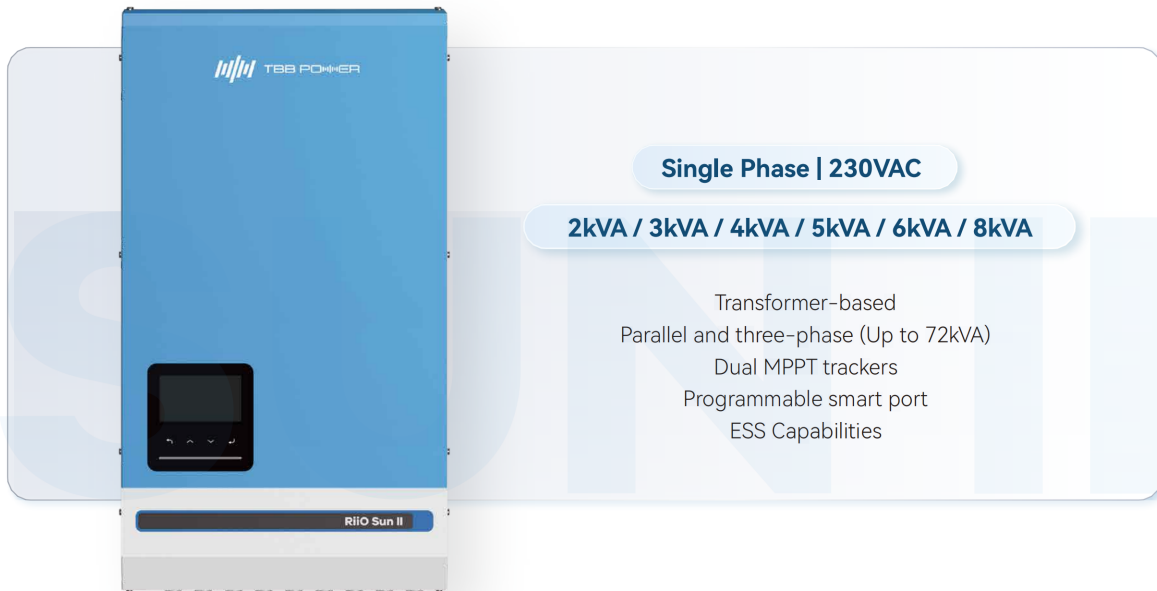


RiiO Sun II

- All-in-one Solar Inverter -



RiiO Sun II is a versatile transformer-based all-in-one solar inverter, designed for backup power, off-grid and ESS applications, integrating a pure sine wave inverter, battery charger, MPPT solar charge controller and a rapid 4ms automatic transfer switch in a compact casing. It's engineered to handle high surge loads and ensures continuous operation of critical load during outages.

Additionally, RiiO Sun II enhances energy self-consumption, supports grid feed-in for utility credits, and optimizes costs with peak shaving and time-of-use strategies.

Enhanced Flexibility

- Versatile for backup power, off-grid and ESS
- Parallel & three-phase up to 9 units, 72kVA
- Built-in a smart port for Gen input or 2nd AC output^{*1}
- 2 MPPT trackers for flexible system design and higher yields^{*2}
- Up to 250V PV open circuit voltage
- Higher PV charging power and current
- AGS function, Power assist & power control
- Compatible with mainstream lithium battery brands and generators
- Optional to work without battery^{*3}

Easy O&M

- All-in-one design for easy installation
- Auto restart when the PV or AC is recovering
- Local monitoring via E4 LCD Monitor
- Remote monitoring and control via Nova Web & APP

Superior Reliability

- Transformer-based, high surge power
- 4ms ultra-fast switch to battery power
- ECO Mode to prolong backup time
- Extremely low self-consumption power
- Max inverter efficiency 94%, max MPPT efficiency 98%

ESS Capabilities

- Maximize self-consumption
- Lower electricity bills via peak shaving & time-of-use
- Grid feed-in for utility credits

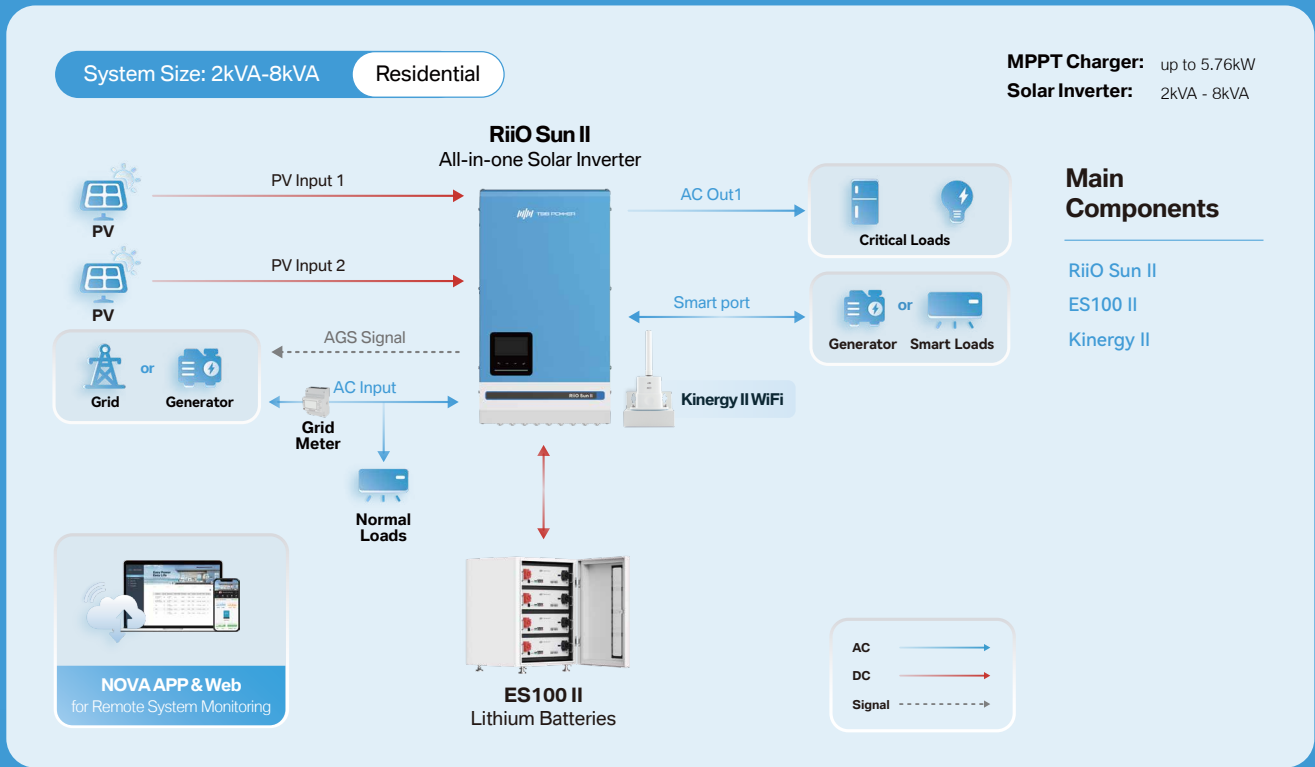
*1-2: Only available for 5kVA/6kVA/8kVA model

*3: Only for single-unit application with stable AC bypass supply, PV energy as a supplement for AC bypass

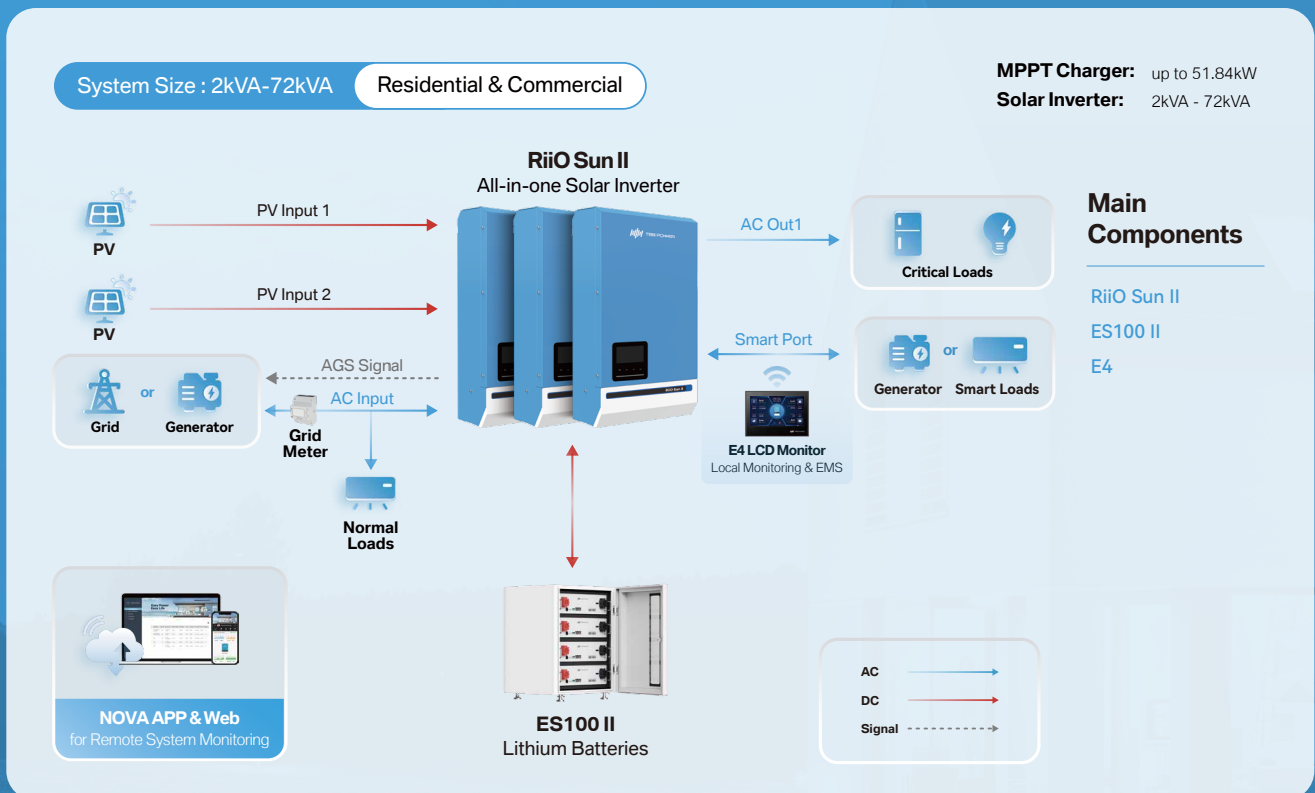
Model	RiiO Sun II 2KVA-M	RiiO Sun II 3KVA-M	RiiO Sun II 3KVA-S	RiiO Sun II 4KVA-S	RiiO Sun II 5KVA-S	RiiO Sun II 6KVA-S	RiiO Sun II 8KVA-S
Power Assist	Yes						
AC input range	175~265 VAC / 45~65 Hz						
AC input Current (transfer switch) (A)	32	32	32	32	50	50	50
Inverter							
Nominal battery voltage (V) / Input voltage (V)	24 / 21~34			48 / 42~68			
AC output voltage (VAC)	220/230/240 ± 2%						
AC output Frequency (Hz)	50/60 ± 0.1%						
Harmonic distortion	<2%						
Cont. output power at 25°C (VA)	2000	3000	3000	4000	5000	6000	8000
Max output power at 25°C (W)	2000	3000	3000	4000	5000	6000	8000
Peak power (W)	4000	6000	6000	8000	10000	12000	16000
Surge	300%						
Maximum efficiency	91%	91%	93%	93%	94%	94%	95%
Zero load power (W)	13	17	17	19	22	25	32
Charger							
Charge voltage 'absorption' (V) / 'float' (V)	28.8 / 27.6			57.6 / 55.2			
Battery types	AGM / GEL / OPzV / Lead-Carbon / Flooded / Traction / Lithium						
Max AC charge current (A)	40	70	35	50	60	70	90
Temperature compensation	Yes						
Solar Charge Controller							
Max output current (A)	80	80	60	60	100 (50 per tracker)		
Maximum PV open circuit voltage (V)	150	150	250	250	250	250	250
MPPT voltage range (V)	40~145			65~245			
Number of MPPT trackers	1	1	1	1	2	2	2
Maximum PV input current per tracker (A)	36	36	36	36	36 + 36	36 + 36	36 + 36
Maximum PV short circuit current per tracker (A)	40	40	40	40	40 + 40	40 + 40	40 + 40
Maximum charge power	2300W @ 28.8V		3450W @ 57.6V		5760W @ 57.6V total, 2880W @ 57.6V per tracker		
Allowable maximum PV power per tracker (W)	3600	3600	5200	5200	4400 + 4400	4400 + 4400	4400 + 4400
Charge voltage 'absorption' (V) / 'float' (V)	28.8 / 27.6			57.6 / 55.2			
MPPT charger maximum efficiency	98%						
MPPT efficiency	>99.5%						
Protection	a) output short circuit; b) overload; c) battery voltage too high; d) battery voltage too low; e) temperature too high; f) input voltage out of range						
General Data							
AC Out1 Current (A)	32	32	32	32	50	50	50
Smart Port Current (A)	N/A				50		
Transfer time	4ms (<15ms in Weak AC source Mode)						
Protection	a) output short circuit; b) overload; c) battery voltage too high; d) battery voltage too low; e) temperature too high; f) input voltage out of range; g) input voltage ripple too high; h) Fan block						
General purpose com. Port	RS485 (GPRS, WLAN optional)						
Programmable relay	1x (30Vdc/3A or 250Vac/3A)						
Operating temperature range	-20°C to 65°C						
Relative humidity in operation	95% without condensation						
Altitude (m)	2000						
Mechanical Data							
Dimension (mm) (max)	499x272x144			570*310*154		620*320*164	
Net Weight (kg)	14	18	18	20	29	31	34
Cooling	Forced fan						
Protection index	IP21						
Standards							
Safety	EN-IEC 62477-1, EN-IEC 62109-1, EN-IEC 62109-2						
EMC	EN-IEC 61000-6-1, EN-IEC 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12						
Grid regulation	RD 1699, NRS 097						

Maximize self-consumption & ESS

RiIO Sun II supports energy feeding back into the grid and maximizing the self-consumption. When there is any surplus solar energy after meeting the demand of loads on the AC outputs and the battery has been fully charged, the surplus part will be fed back to power loads on the AC input, which would maximize the self-consumption. Thus the system investment can be greatly reduced.



When multiple RiIO Sun II are connected in parallel or three-phase, they can maximize self-consumption and realize peak shaving with the aid of E4 LCD monitor and grid meter.

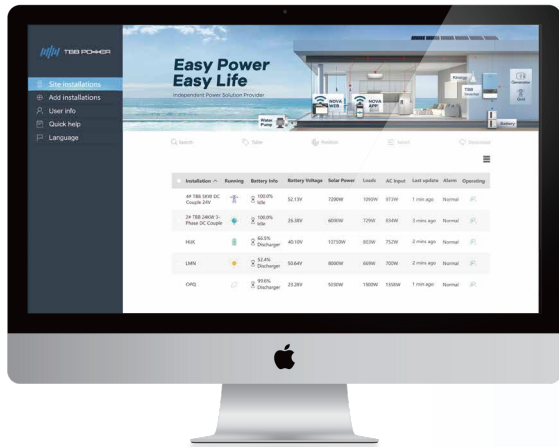


* Please note: due to the inconsistency of grid regulatory requirements, you need to confirm with your supplier whether the Self-consumption/ ESS functionality of RiIO Sun II is allowed to be used or not.

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 Renewable, 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



Ether-Link



E4 LCD Monitor



**Kinergy II-WiFi
Wireless Data Logger**

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.tbbrenewable.com

