?

Based on the abundant resources of nowadays solar industry in China, our team will provide you with the best possible solar products and solutions available by using our knowledge, experience and good relationship with most of solar factories. Not only a normal products supplier, but we are aiming to become your business partner in the solar power industry for long term.

### FACTORY

Our production facilities are located in Hangzhou, China. Furthermore, plenty more productions are shared with our partners and suppliers all around the country.

### PRODUCT RANGE

- Residential , commercial and industrial on
- grid and off grid solar power system
- All solar materials related, plu engineering solutions and installation consultant.

### TECHNICAL TEAM

Our scientists and engineers are focusing on the solar power technology development and applications for the best quality and cost-effectiveness.

### BEST SERVICE

Sales and service people are all from multi -national background with good language and communication skills.

### EXPERIENCE

Over 12-years rich experience in photovoltaic industry, mainly about solar panels manufacturing and onsite installation.