



# All in one Integrated Solution

## Raython series

Raython Series is available with two models in different configurations

## EASY POWER, EASY LIFE



Raython Model 1

5KW | 10.08kWh-20.16kWh



Raython Model 2

8KW | 10.08kWh-20.16kWh



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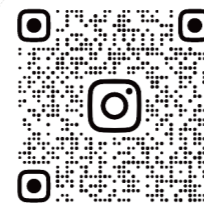
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## Raython Model 1 & Model 2

### For Off-grid & Residential ESS Applications

The Raython Model 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 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.

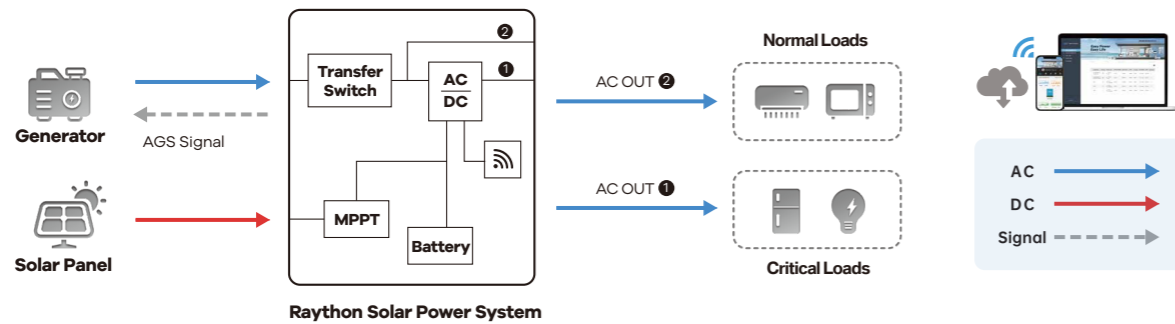
The Raython Model 1 and Model 2 systems are expertly assembled, tested and shipped as a complete system respectively, integrating a solar hybrid inverter(Model 1) or an inverter charger with an MPPT solar charge controller(Model 2), lithium battery modules, wireless data logger, and AC, DC and PV power distribution into one system. On arrival, Raython Model 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 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.

### Highlights

- 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 1)
- NOVA Web & App for system remote monitoring and control
- E4 LCD Monitor for system local monitoring and control

## System Schematic:



## RAYTHON MODEL 1



### AC+DC+PV Distribution

#### E4 LCD Monitor

- For system local monitoring and control

#### Solar Hybrid Inverter Apollo Matrix 5.0S

- AC charger + Inverter + MPPT charger + AC transfer switch (50A)
- Max output power 5000W

#### Lithium Battery Module

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

## RAYTHON 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

Model	Raython Model 1	Raython Model 2
<b>AC input</b>		
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)	48VDC	
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	
Max output power at 25°C (W)	5000	8000
Cont. output power at 25°C (W)	5000	6500
Peak power (10 sec) (W)	8000	13000
Surge	300%	
Maximum efficiency	96%	
Zero load power (W)	21	26
Max AC charge current (A)	70	110
Main output (AC Out1) Current (A)	50	
Transfer time	<2ms (<15ms in Weak AC source Mode)	

## MPPT Charger

Max output current(A)	90	120
Maximum PV power(W)	6000	9000
PV open circuit voltage (V)	150	
Maximum PV short circuit current(A)	60	80
MPPT voltage range(V)	65~145	
MPPT charger maximum efficiency	98%	
MPPT efficiency	>99.5%	>99.9%

## Battery

Battery type	LiFePO <sub>4</sub> Li-ion battery
Nominal energy capacity	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 (mm) (max)	W*D*H mm 650*750*1130
Net weight (kg)	200kg (Estimated)
Cooling	Forced fan
Protection index	IP54

## Standards

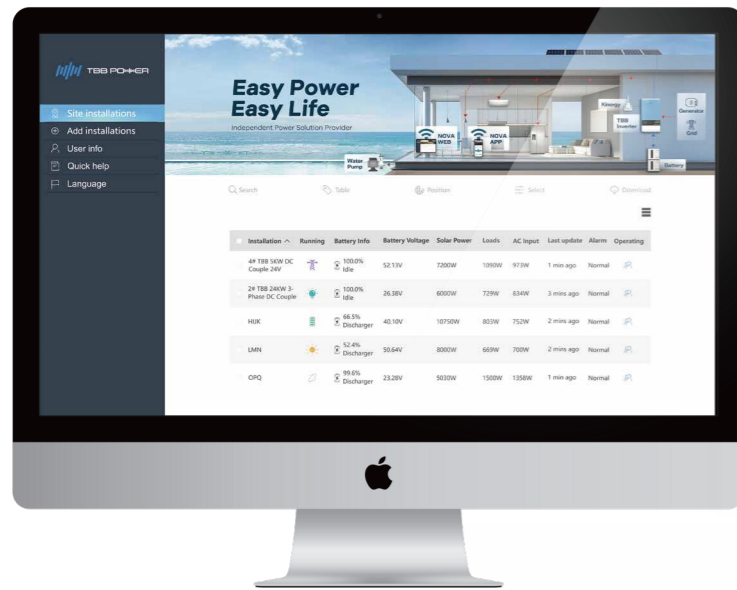
Safety	EN-IEC 62477-1, EN-IEC 62109-1, EN-IEC 62109-2	EN-IEC 60950-1, EN-IEC 62109-2
EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-3-11, EN61000-3-12	
Grid Code	NRS 097-2-1:2017, NTS 2.1 (A)*, RD 1699*	/

\* Coming soon

# TBB NOVA APP & Web

## Monitor and Control Your Solar System Anywhere Anytime

NOVA App and NOVA Web are FREE energy management and monitoring system designed by TBB POWER, displaying real-time data of all system components and history records, providing easy access to controlling the power generation and power consumption. According to historical data, users can actively adjust and optimize power consumption habits.



### Devices for remote monitoring communication



## Comprehensive Monitoring

- Live data and status overview and system analysis
- System configuration and parameter setting
- Customizable alarm setting
- Detailed report for power harvest, storage and consumption in visual chart and graph
- WEB compatible for Windows and Mac PC
- APP available for Android and iOS phone

## Intelligent Management for Dealers / Installers

- Comprehensive management for multiple installations
- Catch potential issues early with alarm setting to prevent system failure
- Optimize the energy harvest and usage with history graphs and detailed analytical reports
- Proactive maintenance services to keep good relationship with customers
- Customizable banner to show dealers information and slogan

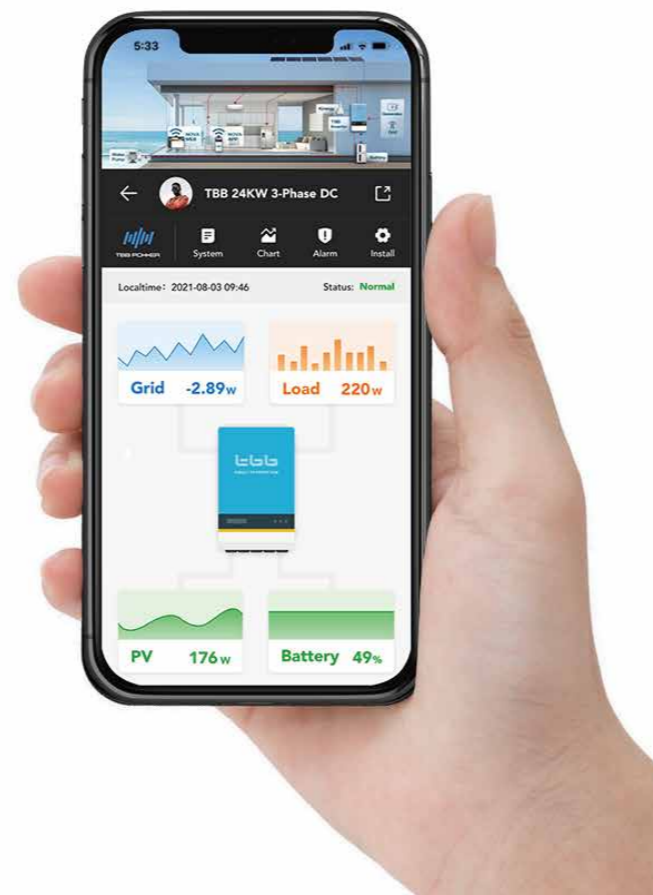


Android



iOS

[nova.tbbpower.com](http://nova.tbbpower.com)



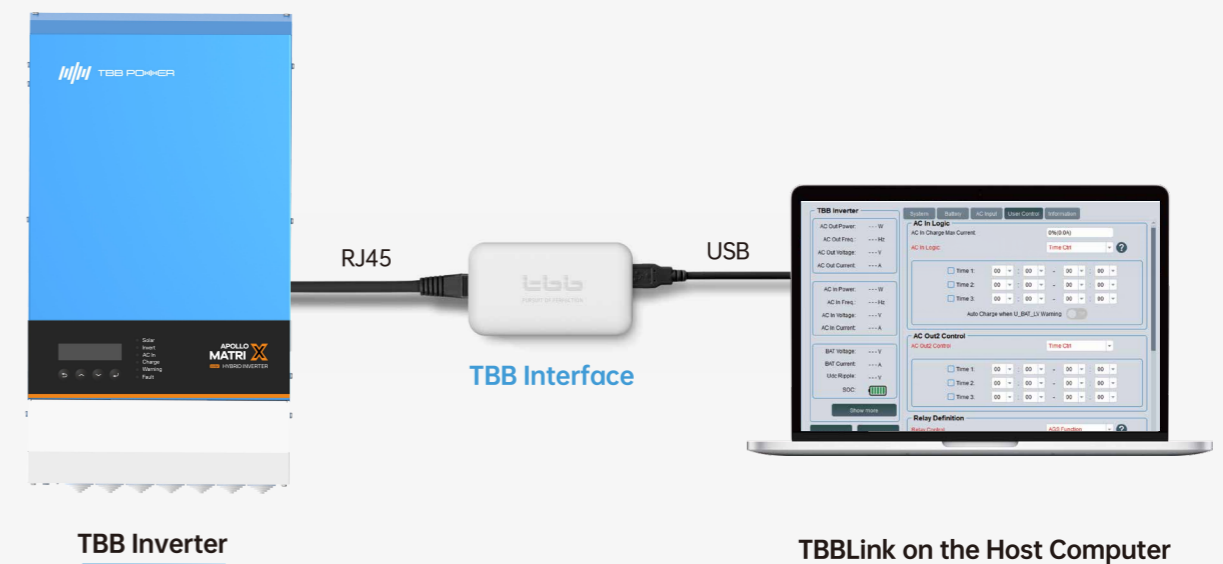
# TBBLink

## Configuration tool for TBB Inverters and PCS

TBBLink is a perfect PC tool for installers to quick configure, update and diagnose TBB inverters. It applies to the following TBB products: RiiO, RiiO Sun, Apollo Maxx, Apollo Matrix and Kinergy Pro, Qoma33H/H-R

## Highlights

- User-friendly and intuitive interface for easy and quick configuration
- Provide quick fault diagnosis by showing current fault information and running information in a clear and intuitive manner
- Support saving and importing settings for batch configuration next time, to save configuration time
- Support quick and smart configuration for parallel and three-phase systems



The TBBLink should be installed on a computer and connect to the inverter via TBB interface before performing the configuration; When configuring the TBB PCS, TBBLink on the host computer can connect to the PCS directly via RJ45 cable.