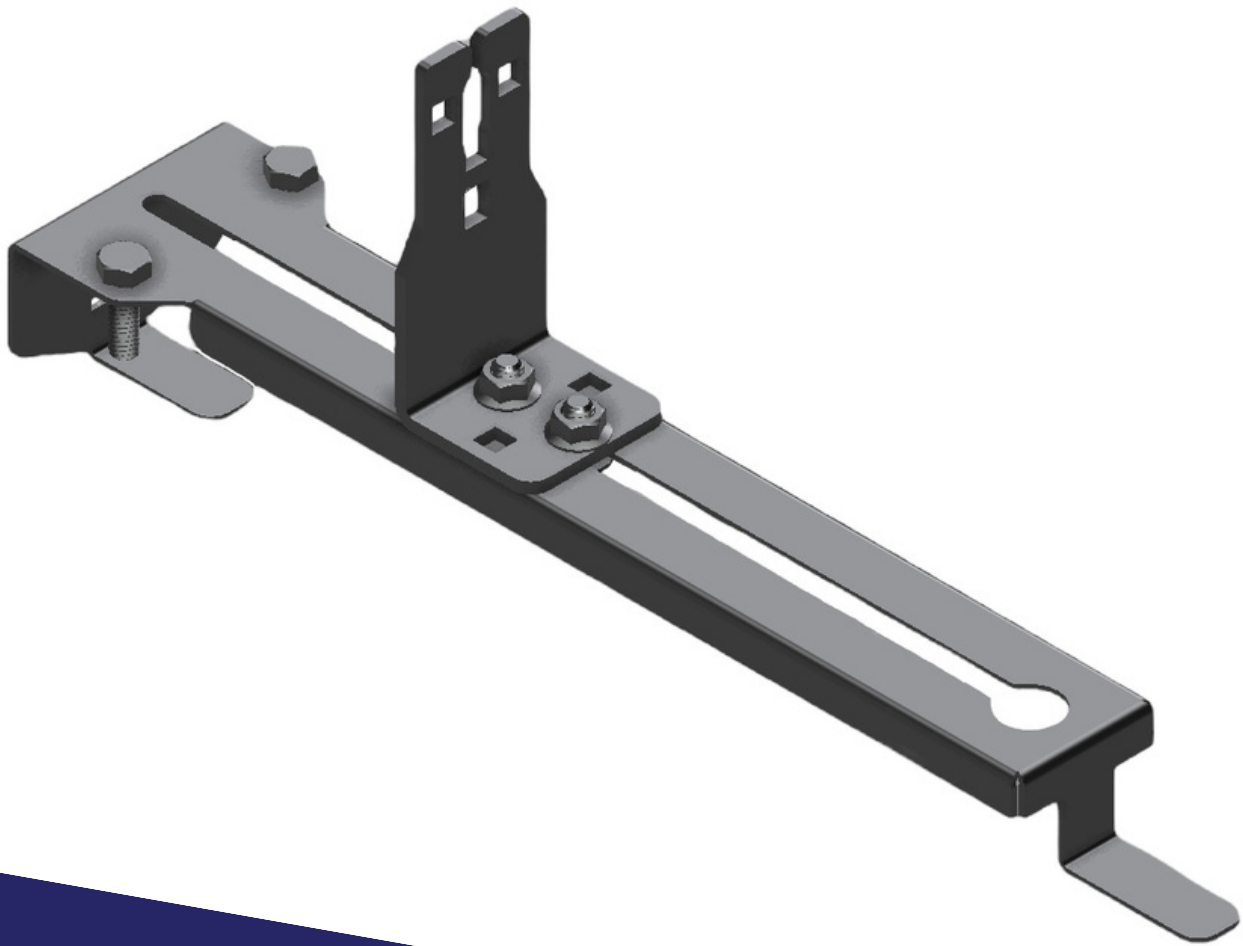


# **INTEGRARACK®**

Revolutionary Solar Racking Systems



## **IR-T1 INSTALL INSTRUCTIONS**



IntegraRack® backs all of its products with a 25 year limited product warranty. We fully stand by the quality and guarantee that they will hold up under the harshest conditions when properly installed.

## Disclaimer

The instructions detailed in this manual will provide the knowledge and requirements necessary for proper installation of the given product. Be sure to read them thoroughly and make sure that you fully understand them before proceeding with installation. Any improper use or installation of these products will void any and all warranty coverage, and may cause failure, property damage or personal injury. IntegraRack is not responsible for any damages caused by improper use.

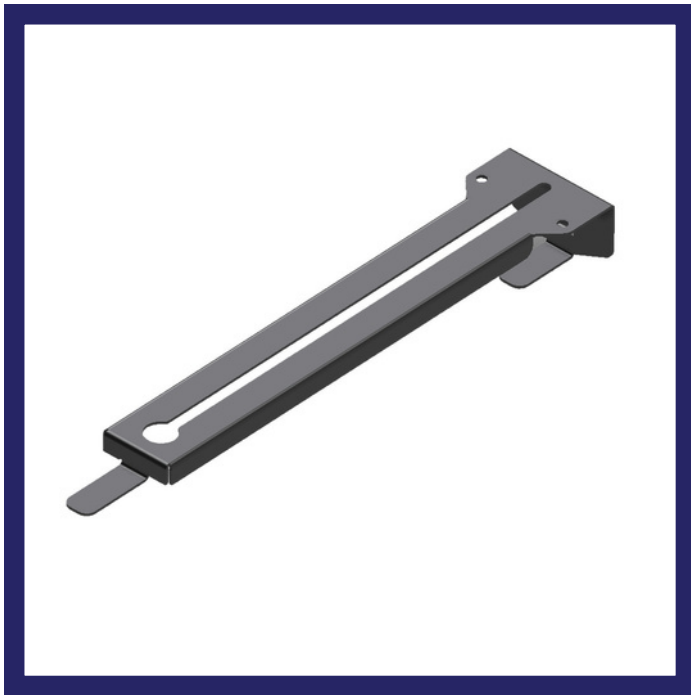
### **IT IS THE RESPONSIBILITY OF THE INSTALLER TO:**

- Comply with any and all applicable local or national codes and regulations.
- Ensure all products are appropriate for the installation according to the environmental and loading conditions.
- Ensure roof structure is in good condition prior to installation
- Disconnect AC power before servicing or removing modules, micro-inverters or power optimizers.
- Review manufacturer's documentation for compatibility and compliance for solar modules and 3rd party systems.
- If loose components or loose fasteners are found during periodic inspection, re-tighten immediately. Any components showing signs of corrosion or damage that compromise safety shall be replaced immediately.
- Provide an appropriate method of direct-to-earth grounding according to the latest edition of the National Electrical Code, including NEC 250: Grounding and Bonding, and NEC 690: Solar Photovoltaic Systems.
- Ensure safe installation of all electrical aspects of the solar system (All electrical installation and procedures should be conducted by a licensed and bonded electrician or solar contractor). Regular maintenance of a module or panel shall not involve breaking or disturbing the bonding path of the system. All work must comply with national, state and local installation procedures, product and safety standards.
- Ensure bare copper grounding wire does not contact aluminum and zinc-plated steel components, to prevent risk of galvanic corrosion.
- Ensure provided information is accurate. Issues resulting from inaccurate information are the installer's responsibility.

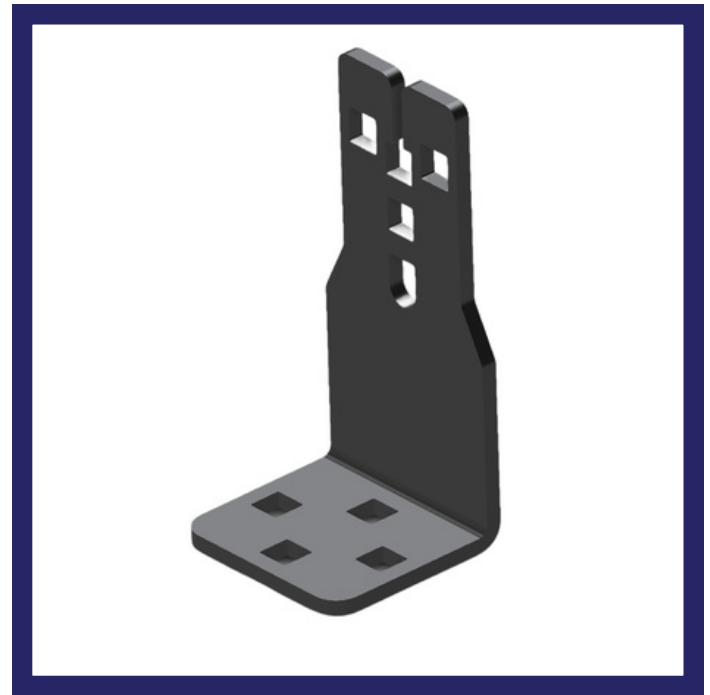
# Components

## INCLUDED COMPONENTS

- (1) IR-T1 Tile Roof Bracket
- (1) IR-L1 Universal L-Foot Bracket
- (2) M8-1.25x24mm Black Tile Tension Bolts
- (2) M8-1.25x16mm Carriage Bolts
- (2) M8-1.25 Serrated Nuts



IR-T1 Tile Roof Bracket



IR-L1 Universal L-Foot Bracket

## Required Tools

### Tools Needed

- 1/2" Wrench or Screw Gun
- Loctite PL® Premium Max High-Strength Concrete Polyurethane Adhesive
- Caulk Gun
- Claw Hammer
- Tape Measure
- Carpenter's Pencil (for marking adhesive locations)
- Small Brush/Microfiber Rag (for cleaning under tiles)

# Installation



## 1. Plan Layout

The IR-T1 is designed to replace traditional tile roof hooks used with rail based solar module mounting. The IR-T1s must be placed no more than 12 inches in from each end of the rail, and spaced no more than 4 feet apart (See our datasheets for detailed snow and wind load requirements).



## 2. Mark Tiles For Adhesive Bonding Areas

Once layout is planned and IR-T1 placement is marked, use a carpenter's pencil to draw a line where the upper tile rests on the lower tile for both locations where the IR-T1 tabs will be inserted under the tiles.



## 3. Apply Our Test Proven Adhesive

First, make sure the adhesive area is clean of any dust and debris before applying adhesive. Using the claw end of a hammer, lift the upper tile and use a caulk gun to apply a bead of the high-strength concrete adhesive above the penciled line and all areas where upper tile makes contact with the upper tile.

*\*Approximately (1) Tube of adhesive needed for every (10) IR-T1 Brackets. It is important to install each IR-T1 directly after applying adhesive.*



## 4. Install IR-T1 Bracket

As soon as adhesive is applied, slide the tabs of the IR-T1 under the upper and lower tiles of the roof where the two beads of adhesive were applied. The IR-T1 may need to be lightly tapped into place.

*\*Repeat steps 3 & 4 until all IR-T1 Brackets are installed on the roof.*



## 5. Tighten Tension Bolts

The two tension bolts will provide sufficient strength to install solar modules before adhesive has fully cured. They also allow for immediate module installation without having to wait for the adhesive to set up. Once all IR-T1 Brackets are in place, tighten all tension bolts.

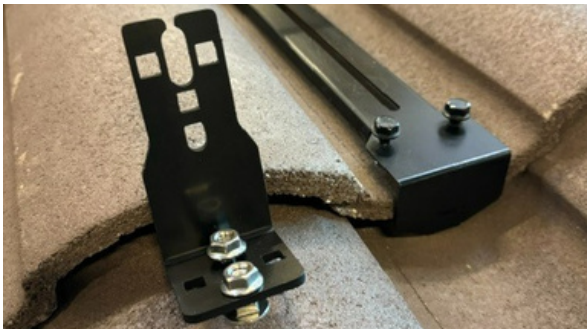
*\*The IR-T1 is designed with a flex point to prevent the tension bolts from cracking the tiles, but caution should still be taken to not over tighten the tension bolts.*

# Installation



## 6. Mark L-Foot Location on IR-T1

The IR-L1 L-Foot is designed to attach the IR-T1 to the rail system. Use the measurements from *Step 1* for spacing of rails to determine placement of the IR-L1 - Foot brackets along the slot of the IR-T1.



## 7. Prepare IR-L1 Brackets

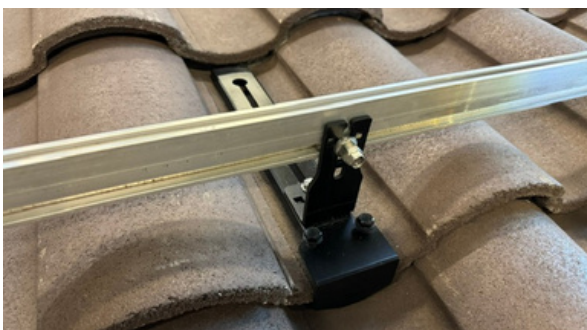
Insert the included carriage bolts up through two of the openings on the bottom foot of the L-Foot Bracket and partially tighten serrated nuts.

*\*It is important to not tighten the serrated nuts until the IR-L1 is mounted in the correct position on the IR-T1.*



## 8. Mount IR-L1 Brackets

Insert the heads of the bolts into the larger opening at the top of the IR-T1 (you will need to angle the foot of the IR-L1 to insert one at a time) and slide the IR-L1 along the slot. Once in the proper position, tighten the carriage bolts and lock the L-Foot in place.



## 9. Attach Rails

Attach rails to the IR-L1 brackets using the T-Bolts included with the rails. The IR-L1 has an opening for a 5/16" T-Bolt and an adjustable slot for a 3/8" T-Bolt, making it compatible with all rail system.



## 10. Install Solar Modules

String line across top of rails up the roof to adjust all rails to the same height and install solar modules as per manufacturers specifications.



**View Installation Video**



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Revolutionary Products**



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