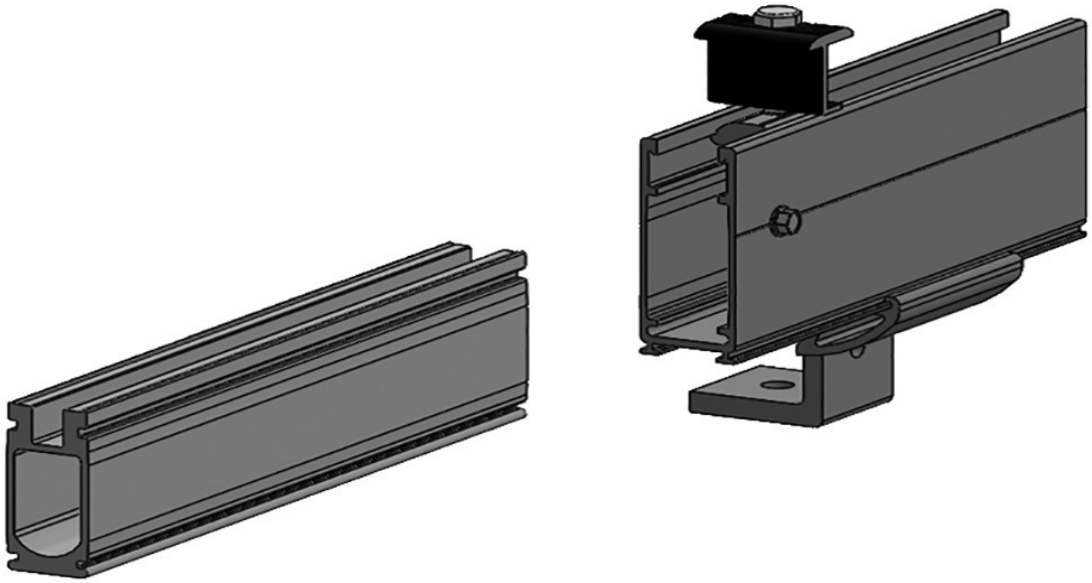


Installation Manual

Tamarack Rails on MT Solar Mounts

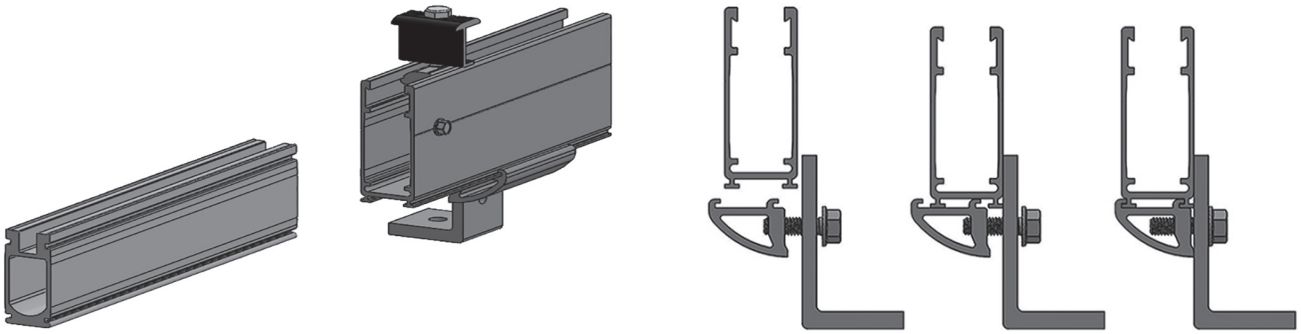
www.mtsolar.us
844-MT-SOLAR (687-6527)

V1.1

Installation Manual for Tamarack Rails on MT Solar Mounts

Tamarack System Features

- Top clamps and rail attachments require the use of a 1/2-inch socket and a 9/16-inch socket
- One part for both mid-clamp and end-clamp use simplifies ordering and stocking parts
- Module clamps are spring loaded to ease module placement
- Built-in wire management for module and microinverter cables



Tools Required

- Cordless Drill
- Torque Wrench
- Rachet and 1/2-inch and 9/16-inch Socket
- Level
- Driver Bit

Torque Specifications

Rail Support with 3/8-inch bolt.	**22 ft-lbs**
MLPE Rail Attachment	**12 ft-lbs**
Ground Lug	**12 ft-lbs**
50-50 clamp	**12 ft-lbs**
Rail Ground Lug	**12 ft-lbs**
Ilsco SGB-4 Module Frame Ground lug	**12 ft-lbs**

ETL Listed to UL 2307 for bonding and grounding when installed in accordance with this manual.

Rails, clamps, splices and mounting devices are UL2703 Listed for mounting flat-plate Photovoltaic Modules and Panels

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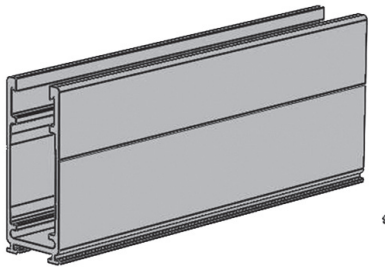
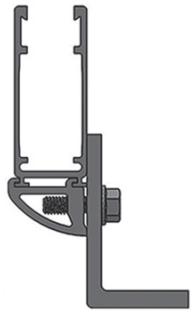
2020 MT SOLAR / TAMARACK SOLAR - REVISION 1

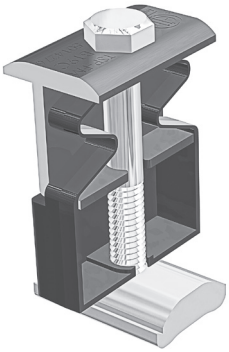
Tamarack Flush Mount System Components



3.1 inch Rail



Rail Mount



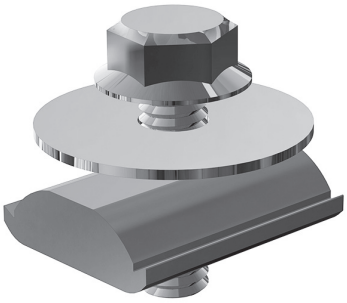
50-50 Clamp

Rail Splice

Rail Ground Lug

Module Frame Ground Lug

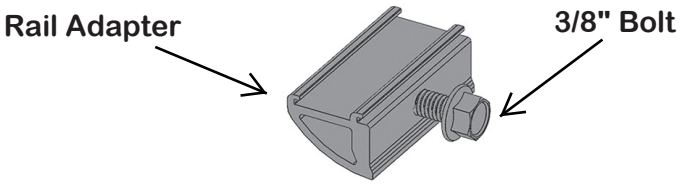
Wire Management Clip



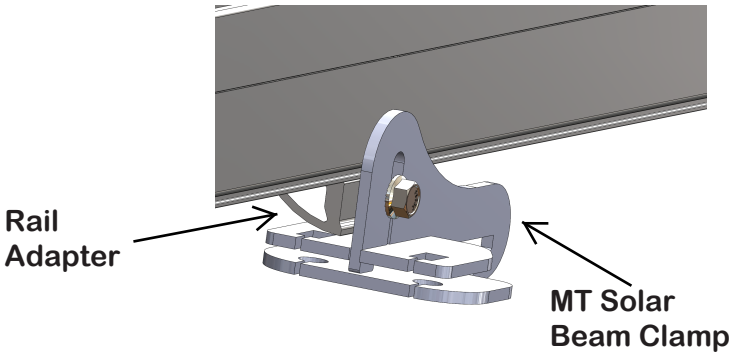
MLPE Adapter

Attach Rail Mounts and Install Rails

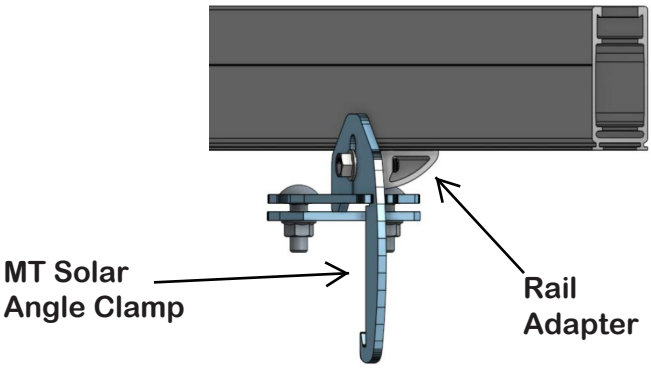
Each Rail Adapter consists of two parts, a bolt and a clamp extrusion.

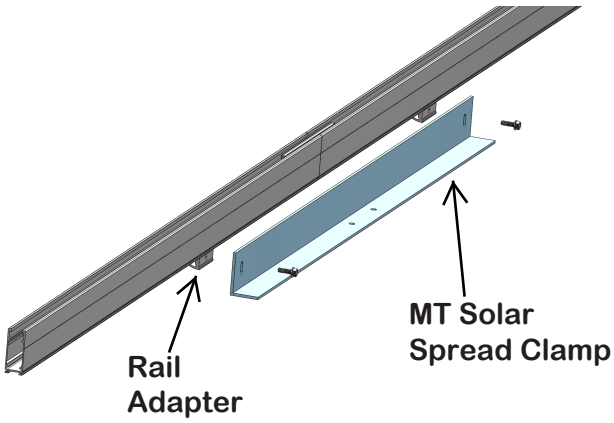


The rail adapters have been designed to interface with off-the-shelf mounting products that have vertical leveling slots. The rail adapters work with typical products that have 5/16 inch or 3/8 inch bolt slots. The rail adapter is compatible with MT Solar Beam Clamps, Angle Clamps or Spread Clamps for installation on typical ground mounts or pole mounts.

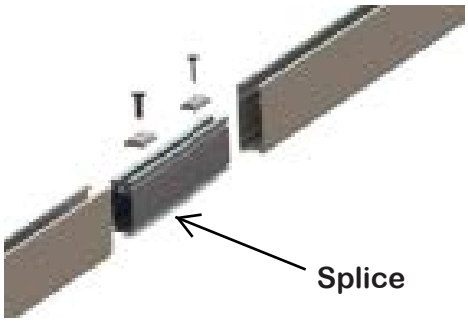


Rail mounting is simple and easy. The Rail Adapter clamps to the two feet on the bottom of the rail. There is never any drilling, and parts can be brought on site fully assembled and ready to be installed. Rail Adapters may be installed anywhere on the rails, including at splices and they will not interfere with module mounting clamps.





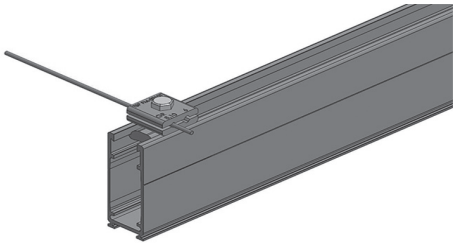
Insert the Rail Splice 5-inches into one rail end. Install one of the provided Rail Splice Locks and tighten to hold it in place. Slide the second section of rail over the splice until it contacts the first section and install the second Rail Splice Lock. Tighten both Rail Splice Lock bolts to 12 foot-pounds. Either bolt may be loosened and moved slightly if it interferes with mid-clamp placement when installing modules.



Grounding

Tamarack rails and PV modules are bonded by 50-50 Module Clamps and splices.
The 50-50 clamps achieve bonding to the module frames by stainless-steel pins in the clamping surface of the clamp tops, which penetrate module frame coatings. The rails and channel nuts are bonded because of the conductive surface of the mill finish aluminum used in the rail construction.

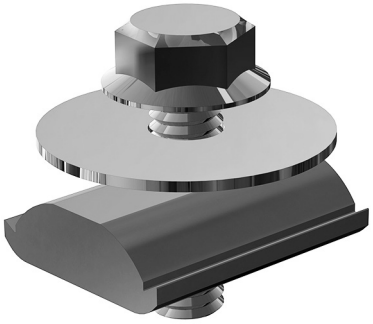
Bonding Method: Rail Lug
Use a Ground Clamp to bond a ground conductor to a rail. The ground clamp works with #10 - #6 AWG copper conductors.



Module Level Power Electronics

Use the Tamarack MLPE Rail Adapter to attach and bond microinverters or optimizers to the rails.

Tighten the bolt with a 1/2” socket to the proper torque.

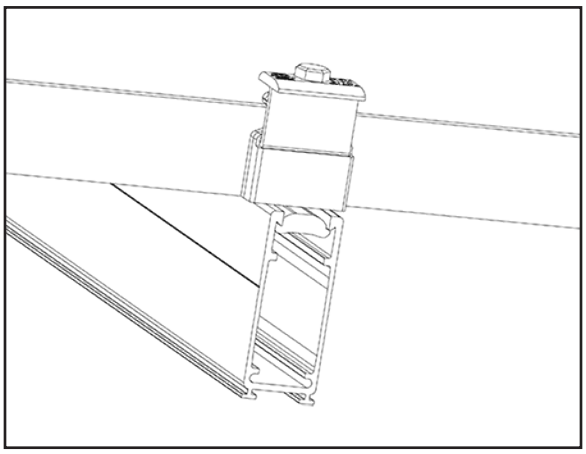


Wire Management

Place electrical conductors and connectors at the bottom of the rail channels. Wires can be threaded through the hole in the splices. Check to be sure that they do not conflict with the self-drilling fasteners. Install the wire management clips where necessary to keep wires in the channels.

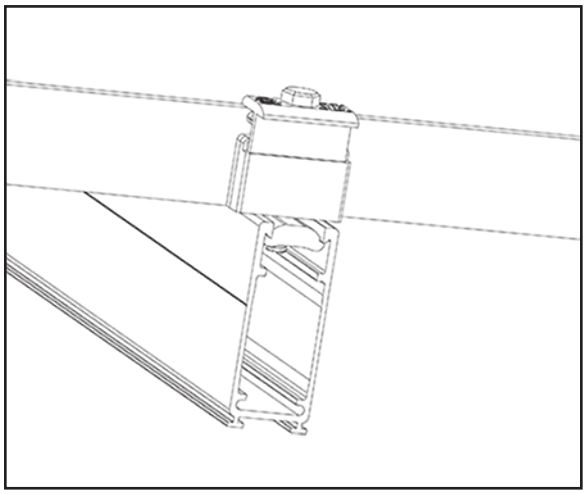
Module Installation

Start module installation at one end of the rails. If there are multiple rows, start on the bottom row.



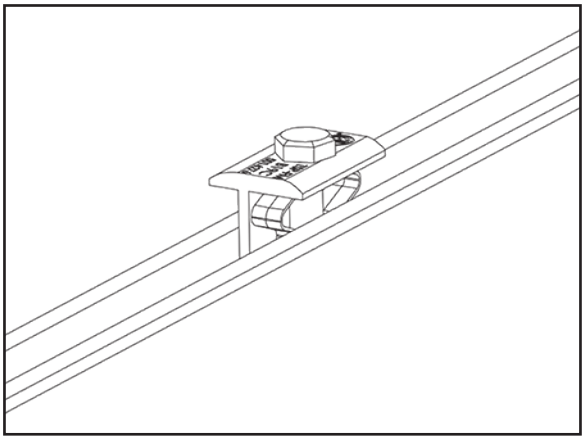
Install a 50-50 clamp at the end of each rail with the side of the clamp with 2 bonding pins on the module frame. Push the channel nut into the rail. The integrated spring assembly will hold the clamp in place.

Place the first module onto the rails so that it is centered over the rails. Make sure the module is touching the inside edge of the clamps and tighten the clamps with a 1/2” socket.



Install 50-50 Clamps in each rail on the other side of the first module. The springs will hold the clamps in place prior to tightening. Place the second module on the rails, align it with the first module, and push in against the clamps. Tighten the clamps to fully secure the module.

Install the remaining modules and clamps on the rails in the same manner, aligning the corners of the modules.



On the outside edge of the last module, install the clamps so that the side with the two stainless-steel pins is on the module frame. Tighten all bolts to the specified torque.

Do a final check to be sure that all installation hardware on the array is properly tightened.