POWERCUBE™

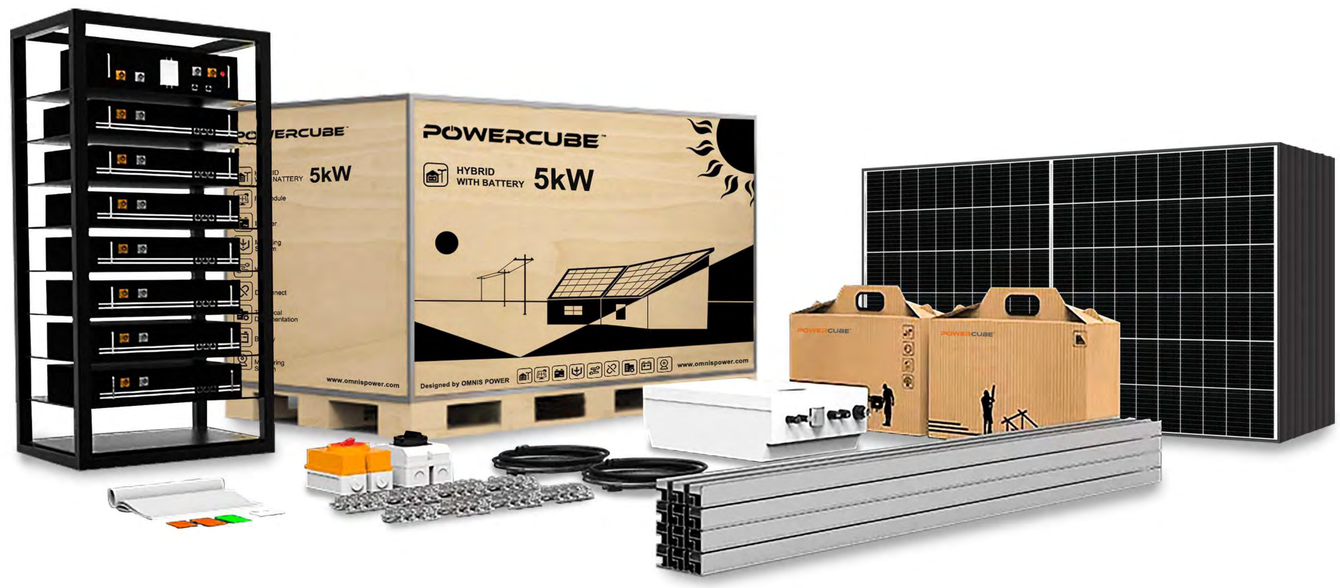
Datasheets

HYBRID

Hybrid
Photovoltaic System Kits

HYBRID

3kW / 4kW / 5kW / 6kW / 8kW / 10kW



Product Description

PowerCube hybrid solar kits are unique in their ability to operate in either on-grid or off-grid conditions. These systems include advanced BMS technology that enables users to modify the charge/discharge rate & schedules of the battery storage unit as well as to manage power consumption and PV generation usage.

Adaptable and friendly

Operational in both on-grid and off-grid mode, Aurora kits are a valuable investment for those seeking an adaptable and user-friendly combination for solar and storage resources.

The best investment

With the decreasing cost of solar PV and Li-Ion batteries, and the increasing local incentives, solar hybrid systems have become an attractive investment opportunity for home and business owners.

Schedule your system

These systems have the ability to generate and store power at periods when electricity prices are at their highest and deliver it to the load on a scheduled time frame.

What's in the Box

- Solar modules
- Hybrid inverter/charger
- Custom roof mounting system
- Battery bank
- Battery storage unit
- PV, battery bank, & grounding wiring harnesses
- DC and AC disconnects
- Wire management kit
- Grounding hardware
- Safety label kit

Stackable and Scalable

Our hybrid solar storage systems include Lithium Iron Phosphate (LiFePO4) battery packs (48V) connected in high voltage DC configurations. The batteries offer 4000 cycles and up to 80% DOD (Depth of Discharge). Each battery is offered in a 2.4kWh block and can be stacked in different storage options.
Each system can be paralleled with one another up to 10 times to achieve up to 100kW's of PV power and almost unlimited battery backup power. Offered in both single and three phase configurations.

Common Applications

- Residential locations with unstable grids
- Locations that do not allow net metering
- People who want to take advantage of the utility rate changes
- Those who cannot affor to lose power or have power outages

Product Benefits

- Can operate in on-grid or off-grid mode
- Sell power back to the grid or store excess power for later use
- Use grid power or solar energy to charge the battery bank

Hybrid On-Grid / Off-Grid Battery PV Kits

SYSTEM SIZE	3KW	4KW	5KW	6KW	8KW	10KW
PRODUCT MODEL	PCH-3KW	PCH-4KW	PCH-5KW	PCH-6KW	PCH-8KW	PCH-10KW
PV System size Nominal(Wp)	3000W	4500W	5250W	6000W	8250W	10500W

PV MODULE SPECIFICATION (MONO)

Panel Model	OP375M60-P2
Power(W)	375
Vmp(V)	34.4
Voc(V)	41.6
Isc(A)	11.45
Imp(A)	10.89
Dimen sions(L x W x H)(mm)	1763x1040x30mm
PV module weight(kg)	20
Certifications	VDE CE CEC ETL INMETRO

INVERTER SPECIFICATIONS (600VDC)

Inverter Size(kw)	3	4	5	6	8	10
Max DC Power(W)	4500	5550	7500	9000	12000	15000
Max DC Voltage(V)	1000					
MPPT Voltage range(V)	125-550			180-950		
No.of MPPT'S	2					
Max AC Power(VA)	3000	3680	4999	6000	8000	10000
Max Output Current(A)	14.3	16	21.7	9.6	12.8	15.9
AC Nom.Voltage/Voltage Range(V)	220/230/240(180-270)			400/230;380/220		
AC Grid Freque ncy range(Hz)	50/60					
Number of phases	1			3		
Dimensions(L x W x H)(mm)	476*464*180			457*654*228		
Inverter weight(kg)	24			45		
Certifications	EN61000-6-2 EN61000-6-3 EN61000-3-2 VDE4105 EN50549 CEI0-21					

12/240VUL invertersalsovailable upon request

BOS

#DC Isolator 1200V	2	2	2	2	2	2
#AC Isolator	1	1	1	1	1	1
#AC Breaker	1	1	1	1	1	1
*PV Wire Harmess.4mm(meters)	1	1	1	1	2	2
*Ground Wire.4mm(meters)	8	12	14	16	22	28
Battery Cables	N/A					

* Extra wire is avaible upon request

SYSTEMLAYOUT

# of Modules	8	12	14	16	20	22
# of inverters	1					
PV Layout options	Landscape or Portrait					
PV Arrary Surface Area(m2)	14.67	22.00	25.67	29.34	36.67	40.34
PV Arrary Weight(kg)	160	240	280	320	400	440
PV Module Configuration 1000VDC — No.of PV Modules/String	8	12	14	16	20	22
PV Module Configuration 1000VDC — Total Strings	1	1	1	1	2	2
PV Module Configuration 1000VDC — String Voc	332.8	499.2	582.4	665.6	832	915.2
PV Module Configuration 1000VDC — String Vmp	275.2	412.8	481.6	550.4	688	756.8
PV Module Configuration 1000VDC — String Imp	10.89					

PRODUCTION ESTIMATES(KWh)

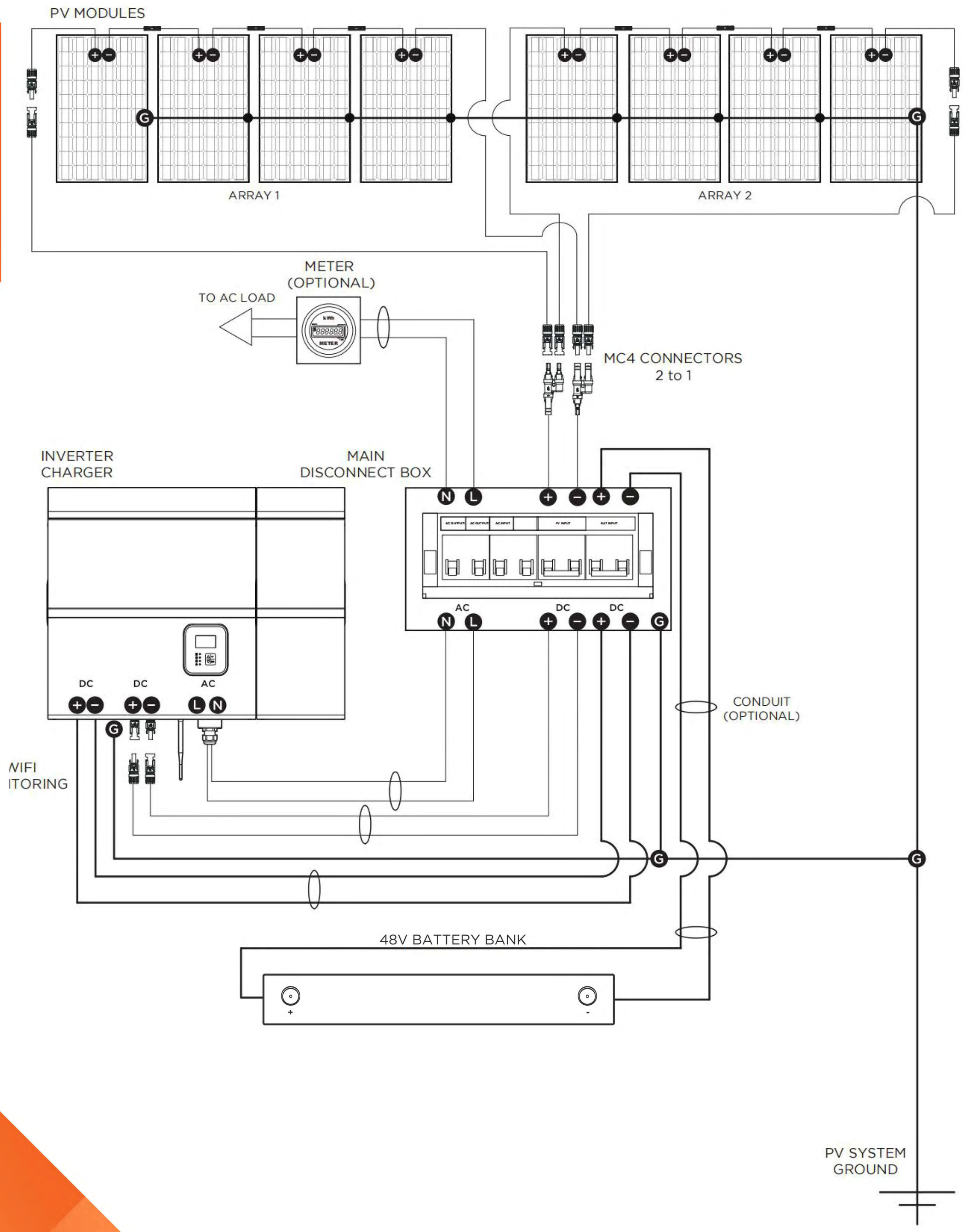
*Projectedyearly outputat 1100GHI/year	2805	4207.5	4908.75	5610	7480	9350
*Projectedyearly outputat 1460GHI/year	3723	5584.5	6515.25	7446	9928	12410
*Projectedyearly outputat 1825GHI/year	4653.75	6980.625	8144.0625	9307.5	12410	15512.5

* Based on 0.85% system deraling(formula=DC Power x peak sunshine hour/year x derate factor)(GHI=Global Horizotall radiance)

SYSTEM OPTIONS

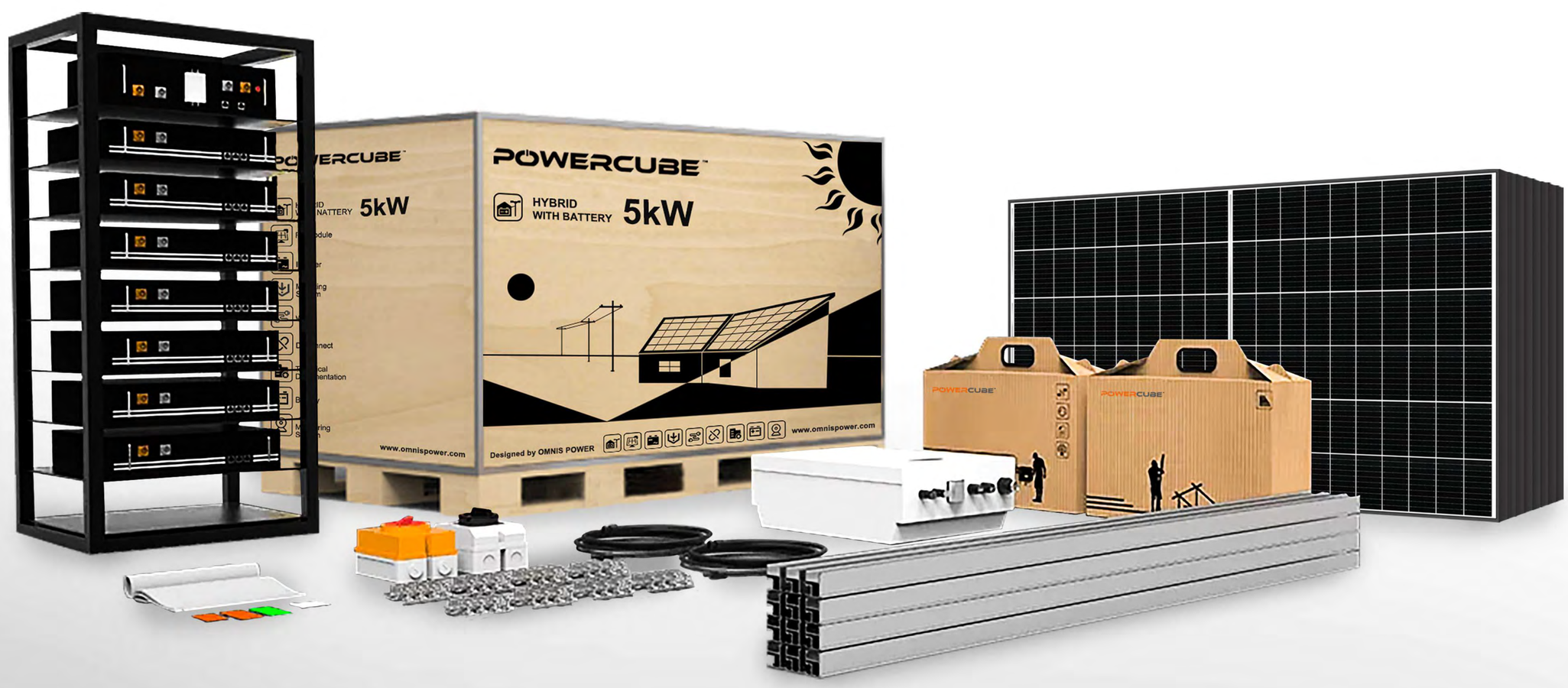
Wifi Monitor	Wifi or GPRS
PV System Color	Siliver or Full Black
Mounting System Types	Metal Roof Aspht Shingle,Tile roof,Flat Concrete
Battery Bank	TBD

Hybrid Exanple Layout (3kW)



The all-in-one Box Solution

The difference is clear, get better results with our all in a box packaging solutions. Omnis Power Solar's heavy duty ISPM15 compliant care design not only protects the contents during international shipping but also ensures that the solar kits arrive to their destination site undamaged and ready for installation. Omnis Power Solar's BOS toolboxes are included in all our solar kits and designed with the installer in mind. With years of installation experience, we understand the benefits of having a safe and well organized jobsite.



Packaging Specs

Designed to be warehouse friendly for distribution centers and local logistics companies, our kits are easily stacked, inventoried, and consolidated.

3kW

1.8 x 0.8 x 1
1 kit per pallet

20 kits per 20’
40 kits per 40’

4kW

1.8 x 0.9 x 1
1 kit per pallet

12 kits per 20’
24 kits per 40’

5kW

1.8 x 1 x 1
1 kit per pallet

12 kits per 20’
24 kits per 40’

6kW

1.8 x 1 x 1
1 kit per pallet

12 kits per 20’
24 kits per 40’

8kW

1.8 x 1 x 1
2 pallets per kit

6 kits per 20’
12 kits per 40’

10kW

1.8 x 1 x 1
2 pallets per kit

6 kits per 20’
12 kits per 40’