TG-EP

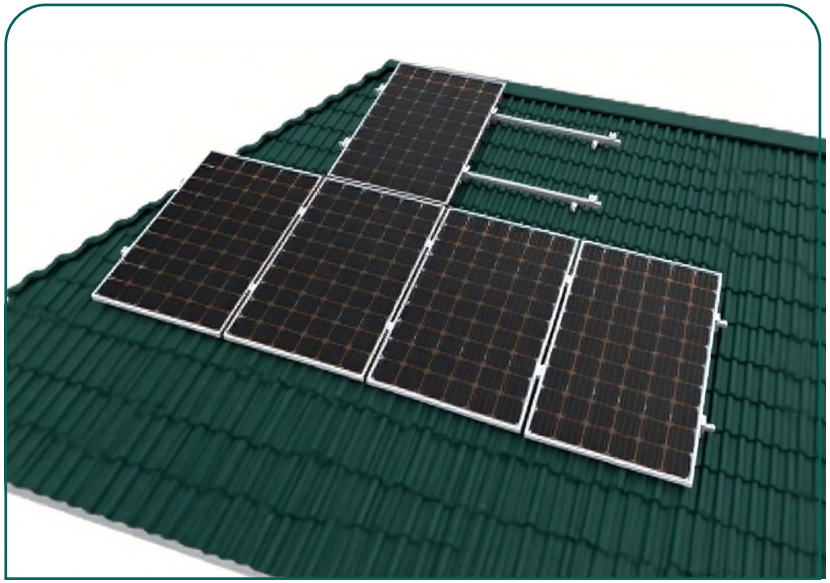
TrinGo.the Energy Pioneer

One-stop solution expert for PV mounting system

Product Catalog

1 Tile Roof Mounting System

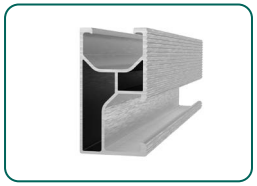
Tile Roof Mounting System



Product Advantages

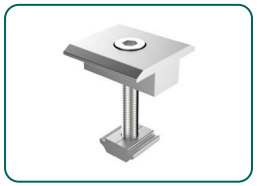
- Multiple hook designs compatible with various tile profiles.
- Highly adjustable bracket system for easy installation.
- All-aluminum alloy structure, lightweight, reduces roof load.
- Simple, fast installation with high adaptability.
- Sleek appearance with excellent corrosion resistance.

Component Display



Rail

End Clamp

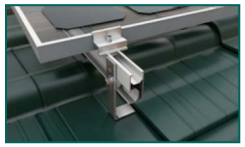


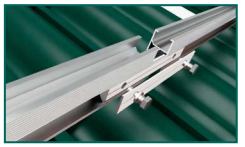
Mid Clamp

Rail Connector

Hook

Installation Node Diagram





Technical Parameters

- Installation Angle: Parallel to the roof surface
- Material: Aluminum Alloy/AL6005-T5
- Surface Treatment: Anodized Anodized (customizable thickness)
- Design Standards: GB50009-2012, IBC2009, CBC2010, AS/NZS1170, JISC8955-2017

Hook Components Product Display-Tile Roof Mounting System

Flat Tile Hook 1

Flat Tile Hook 2

Tile Hook 3

Tile Hook 4

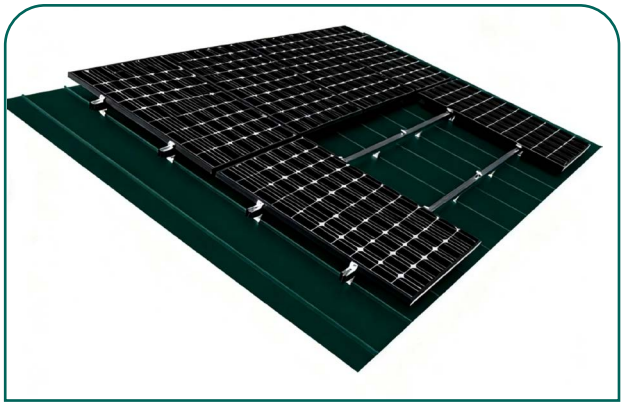
Tile Hook 5

Tile Hook 6

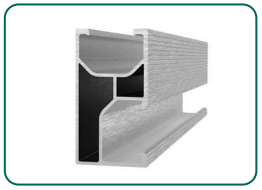
Note: To ensure the safety and stability of the photovoltaic system without compromising roof waterproofing, it is essential to precisely match specialized hooks based on the specific glazed tile characteristics. Professional solutions, including wind load calculations and waterproofing design, must be provided.

2 Metal Roof Mounting System

Metal Roof Mounting System



Component Display

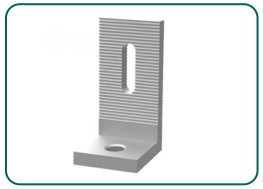


Rail

End Clamp

Mid Clamp

Double-Ended Screws



L-Angle Bracket

Installation Node Diagram

Product Advantages

- Compatible with various metal roof profiles.
- Standardized design reduces installation cost and time.
- All-aluminum alloy structure, lightweight, reduces roof load.
- Simple and fast installation with strong adjustability.
- Preserves the integrity of the existing roof waterproofing.

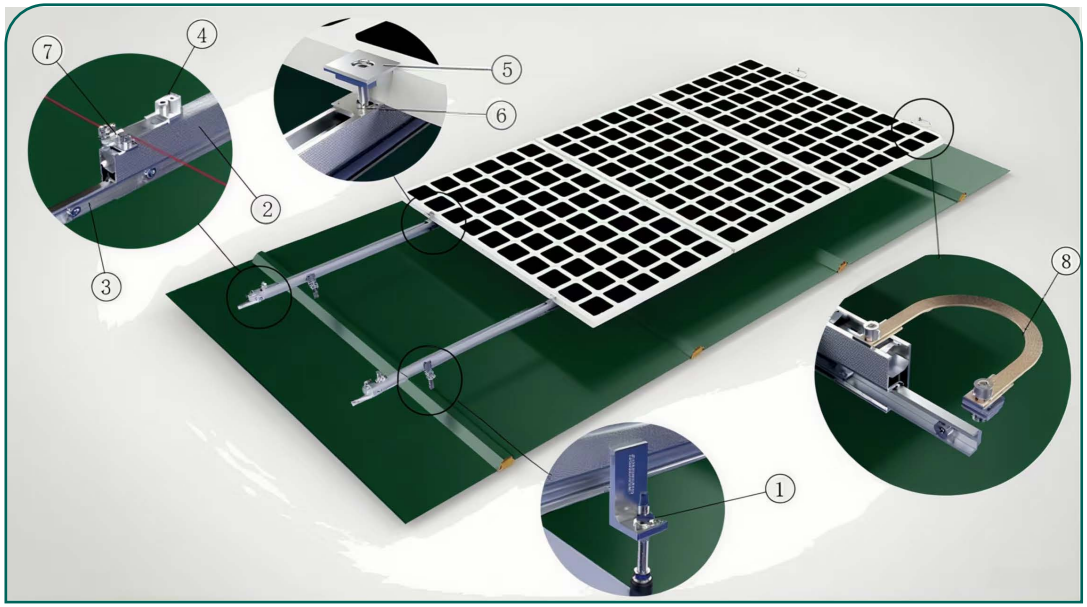
Technical Parameters

- Installation Angle: Parallel to the roof surface
- Material: Aluminum Alloy/AL6005-T5
- Surface Treatment: Customizable anodized surface thickness
- Design Standards:GB50009-2012, IBC2009, AS/NZS1170

  CBC2010, JISC8955-2017

Grounding Accessories Installation Diagram &Related Product Display

-Metal Roof Mounting System



Accessories

①Double-Ended Screws
②Rail
③Rail Connector
④End Clamp
⑤Mid Clamp
⑥Conductive Sheet
⑦Conductive Clips
⑧Rack Connector

Accessories

- Rack Connector

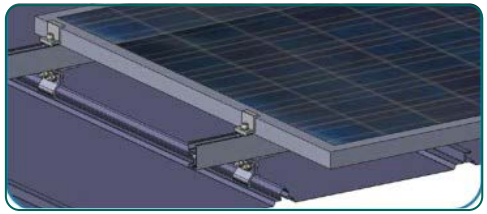

- Conductive Sheet

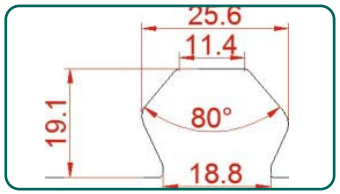

- Conductive Clips


- Cord Clip

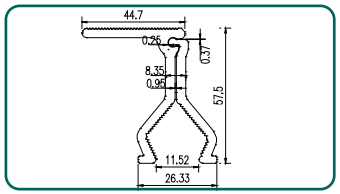

Installation Schematics for Different Metal Roof Profiles-Metal Roof

Installation Schematic A



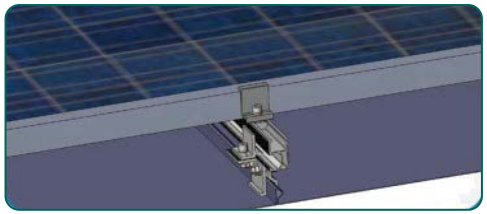


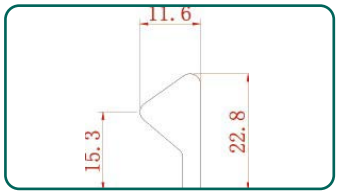
Profile A



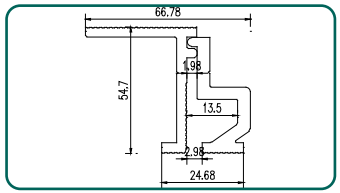
Clamp A

Installation Schematic B



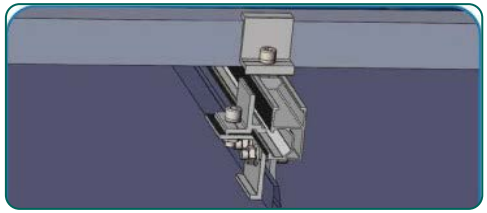


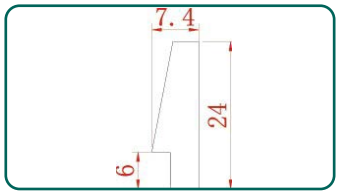
Profile B



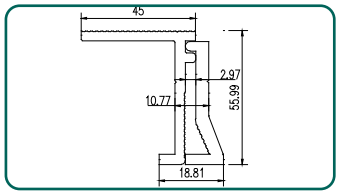
Clamp B

Installation Schematic C





Profile C



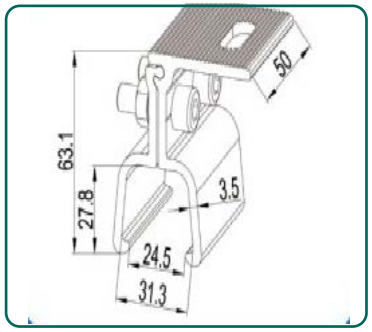
Clamp C

Installation Schematic D

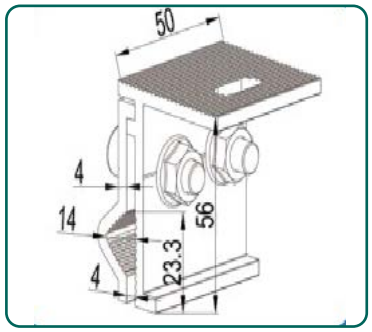
Installation Schematic E

Clamp Components Product Display-Metal Roof

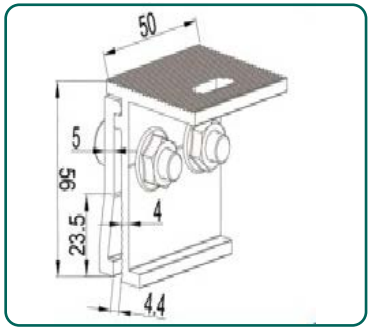
Clamp



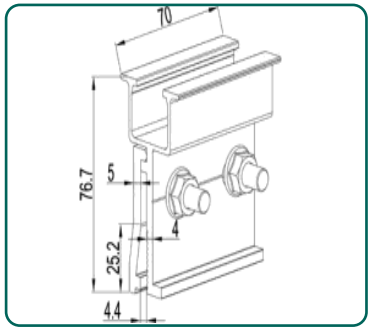
Clamp1



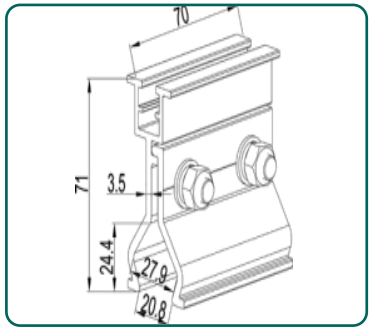
Clamp2



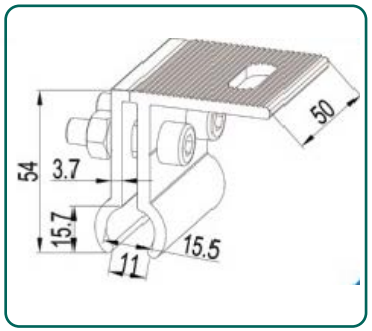
Clamp3



Clamp4



Clamp5



Clamp6

Diagram

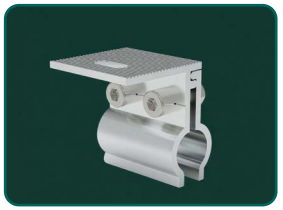


Diagram1


Diagram1

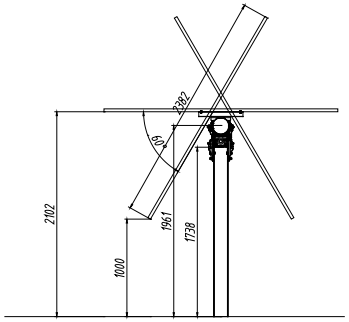

Diagram1

Note: To ensure the safety and stability of the photovoltaic system without compromising the roof's waterproofing integrity, it is essential to precisely match specialized clamps according to the specific profile of the Metal roofs (e.g., trapezoidal, standing seam, corrugated). Professional solutions—including wind load calculations and waterproofing design—must be provided.

3 PV Tracking System

PV Tracking System

Side View：：

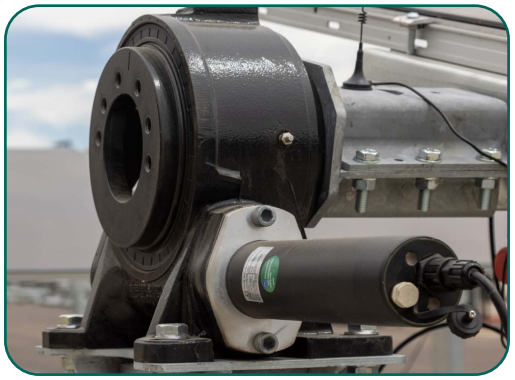


Features of PV Tracking Mounting System

- Basic Definition: A PV tracking mounting system is an intelligent support structure that drives photovoltaic modules via an electromechanical system.
- Core Function: It dynamically adjusts the angle of PV modules in real time to follow the sun's path, maximizing solar radiation exposure.
- Main Types:
  - ●Single-Axis Tracking: Adjusts the tilt angle of the modules.
  - ●Dual-Axis Tracking: Adjusts both the tilt and azimuth angles of the modules.
- Key Advantage: Significantly improves energy yield, typically yielding an energy gain of 5% to 35% compared to fixed mounting systems.
- Primary Application: Primarily used in large-scale, utility-scale ground-mounted photovoltaic power plants.
- System Composition: Consists of four main components: structural components, drive system, control system, and control algorithm.

PV Tracking System

TRACKER SPECIFICATIONS



- Tracking Type:Independent horizontal single-axis tracker
- Tracking Range:±60°
- Drive Type:Slew drive/Synchronous multi-point design
- Modules per Tracker： Up to 120 modules per tracker
- ytem Voltage:300 VDC-1000 VDC
- Foundation Options:Ramming piles/Cast-in-place concrete piles/Concrete piles or ballasts
- Structure Material:Hot-dip galvanized / Pre-galvanized / Magnesium-aluminum-zinc coated steel
- Daily Energy Consumption:Typical 0.04kWh/day
- Standard Design Wind Speed:156mph (70m/s) per ASCE7-10, higher wind load available
- Modules Supported:All commercially available modules
- Operation Temperature Range: -30°C to 60°C

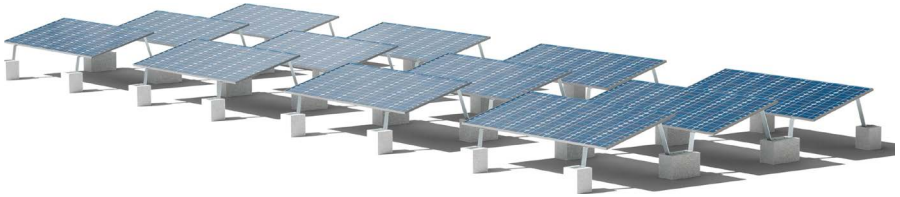
PV Tracking System

TRACKER CONTROLLER SPECIFICATIONS

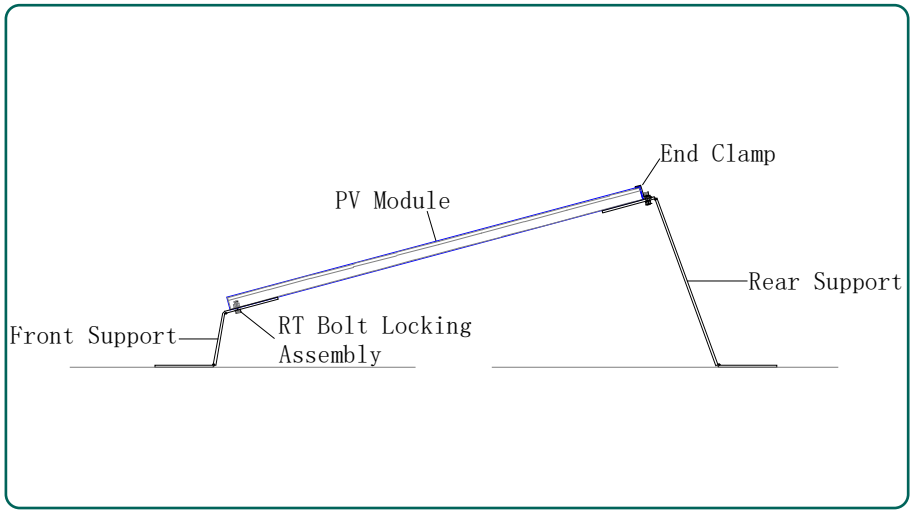
- Control Algorithm:Astronomical algorithms + Tilt sensor closed-loop control
  Tracking Accuracy:≤2°
- Low tilt stow angle:Support terrain adaptive intelligent algorithm
- Communication Options:LoRa wireless/RS-485 cable
- Other Special Modes:Windward stow,snow, flood and hail protection for customer selection
- Controller's Power supply:String powered as default, AC or self-powered as option
- Flood Mode:Tracker flat (optional)
- Snow Mode:Tracker at max tilt (optional)
- Wind Stow Mode: Low tilt stow angle

4 Flat Roof Ballast Mounting System

Flat Roof Ballast Mounting System

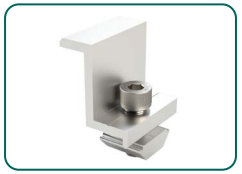


Installation Schematic Diagram

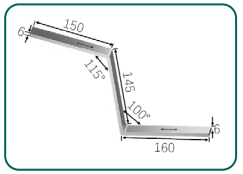


Component Display

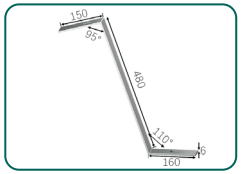
Post-Expansion Anchor Bolt



End Clamp



Front Support



Rear Support

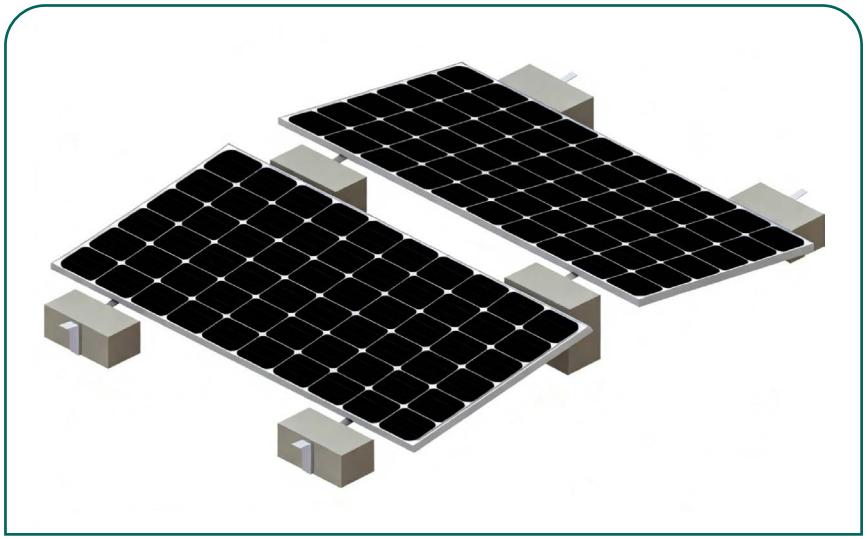
Product Advantages

- System Type: Cost-effective flat roof mounting system.
- Primary Material: Steel.
- Key Characteristic: Simple and fast installation process.
- Applicable Regions: Excellent wind resistance. High-strength material (Q355B steel, hot-dip galvanized ≥140μm) ensures superior durability.

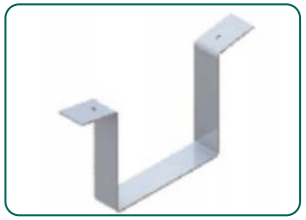
Technical Parameters

- Installation Angle: Parallel to the roof surface
- Material: Steel Q355B (customizable)
- Surface Treatment: Hot-dip galvanizing (≥140μm, customizable)

Flat Roof Ballast Mounting System



Component Display



Front Support

Middle Support

End Clamp

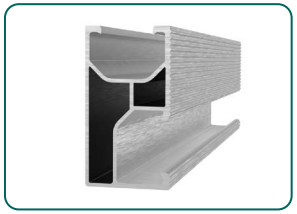
Installation Examples

Product Advantages

- System Type: Cost-effective flat roof mounting system.
- Primary Material: Steel.
- Key Characteristic: Streamlined and efficient installation process.
- Recommended Application: Suitable for regions with low wind and snow load requirements.

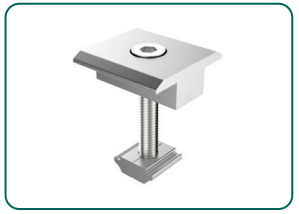
Flat Roof Ballast Mounting System

Component Display



Rail

End Clamp



Mid Clamp

Rail Connector

Fixed Triangular Bracket

Product Advantages

- High-strength aluminum alloy material with excellent corrosion resistance.
- Bolted connection design for simple and fast installation.
- Flexible configuration, compatible with concrete foundations.
- Strong stability, capable of withstanding extreme weather conditions.
- Adjustable angle to maximize power generation efficiency.

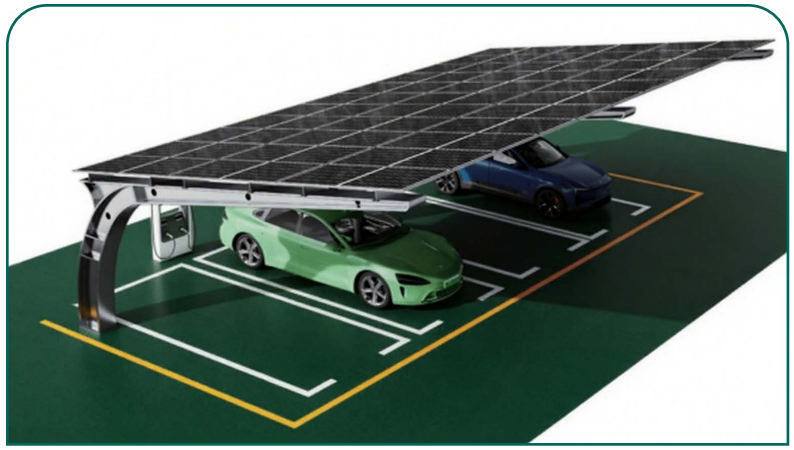
Technical Parameters

- Installation Angle: Parallel to the roof surface
- Material: Aluminum Alloy/AL6005-T5
- Surface Treatment: Customizable anodized surface thickness
- Design Standards: GB50009-2012, IBC2009, CBC2010, AS/NZS1170, JISC8955-2017

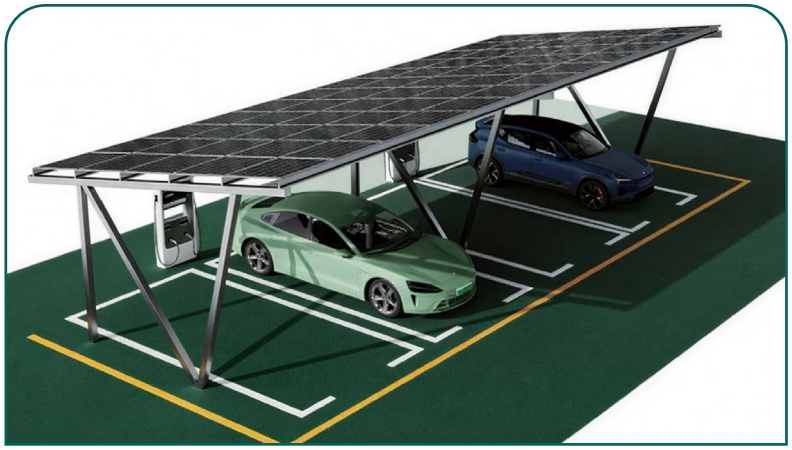
5 Carport Mounting System

Carport Mounting Solution

Partial Display of Carport Styles



Cantilever Type



Bent Frame Type

Product Advantages

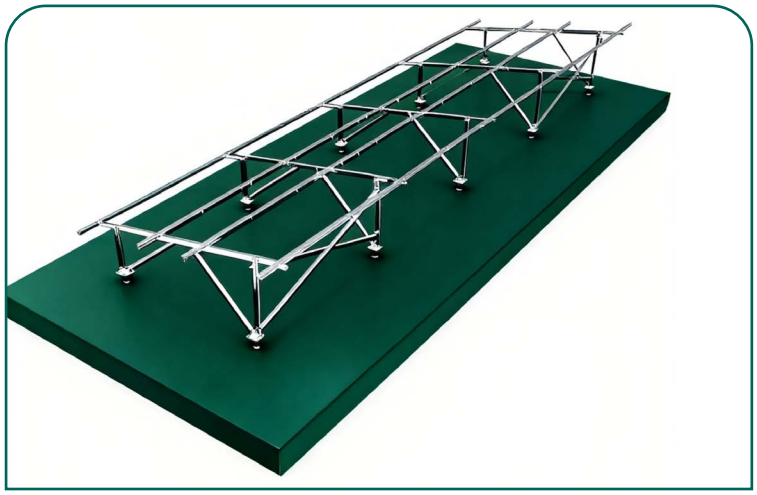
- Provides shade and rain protection for vehicles
- Utilizes prefabricated structure with modular on-site assembly to improve construction efficiency
- Suitable for multiple scenarios with diverse and aesthetically simple design options
- Steel structure designed for wind resistance, excellent fire resistance, and weather durability

Technical Parameters

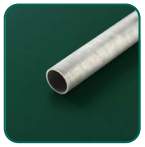
- Structural System: Cantilever type, bent frame type, etc.
- Material: Steel Q235B/Q355B
- Anti-Corrosion Treatment: Coating protection/hot-dip galvanizing
- Flame Resistance Rating: Class A (GB 8624)

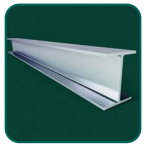
6 Ground Solar Racking System

Ground-Mount Solar Solution



Component Display


Round Steel Pipe


H-Beam


U-Steel


C-Steel

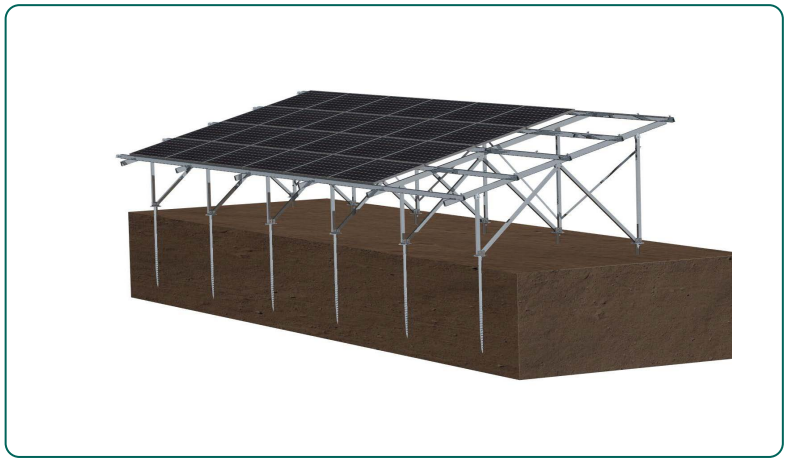

Ground screw

Fixed Mounting System display

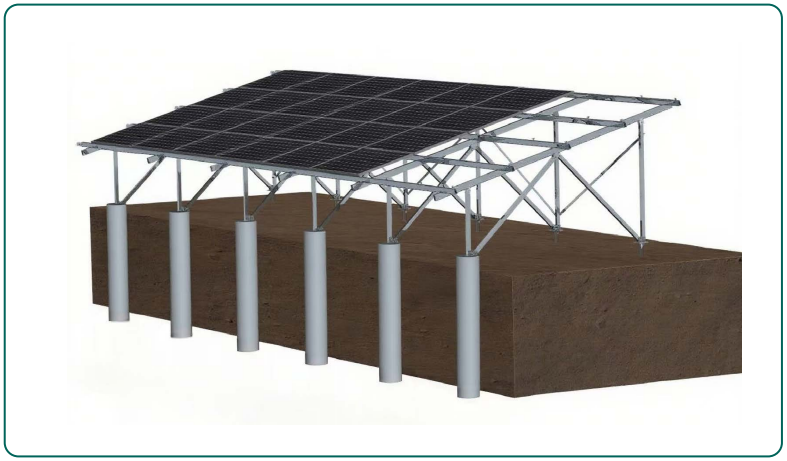
Product Advantages

- Excellent environmental adaptability, designed for complex terrains such as shallow beaches, grasslands, deserts, and wetlands.
- Exceptional corrosion resistance, ensures long system service life.
- Outstanding mechanical performance and strong load-bearing capacity, effectively resisting extreme weather conditions like strong winds and heavy snow.
- Standardized and modular design with efficient connection methods, significantly improving installation speed.

Bracket Pile Foundation Types



Ground Screw Foundation



Concrete Pile Foundation

C/H-Beam Foundation

Technical Parameters

- Tilt Angle: Customized based on the optimal solar angle for the project location.
- Materials: Steel Q235B/Q355BAluminum、Alloy/AL6005-T5
- Anti-Corrosion Treatment: Hot-dip galvanizing (steel), Anodizing (aluminum), or Protective Coating.