

RAYAX™

The Rays Of Power

THE POWER HUB



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ABOUT US

Rayax is a leading name in the solar sector, delivering comprehensive, end-to-end solar solutions. We are dedicated to making clean energy accessible to all by offering superior solar technology designed for maximum efficiency and long-term reliability. Our experienced team provides seamless services, covering everything from consultation and design to installation and ongoing maintenance. With a strong focus on cost-efficiency, we empower homeowners, businesses, and industries to reduce their energy expenses while promoting environmental sustainability. Our innovative, tailored solutions cater to diverse energy needs, driving the transition towards a greener, more sustainable future with affordable and reliable solar power.



Mission

With a strong commitment to our stakeholders, we are dedicated to consistently elevating the quality of our products and services, delivering excellence in all we do.

Vision

Our vision is to deliver affordable, high-quality sustainable energy solutions worldwide, cutting carbon emissions and promoting a greener future for a better quality of life.

Values

Our values define who we are and guide our actions: we uphold Integrity in all interactions, foster Respect for Individuals, and prioritize putting the customer first with a passion for excellence, we continually strive for improvement, embracing innovation to deliver solutions that exceed expectations.

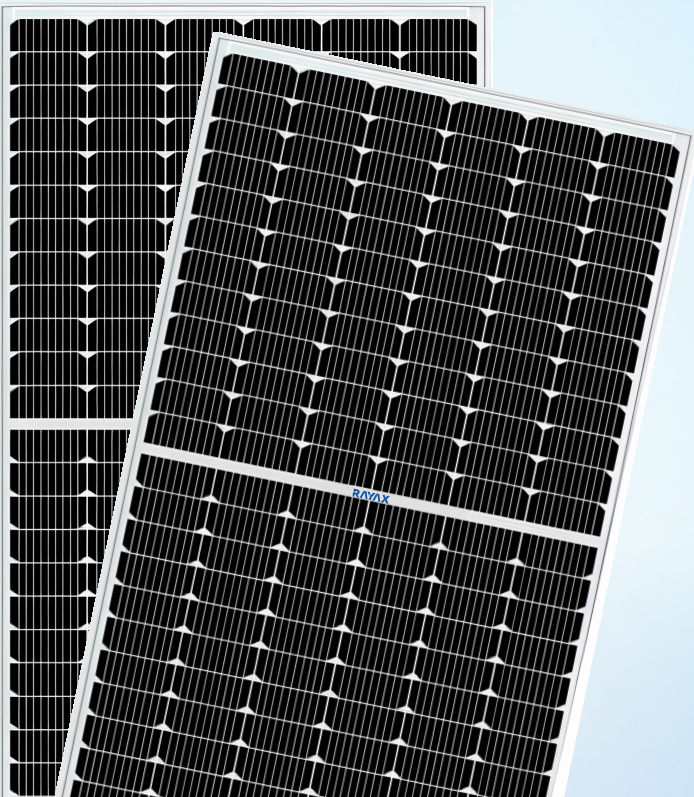


SOLAR PANELS

Range (55 W - 730 W)

ADVANTAGES

- Highest reliability & enhanced crack tolerant MBB module
- Highest commercial gains, lower LCOE
- Sustain heavy Snow & Wind loads (5400 Pa & 2400 Pa)
- Improved longevity with Excellent anti-PID performance
- Split junction box improve heat dissipation



Technical Specifications

Model Name	AM – 55 W	AM – 75 W	AM – 110 W	AM – 170 W	AM – 210 W	AM – 225 W	AM – 275 W	AM – 550 W	AM – 550 W Bifacial	AM – 600 W Topcon	AM – 730 W HJT
Power (Pm) in watts	55	75	110	170	210	225	275	550	550	600	730
No. of Cells	36	36	36	36	36	72	72	144	144	144	132
Voltage at Maximum Power (Vmp) in Volts	21.00	21	21	21	21.5	21.00	21.50	42.74	42.40	43.50	43.00
Current at Maximum Power (Imp) in Amps	2.62	3.67	5.25	10.05	10.05	10.72	12.80	12.89	12.98	13.57	16.98
Open Circuit Voltage (Voc) in volts	24.50	24.91	24.91	24.91	24.91	25.00	25.00	49.60	50.20	51.00	51.00
Short Circuit Current (Isc) in Amps	2.83	3.89	5.23	10.65	10.65	13.70	13.45	13.72	13.82	14.45	17.80



ON-GRID SOLAR INVERTER

Proudly, Truly Indian.

Experience the Rayax On-Grid solar inverter series, proudly designed and made in India . Engineered with precision and packed with advanced features, this inverter ensures optimal performance and reliability. From its low current distortion factor to its robust anti islanding feature, each aspect is designed to maximise efficiency and safety. With an advanced MPPT algorithm and wide range voltage support, it optimises the solar energy harvest and adapts to varying conditions seamlessly.

Compact, lightweight, and easy to install, it's the perfect solution for sustainable energy generation! Plus, with data stored securely on Indian servers, you can trust its privacy and security.

Single Phase

CAPACITY (KW)	2	3	5	5.4	6
INPUT (DC)					
Max. DC input power (KW)	2.2	3.3	5.5	5.9	6.6
Max. DC I/P (Vdc)	550V				600V
Max. MPPT I/P Current (A)	20A				
MPPT Short Circuit Current (A)	30A				
MPPT Tracking Voltage (Vdc)	70-550V		80-550V		80-600V
Start-Up Voltage (V)	80V	80V			
Number of MPPT Tracker	1		1/2		
Strings per MPPT Tracker	1				
OUTPUT (AC)					
Rated output power (KW)	2	3	5	5.4	6
Rated Grid Voltage (V)	230V				
Voltage Operating Range (V)	140-285V		170-285V		
Rated Grid freq. (Hz)/Range	50Hz (± 5%)				
Rated output current AC (A)	9.6	14.3	23.5	25.8	28.7
AC Connection	P+N+PE				
THDI (%)	<3%				
Output Power factor	0.8 leading to 0.8 lagging				
EFFICIENCY					
Max. conversion Efficiency (%)	97.5%				
Max. Euro Efficiency (%)	97.3%				
MPPT Efficiency (%)	>99%				
GENERAL DATA					
Dimensions (W*H*D) mm	280W*310H*184D		330W*323H*190D		
Weight (Kg)	4.8		7.5		
Topology	Transformerless				
Noise Emission (dB)	<25dB				
Display	LED with LCD Display				
Cooling Method	Natural Cooling				
Operating ambient Temperature	(-25°C~+65°C)				
Operating Humidity	0%-100%				
Max. Operating Altitude (m)	2000 (>2000 Derating)m				
Ingress Protection	IP65				
Night Consumption (w)	<1				
Standard Warranty	8 Years*				



Range : 2 KW - 6 KW



Residences



Shops



Small Clinics



Gyms



Small Offices

HYBRID MPPT INVERTER (1-PHASE)

THE OFFGRID INVERTER KILLER

The Boxer is a unique addition to the Indian solar industry, plagued with budget friendly and frequently failing foreign wall mounted products. Boxer has a galvanic isolation to protect from the grid variations and gives the consumer all benefits of a hybrid inverter, while being a sleek, efficient machine. With Lithium compatibility, it is set to bring about a revolution in Indian homes, craving for high power and better backups.



- Seamless changeover time
- Battery-less operation on demand
- Export power to grid at lean loads
- 20% Overloading on PV Side
- Li+ compatible with brand selection
- Runs heavy loads including 1.5T AC

Range : 1-5 KVA/48V

Applications



Office Buildings



Mini Grids



Telecom BTS



Railway Signaling



Cold Storage



Process Industries

RATINGS	1KVA/48V	2KVA/48V	3KVA/48V	4KVA/48V	5KVA/48V
MODEL NO.	BOX-048-01K-1P	BOX-048-2K-1P	BOX-048-03K-1P	BOX-048-04K-1P	BOX-048-05K-1P
A. MPPT CHARGER					
Type (Buck)	MPPT				
PV Normal Capacity (KWp)	1.2	2.4	3.6	4.8	6
Max PV Strings in parallel	1	2	3	4	5
No of MPPT Channel/No. of Input	1/1				
Max. Open Circuit Voltage (Voc)*	190				
MPPT Tracking Range (Vmp)*	75-160				
Max Output Current (A)	23	46	71	94	118
Peak Charging Efficiency	≥92%		≥94%		
B. SOLAR INVERTER					
Nominal Capacity	1KVA	2KVA	3KVA	4KVA	5KVA
Output Current(A)	3.5	7	10	14	17
Battery Voltage(V)	48				
Output Voltage/Freq/Phase	230V(± 2%) / 50Hz/ 1P+N				
Load Power Factor	0.8- unity				
Peak Efficiency	>88 %				
Over Loads: 120 sec/ 5 sec/ 2.5 sec	101-110%/111-150% /151-200%>200% Immediate trip				
Auto Bypass Feature	Provided				
Anti Islanding/ Power Export to Grid	Provided (As per IEC 62116 & IEC 61727)				
C. GRID CHARGER					
Grid Voltage Range	230V (+10% & -20%)				
Grid freq Range	50Hz (+5% & -5%)				
Max Grid Import Power	1.5KVA	3KVA	4.5KVA	6KVA	7.5KVA
D. PROTECTIONS & DISPLAY PARMETERS					
PROTECTIONS			DISPLAY PARAMETERS		
PV Side	- Reverse Polarity, PV Power Limit, Surge Protection (MOV),O/P voltage - Reverse Polarity, O/U Voltage, Current Limit - O/U Voltage, O/U Frequency, Surge Protection (MOV) - Overloads, Short circuit, Surge Protection (MOV) - Over Temperature		- Voltage, Charger O/P Amps, Power, Cumulative Energy - Voltage, Current, Battery State - Phase Voltage, Frequency, Power, Power Factor - Voltage & Current, Frequency, Power, Export kWh - Mode of Operation, Active Faults		
Battery Side					
Grid Side					
Load Side					
System Protection					
E. MISCELLANEOUS					
Switchgear Protection	MCB/MCCB provided on PV, Battery, Load & Grid path				
LED Indications	Power On, Inverter ON, Solar Present/Charging, Load On Grid/Charging, Battery Low, System Trip				
Data Port (RS485/ RS 232)	Optional (Available on Request)				
Remote Monitoring	Optional through GPRS based Modem/WIFI				
Ingress Protection	IP-20 (Indoor Type)				
Cooling Method	Force Cooling (Temp Controlled)				
Operating Temperature	0-50 degrees (without Derating)				
Humidity	Max. 95% Non-Condensing				
Altitude	1000m above sea level				

ENERGY STORAGE SYSTEM (Li+ ESS)

The 'Drawing-Room' Solar that runs your AC

Rayax ELITHIUM series form our stunning, powerful and premium category of Solar Energy Storage Systems. Perfect harmony of optimised MPPT Inverter technology and a lithium energy pack provides enough punch to run your heavy loads, including 1.5T inv Air Conditioner (Elithium 3532). Designed to revolutionise the aspirational domestic market, making seamless energy accessible to premium households. This solar plus storage pack promises intelligent operation of energy to ensure you are independent from the variations of mains grid.



ELITHIUM 2027

ELITHIUM 3532

TECHNICAL SPECIFICATION

PARAMETER	RATING	
Model Number/Name	Elithium 2027	
Nominal DC Voltage	25.6V	
MPPT CHARGER		
Type of Charger	MPPT	
No of MPPT Channels	One	
Switching Element	IGBT	
Max. Connected PV Modules	2200 Watts	3000 Watts
Max MPPT Output Current/ Max Battery Charging Current	70 Amps	100 Amps
Max. Open Circuit PV Voltage	110 V	
MPPT Voltage Range	35-88 Volts	
Max. Input PV Current	40 Amps	50 Amps
MPPT Peak Efficiency	94%	92%
SOLAR INVERTER		
Input Power at Peak Load	2200 Watts	3000 Watts
Switching Element	MOSFET	
Nominal Output Voltage	220 V	
Nominal Output Frequency	50 Hz	
Output Voltage Range (At nominal Battery Volts)	180-220 Volts	
Max. Output Nominal Current	8 Amps	9.5 Amps
Overloads	100-125% (120 Seconds), 126-150% (60 Seconds), 151-200% (5 Seconds), > 200% (Immediate)	
Controller Type	DSP Based	
Output Type	Pure Sine Wave	
Input Source	PV/ Battery/Grid	
Peak Inverter Efficiency	>85%	
Total Harmonic Distortion	less than 5 %	
Changeover Time in UPS Mode	less than 15 msec	
Changeover Time in Wide Range Mode	less than 25 msec	
BATTERY		
Battery Ah/Voltage	105/25.6	125/25.6
Battery Wh	2688	3200
Charging current (A)	30 Amps	
Continuous discharging current (A)	50 Amps	
Maximum continuous discharging current (A)	100 Amps	
Battery Under Cut Alarm	24.2V (Settable)	
Battery Under Cut	24.0V (Settable)	
Float Charging Voltage (Factory Settable)	28.8V	
Boost Charging Voltage (Factory Settable)	28.8V	
GRID CHARGER		
Grid Operating Voltage Range (W-UPS Mode)	120-280 Volts (+/- 10V)	
Grid Under Cut Recovery Voltage (W-UPS Mode)	135 Volts (+/- 5V)	
Grid Over Cut Recovery Voltage (W-UPS Mode)	265 Volts (+/- 5V)	
Grid Operating Voltage Range (UPS Mode)	180-260 Volts (+/- 10V)	
Grid Under Cut Recovery Voltage (UPS Mode)	195 Volts (+/- 5V)	
Grid Over Cut Recovery Voltage (UPS Mode)	245 Volts (+/- 5V)	
Grid Input Frequency Range	47-53 Hz	
DISPLAY/PROTECTIONS/INDICATIONS		
Protections	PV: Reverse Polarity, Battery Reverse Power, PV Power Limit Battery: Under Voltage Cut, Over Voltage Cut, Reverse Polarity, Overcharge Limit (BCL), Battery Fuse Grid: Over Voltage, Under Voltage, Over Frequency, Under Frequency, Grid Fuse Fail Load: Overload, Short Circuit, Over Heat, Output Low, Grid Back Feed, Prevent Ph to Ph condition Grid Supply	
Display Parameters	PV: Voltage, Amps, Power, Today KWH, Total KWH Generation. Battery: Voltage, Amps, Charge/ Discharge Status Grid: Voltage, Frequency, Load: Voltage, Load %, Frequency. System: Operating Modes (UPS/ Wide Range), Priority Selection, Grid Charging Enable/ Disable, Battery Status (Charging/ Discharging) Start Up: WELCOME, Firmware versions	
Display Faults	PV: PV Over Voltage Battery: Battery Under Voltage, Battery Over Voltage Grid: Back Feed, Under/ Over Voltage ,Fuse Fail Load: Overload, O/P Short Circuit System: Over Temperature	
Audio Buzzer	Overloads, Short Circuit, Low Battery Alarm, Battery Under Cut, Change in Grid Status (Beep),Grid Fuse fail, PV Over Voltage, Grid Over Voltage	
Front Panel LED	Power ON, Inverter ON, SPV Present/ SPV Charging, Grid Present/ Grid Charging, Battery Under Cut/ Alarm, Fault	
Front Panel Switches	Reset for System ON/OFF, UP, DOWN, BACK, ENTER	
Display Type	16 x 2 Alpha Numeric Display with Backlight	
ENVIRONMENT		
Operating Temperature	0-50 degrees Ambient	
Max Relative Humidity @25°C (non Condensing)	95%	
Degree of Protection	IP20	
Dimensions (LxWxH)	503X272X575 (in mm)	553X270X575 (in mm)
Noise @ 1meter	60 dB	
Cooling	Temp Controlled Fan Cooled	
*Specifications are subject to change without prior notice due to constant improvement in design and technology		

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HEAVY LOADS

Runs your 1HP motor on EL 2026 Runs your 1.5T inv AC on EL 3532 Built to withstand overloads up to 200%

PREMIUM DESIGN

Wall mounted sleek design Minimalist colours to match your decor No more shoddy battery wiring

LITHIUM ADVANTAGE

Zero battery maintenance Works well with heavy motor loads Longer life and more kWh per cycle

PLUG N PLAY LFP

battery, factory-fitted and connected Easily connect PV, GRID and LOADS DIY System, needs zero expertise to install



Clinics



Gyms



Shops



Residences



Bank ATM



Small Offices



HBD SERIES HYBRID MPPT INVERTER (1P & 3P)

Made for Power-Hungry Solar Applications

Built for large-sized industrial/commercial units requiring enormous and reliable power. Withstands hard Indian weather conditions. This MPPT-based attractive PCU delivers power seamlessly for large-scale applications. Multiple colours/designs are available as per technical specifications and user needs.

5–7.5 KVA/96V

10–15 KVA/120V

15–40 KVA/240V

30–40 KVA/360V

10–50 KVA

50–150 KVA

150–200 KVA

200–250 KVA



- Ideal for huge energy requirements
- Energiia's *Gold Standard* solar technology
- Active Front-End technology, more battery life
- Maximum solar power extraction under all conditions (High-efficiency MPPT)
- Tough and Resilient - Industrial-grade design
- Battery charging according to Time-of-Day
- Controlled scheduling via keypad or PLC
- BESS Solution - peak load shaving/levelling
- Exports excess power to the grid
- Can be AC coupled with String Inverters
- Compatible with Wind, Hydro and Biomass
- Seamless DG set synchronisation



Mini
Grids



Cold
Storage



Railway
Signaling



Office
Building



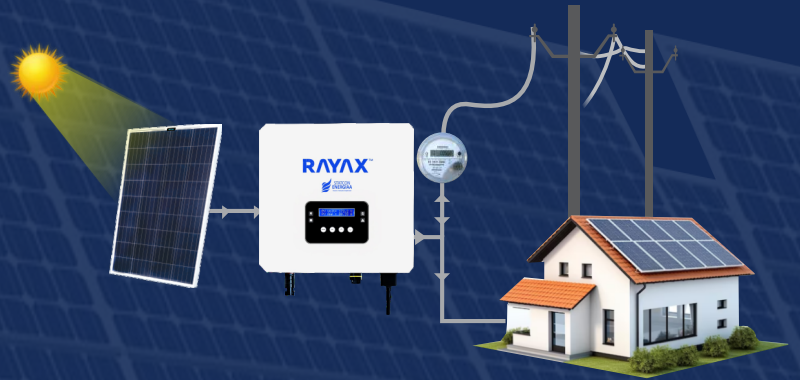
Telecom
BTS



Process
Industries

ONGRID SOLAR SYSTEM

On-grid solar power systems, also known as gridtied systems, are photovoltaic (PV) systems that are connected to the electricity grid. These systems allow for the integration of solar energy with the existing power grid, enabling users to both consume and contribute electricity. This setup is particularly popular in residential, commercial, and industrial applications due to its efficiency and cost-effectiveness.



OFFGRID SOLAR SYSTEM

Off-grid solar panel systems are standalone photovoltaic (PV) setups that operate independently of the electricity grid. These systems are ideal for locations where connecting to the grid is not feasible or economical, such as remote areas or off-the-beaten-path locations. They provide a reliable source of electricity by storing energy for use when sunlight is not available.

We provide solar off-grid solutions ranging from 1KW to 50 kW, primarily used in domestic settings, retail shops, petrol pumps, farm houses, and more.



HYBRID SOLAR SYSTEM

Hybrid solar panel systems combine features of both grid-connected (on-grid) and off-grid solar systems. These systems are designed to offer the benefits of solar energy while maintaining a connection to the electricity grid and incorporating battery storage. Hybrid systems aim to maximize energy efficiency, provide backup power, and offer flexibility in energy management.

We Provide Hybrid Solar Solutions Till 15 KW and its mostly uses by commercial, mid level organisation and serving various area like Nursing home, Boutique, Malls Etc.



ENERGY SOTRAGE SYSTEMS (ESS)

Solar Energy Storage Systems (ESS) are designed to store excess electricity generated by solar photovoltaic (PV) systems for later use. These systems enhance the flexibility and reliability of solar power by allowing users to store energy for times when sunlight is unavailable, such as during the night or cloudy periods. ESS can be integrated with solar PV systems to optimize energy usage, increase self-consumption and provide backup power during outages.





SOLAR WATER PUMP

India's agriculture largely depends on monsoon rains for natural irrigation. To supplement this, pumps are used to supply water artificially. Farmers often rely on grid electricity or diesel generators to operate these pumps, causing delays and financial strain. Therefore, a reliable irrigation solution like the Solar Water Pump proves to be highly beneficial. It ensures a consistent and steady water supply to their fields, enhancing crop productivity.

Solar water pumps utilize photovoltaic technology, converting sunlight into electricity to power the pumping system. This approach replaces the unreliable grid supply and eliminates pollution from diesel-operated pumps. Solar modules drive the system, effectively extracting surface or groundwater for irrigation purposes.

SOLAR ATTA CHAKKI

Rayax Solar Atta Chakki is an innovative solution aimed at promoting sustainable farming and reducing dependency on conventional energy sources. Equipped with high-efficiency solar panels, it provides a reliable alternative to inconsistent electricity, eliminating the need for costly diesel usage during grain grinding.

Beyond financial savings, the Rayax Solar Atta Chakki significantly benefits the environment by producing zero emissions and minimizing carbon footprints, contributing to a cleaner and greener environment. It empowers farmers to preserve their traditional practices while embracing eco-friendly advancements.



OUR PROJECTS





RAYAX™

The Rays Of Power

CORPORATE ADDRESS

RAYAX ENERGY PRIVATE LIMITED

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