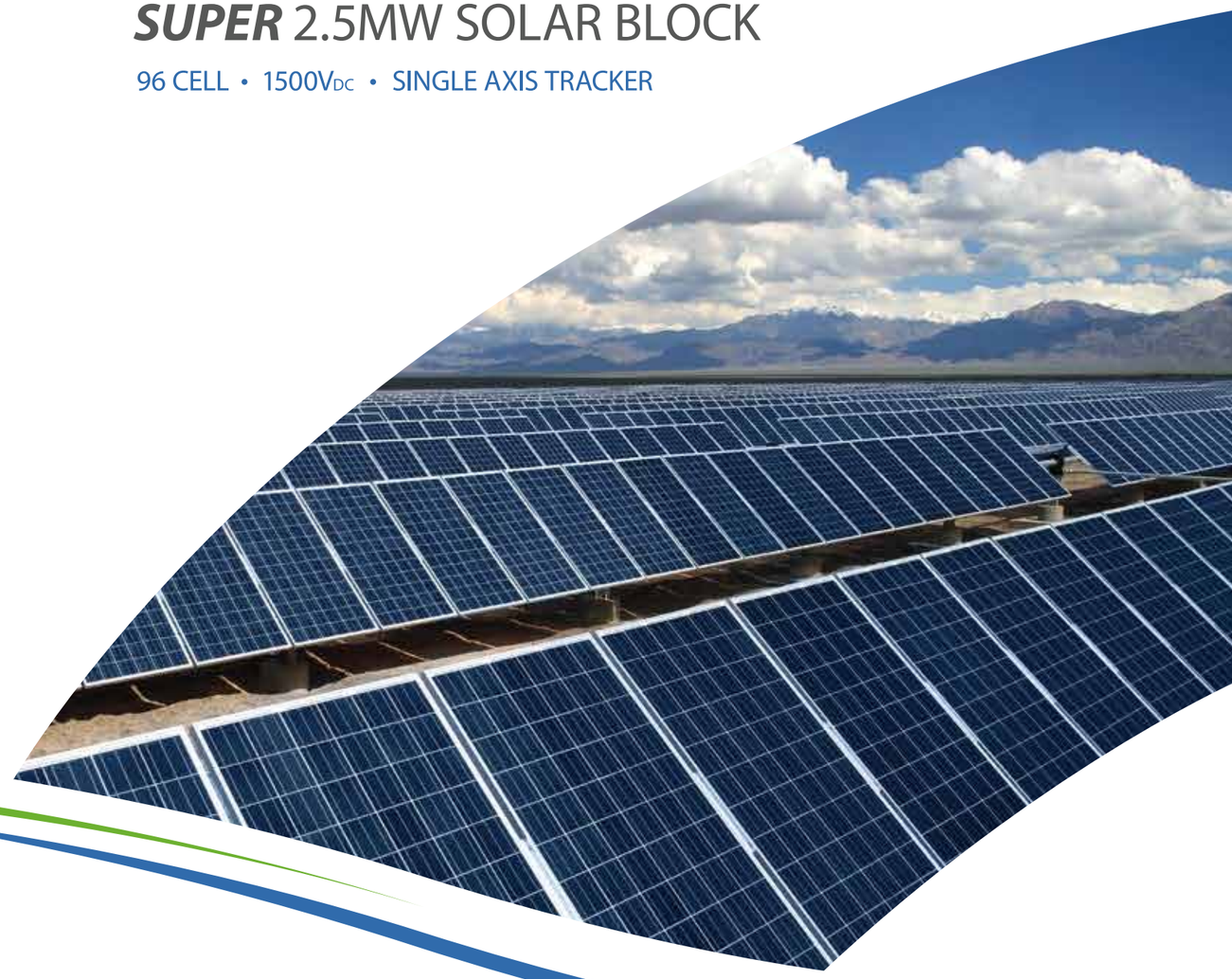
SUPER 2.5MW SOLAR BLOCK

96 CELL • 1500V_{DC} • SINGLE AXIS TRACKER



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BRINGING GREEN POWER TO LIFE

http://en.gclsi.com

SUPER Block Make Solar Plant

More Efficient and Powerful

GCL System Integration

GCL System Integration Technology Co., Ltd. is committed to be a global leading one-stop integrated services supplier for comprehensive energy. In GCL System Integration, we take research and development as our foundation, Designing optimization as our support, system-integration as our carrier, convenient financial services as our link and operational services as our bolster. With a global leading differentiated business mode, GCL System Integration is a one-stop integrated supplier of Designing & Products & Services that combines energy and internet.

In GCL System Integration, research and development are given priority to, and with our professional system-designing team, GCL System Integration offers technology designing services and optimized designing schemes for different kinds and scales of photovoltaic power systems.

Meanwhile, GCL System Integration also offers our customers with optimized solutions for different designing requirements with our outstanding industrial supply chains. With innovation of technologies and applications, we offer our customers with integrated packages for super-efficient components and through quality and efficiency, we guarantee our customers with a minimum 25 years steady operation of photovoltaic power systems.

After the establishment of power plants, GCL System Integration will continuously offer our customer with best operation services. With our professional management team, GCL System Integration will gradually accomplish global operation, intelligent operation and efficient operation. By large-data analysis of power station operations, we will improve and optimize our operational services and the power's yield. And the large-data analysis will also benefit our studies on system efficiency and designing optimization. Moreover, through internet technology, GCL System Integration offers our customers with optimized solutions for your systems, which will definitely improve the global competitiveness of operation systems of GCL System Integration.

In the future, for the commitment of becoming a global leading supplier of integrated distributed-energy system, GCL System Integration will further extend its product line offering one-stop service for clean energy.

One-Stop Service

Developing innovative technologies characterized by high energy yields, reliable operation in diverse climates, and low raw material consumption.
The high degree of vertical integration in the production processes has resulted in a leading market position.

SUPER 2.5MW Solar Block for ***SUPER*** Performance

GCL ***SUPER*** 2.5MW Solar Block is the latest package solution with best technology for partners. The solution focus on standardization and optimization for the solar power plant.

Standardized block make the design/construction more convinient and efficient.

This optimization inclouding three main upgrades from:

- ***72 cells solar panel to 96 cells solar panel***
- ***System voltage 1000VDC to 1500VDC***
- ***Fixed Mounting Rack to Single Axis Tracker***

The ***SUPER*** 2.5 MW block design target to

- ***Simplification of the design work***
- ***Lower the construction cost***
- ***Absorb more energy by tracking sun***
- ***Increase the DC part efficiency***
- ***Improve the system performance ratio***

With all these extrodinate advantages, the ***SUPER*** 2.5MW Solar Block set the benchmark of LCOE for large scale solar plant.

*LCOE= Levelized Cost Of Energy

System Featuer	
Power Generation	2.5 MWp (STC)
AC Power Supply	2,000 kVA
Solar Panel	425W (96 Cells)
System Voltage	1500VDC
Single Axis Tracker	8 Sets

Performance	
Space Efficiency	715KWp/ha
Required Area	35,000 m^2
Single Tracker Capacity	325kWp
Energy Yield	+15% more

** Data varies according to project*

“Just Place and Duplicate”

Block Design
Combination of GCL Technology

The SUPER 2.5 MW Solar Block GCL System Integration is a power generation unit which consists of the most advanced components on the market, ensuring maximized space efficiency for minimized costs. The consistent unit is developed for the construction of solar power plants in 2.5 MW block. Intelligently combined materials ensure decades of reliable operation, even in extreme environmental conditions.

The block design includes innovations like the single axis tracker, specially designed for GCL large size 96 cells modules, which speeds up the construction process, increases the space efficiency and energy yield.

Another essential part of the system is the newly developed 1,500VDC technology, using all components apply with 1500VDC standard. This ensures lower costs in cabling, power conversion, and further leads to high system efficiency.

The All-in-One Inverter Power Container is specially developed 2MVA power container includes two 500kW Inverters with 1500VDC system voltage, one MV transformer,. The All-In-One container reduces the on-site electrical connection and civil work. The build-in monitoring system ensure all the unit under full good performance. The Power Container with its medium-voltage grid supply can be designed according to local grid code and regulation.

GCL *Manufacture*

Module technology - The SUPER 2.5MW Solar Block designed for silicon technology from GCL System Integration, which apply SUPER large size solar panel with 96 cells up to 425Wp. The panel is optimized for horizontal single axis tracker. The production of the panels is under full automatic manufactory with strict quality control process. With this certificated SUPER 1500VDC 96 cells panel, construction cost and DC power loss can achieve to extra low level.

GCL *Manufacture*

Single Axis Tracker - The GCL's Horizontal Single Axis Trackers are aligned in north-south direction while rotating in the east-west direction with advanced tracking algorithms with independent IP right. The tracker is designed with sealed and maintenance free motor, easy for transport / construction/ mantainence, under world's most reliable slew drive (TUV, SGS certificated). The system can achiieve 10% to 25% more energy yield in various location.

SCADA and Monitoring

The SCADA (Supervisory Control and Data Acquisition) integrated by GCL monitors the grid access points and regulates the electrical current flow of the solar power plant. Specially developed voltage sensors and software algorithms detect emerging grid requirements and react automatically.

The Real-time Management system allows you to permanently monitor the plant. The web interface offers a huge variety of logging and analyzing tools. These tools deliver all important operational data of the power plant, to avoid system failures and to increase operating safety.

GCL *Integration*

GCL *Integration*

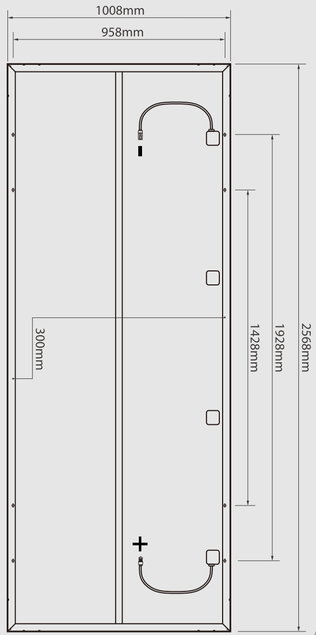
INVERTER POWER CONTAINER - The specially developed 2MVA power container includes two 500kW Inverters with 1500VDC system voltage, one MV transformer. The All-In-One container reduces the on-site electrical connection and civil work. The build-in monitoring system ensure all the unit under full good performance. The Power Container with its medium-voltage grid supply can be designed according to local grid code and regulation.

Advanced Technology for Future Solar Plant

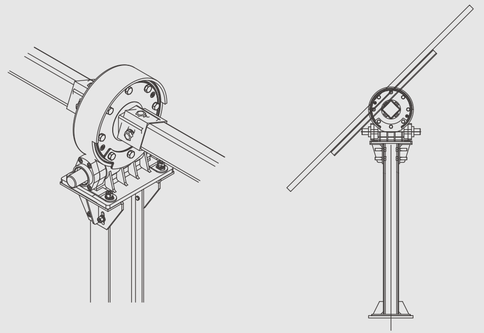
Total nominal power:	2,500 kWp
Required area:	around 35,000 m^2
Space efficency:	700~750 kWp/ha
Rated AC power:	2,000 kVA
System voltage:	1,500 VDC
Tracker Capacity:	300~ 350KWp/per motor
Tracker Performance:	10% ~ 25% more energy yield
Power Container:	Inverter Efficienty up to 99% Two independent inverter with wide MPPT range Build-in communication & monitoring unit Medium Voltage Transformer Easy transportation and installation 10kV to 33kV medium-voltage power grid (50/60Hz)
Lightning protection:	Active Lightning Shield
Plant management:	SCADA & Solar Plant Monitoring
Photovoltaic modules:	GCL 96 cells Modules (1500VDC) 2568x1008x40mm(36.5kg) IEC 61730, UL 1703, TÜV Safety Class II
System efficency:	Up to 85% (Performance Ratio)
Valid air temperature:	-20 to 50°C
Full load altitude	3000m
Operating service life:	25 years+
Standards:	Meets country-specific codes ASCE / EN / DIN / VDE / ISO / IEC
Disposal:	Recyclability of all components
Shipment:	Container 40' DC High Cube

Technical changes are reserved.

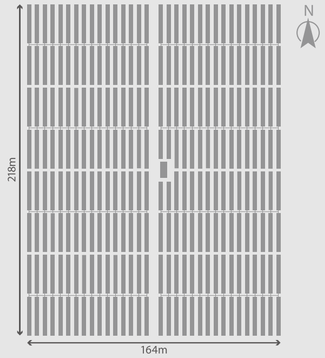
96 Cells Solar Panel Dimension



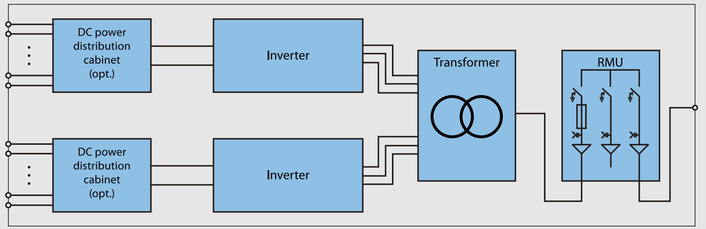
Mounting Rack - Single Axis Tracker



SUPER 2.5 MW Solar Block Dimension



Invert Container Circuit Diagram



Additional Service
Beyond the Package Solution

Choosing GCL System Integration, means choosing technology with decades-long endurance. And if you wish, GCL System Integration Service offers a Full Service Agreement including a comprehensive operations and maintenance plan, ensuring the highest level of performance.

The generation of electrical power from sunlight is almost wear-free and very little maintenance is required. Continuous monitoring of each power unit is still advised to prevent avoidable yield losses. The long service life requires professional management: GCL takes care of all technical tasks worldwide. Around the clock, our team of experts currently monitors over 2GWp of PV facilities, including those designed with SUPER 2.5MW Solar Block.

The contractual service agreements are designed to provide flexible and optimum care for your plant.

Our global service network with its dedicated staff supports predictable performance at all times. Remote power plant monitoring, regular inspections which include visual and function checks, cleaning services, on-site support in the event of a fault and detailed maintenance reports are integral parts of the continual monitoring and management we offer.

Bringing Green Power to the world

1

USA: Alpaugh

Units placeable: 10x2.5MW Block
Nominal Power: 24 MWp

2

China: Hami,Xinjiang

Units placeable: 8 x 2.5 MW Block
Nominal Power: 20 MWp

3

USA: Sol Orchard

Units placeable: 7 x 2.5 MW Block
Nominal power: 18MWp

4

China: FuNing

Units placeable: 12 x 2.5 MW Block
Nominal Power: 30 MWp