



RAYTHON

ALL-IN-ONE INTEGRATED SOLUTION

3-5KW

5.04KWH-20.16KWH

8KW

10.08KWH-20.16KWH

OVERVIEW

The Raython Model 0/1 and Model 2 systems are all-in-one standalone solar power systems. They are ideal solutions designed for holiday houses or single-family houses that have no access to the grid power and the users often use generators as their power supply. Raython Model 0/1 can be also used in residential ESS applications for areas with a stable grid but high electricity prices and need to maximize self-consumption with solar to save electricity bills.

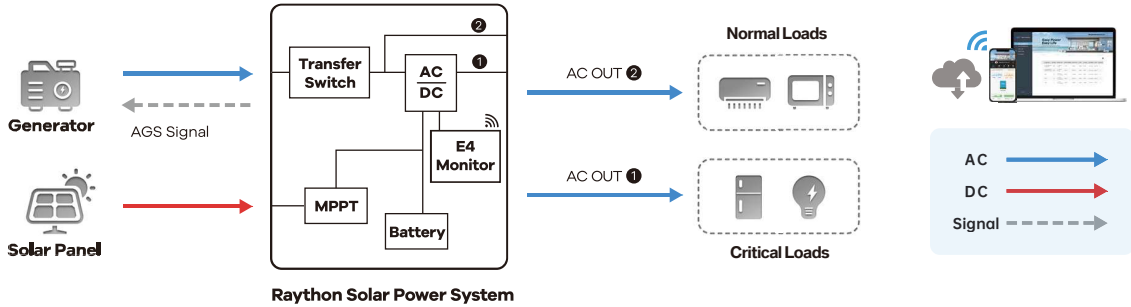
The Raython Model 0/1 and Model 2 systems are expertly assembled, tested and shipped as a complete system respectively, integrating a solar hybrid inverter(Model 0/1) or an inverter charger with an MPPT solar charge controller(Model 2), lithium battery modules, wireless data logger, and AC, DC and PV power distribution into one system. On arrival, Raython Model 0/1 and Model 2 systems are ready to install and the all-in-one design makes them easy to install and saves your precious time.

Our Raython Model 0/1 and Model 2 Solar Systems are designed for applications with a daily power use from 10.08kWh-20.16kWh, to meet your different power need.

KEY FEATURES

- All-in-one design for easy and quicker installation (<30 minutes).
- IP54 protection index for outdoor use; ECO-friendly: lower pollution, less noise and lower fuel consumption.
- Factory assembled and tested system enables you get free from complicated groundwork.
- Strong surge capability and powerful overload capability to power heavy loads like air-conditioner, water pump, fridge, washing machine, etc.
- Automatically start and stop the generator according to the load level, battery level or time period to ensure continuous power supply.
- Leakage protect function on its AC output to ensure safety.
- Its power assist function enables limited AC source to power heavy loads with the assist of battery power.
- Boasts ESS capability to maximize self-consumption and save electricity bills (Model 0/1).
- NOVA Web & App for system remote monitoring and control.
- E4 LCD Monitor for system local monitoring and control.

System Schematic:



RAYTHON
MODEL 0/1



AC+DC+PV Distribution

E4 LCD Monitor

- ✓ For system local monitoring and control

**Solar Hybrid Inverter
Apollo Matrix 3.0S/5.0S**

- ✓ AC charger+Inverter+MPPT charger+ AC transfer switch (Model 0: 30A; Model 1: 50A)
- ✓ Max output power: 3000W (Model 0) / 5000W (Model 1)

Lithium Battery Module

- ✓ Model 0: 48V | 1105Ah-210Ah | 5.04kWh-10.08kWh
- ✓ Model 1: 48V | 210Ah-420Ah | 10.08kWh-20.16kWh

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MODEL 2

E4 LCD Monitor

- ✓ For system local monitoring and control



AC+DC+PV Distribution

**MPPT Charge Controller
Solar Mate**

- ✓ 150V 120A / 250V 100A

**Inverter Charger
Kinergier Pro 8.0S**

- ✓ AC charger+Inverter+AC transfer switch (50A)
- ✓ Max output power 8000W

Lithium Battery Module

- ✓ 48V 210Ah-420Ah
- ✓ 10.08kWh-20.16kWh

RAYTHON	MODEL 0	MODEL 1	MODEL 2
AC INPUT			
Generator compatible	Yes		
AC input voltage range(VAC)	175~265		
AC input frequency range(Hz)	45~65		
AC input current (transfer switch) (A)	50		
INVERTER			
Product topology	Transformer based		
Nominal battery voltage (VDC)	48		
Input voltage range (VDC)	42~68		
AC output voltage(VAC)	220/230/240 ± 2%		
AC output frequency(Hz)	50/60 ± 0.1%		
Harmonic distortion	<2%		
Load power factor	1.0		
Cont.output power at 25°C (VA)	3000	5000	6500
Max output power at 25°C (W)	3000	5000	8000
Peak power(W)	9000	15000	16000
Surge	300%		
Maximum efficiency	96%		
Zero load power (W)	17	21	26
Max AC charge current (A)	40	70	110
Main output (AC Out1) Current (A)	32	50	50
Transfer time	<2ms (<15ms in Weak AC source Mode)		
PV IN			
Max output current(A)	60	90	120
Maximum PV power(W)	4000	6000	9000
PV open circuit voltage (V)	150		
Maximum PV short circuit current(A)	35	54	80
MPPT voltage range(V)	65~145		
MPPT charger maximum efficiency	98%		
MPPT efficiency	>99.5%		>99.9%
BATTERY			
Battery type	LiFePO4 Li-ion battery		
Nominal energy capacity	5.04kWh-10.08kWh	10.08kWh-20.16kWh	
GENERAL DATA			
General purpose com. port	GPRS/Wi-Fi optional with Kinergy		
Operating temperature range	Inverter: -20°C to 65°C / Battery: discharge -20°C to 55°C, charge 0-40°C		
Relative humidity in operation	95% without condensation		
Altitude (m)	2000		
MECHANICAL DATA			
Dimension (W*D*H) (mm) (max)	750*482*1130	750*650*1130	
Net Weight (kg) (without battery)	100	135	150
Cooling	Forced fan		
Protection index	IP54		
STANDARDS			
Safety	EN-IEC 62477-1, EN-IEC 62109-1,EN-IEC 62109-2		EN-IEC 60950-1, EN-IEC 62109-2
EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-3-11,EN61000-3-12		
Grid Code	NRS 097-2-1:2017, NTS 2.1 (A)*, RD 1699*		/
Warranty	4 Years + 1 Year**		

* Coming soon

**Add 1 year to your warranty when you link your product to the NOVA App