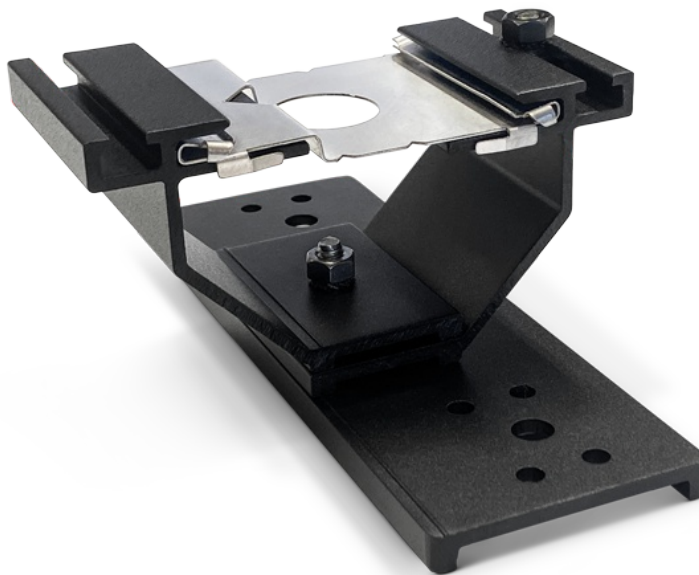


## RFS Hang



## Ratings



# Pending

Complies with 2018 IBC & IRC

Certified to ANSI/UL 2703 (pending)

System fuse rating: 30 A

Max module size: 23 square feet

Module orientation: Landscape

System design load rating: 10 PSF uplift, 10 PSF downward, 5 PSF lateral

System fire rating: Class A\*

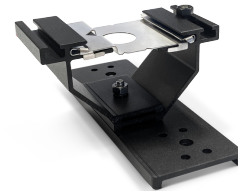
Compliant with ASCE 7-16 load requirements: See PE stamped compliance letter for more details

\*When installed over a metal roof of 28 gauge or thicker

## System Components

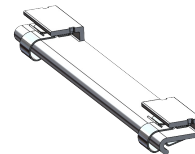
### RFS Hang

- Secures the modules to the roof while creating a bond path up the module column.



### Corner Lock

- Aligns the corners of adjacent modules making for a sleek and beautiful solar array.



### Debris Guard

- Provides an aesthetic leading edge to your Solar Array. Can be installed around the perimeter of the array to block leaves and other debris buildup.



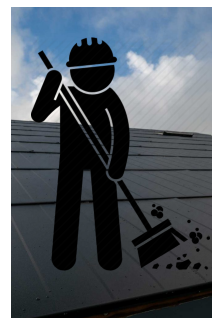
### Self tapping screws (#10 x 1 1/4" )

- Allows for quick installation into the roof sheathing creating a robust attachment.



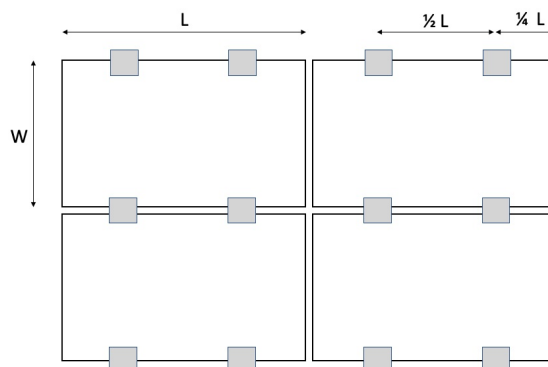
## Preparation

- The roof should be clean and free of dirt and any debris.
- Modules should be wire managed prior to being installed.  
See Pre-wiring section below for recommendations.



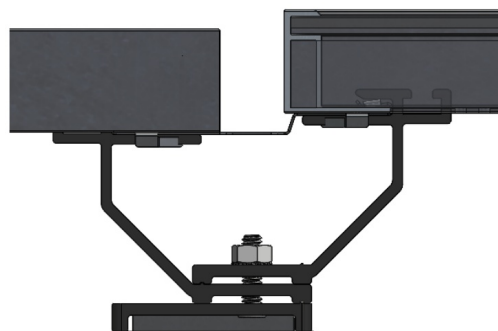
## Layout

- Working from the top of the roof to the eave. Lay out a straight line near the top of the ridge.
- First row of mounting hardware to be installed at specified distance apart depending on the local site conditions including wind and snow loads. If you have questions seek out a registered design professional for help.
- Tip: Use of a string line will ensure that the array is straight and square to the roof.
- Note: Observe local fire setback requirements.



## Installation

- Set modules onto the first set of mounting hardware and slowly rotate down such that the module sits parallel to the roof.
- Ensure the flange of the module is engaged with the hardware.
- Install the next set of mounting hardware on the flange of the module frame pulling toward you.
- Screw in the brackets with 8 #10 x 1.5" self-drilling screws. Be careful not to over compress the sealing washers. (see section on proper sealing washer compression)
- Align modules with the previous row and ensure that the module frame is correctly seated in the flange of the mounting bracket.
- Install Corner Locks along the bottom row of modules between each pair of adjacent modules before moving on to the next row of modules.
- Repeat these steps until the array is complete



- RFS Hang comes preinstalled with a butyl sealant on the underside of the bracket in order to provide an easy to use robust seal to the roof surface.

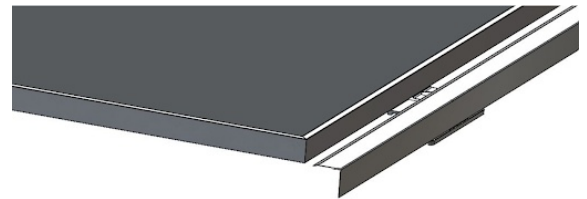


- Bonding the array is done by installing a DynoBond from one column of modules to the next.
- An ILSCO Lay-In lug is installed in the T-slot on the RFS Hang using a stainless steel 1/4"-20 bolt, a stainless steel toothed washer, and a stainless steel 1/4"-20 hex nut torqued to 80 in-lbs. 6 to 10 AWG copper wire (stranded or solid) can be landed on the ground lug and torqued to 20 in-lbs.



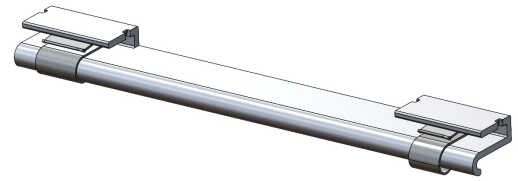
## Debris Guard

- An off the shelf black galvanized metal drip edge is installed with #10 self-drilling sheet metal screws along the front edge of the array to complete the job.



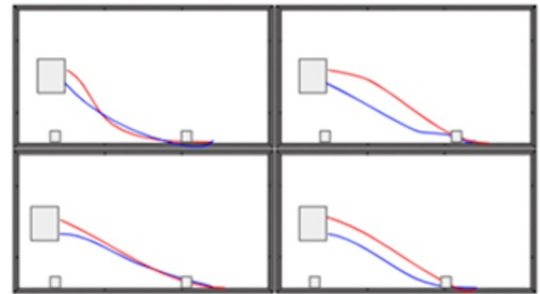
## Corner Lock

- As module rows are installed a Corner Lock should be installed on the flange of the module frame between adjacent modules. The Corner Lock aligns module corners so that the array maintains a consistent plane making for the best looking system.



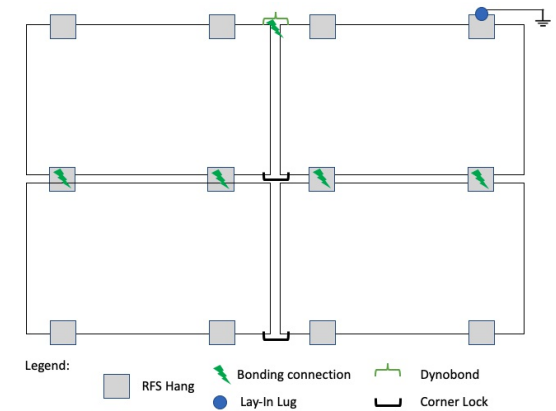
## Pre-wiring

- It is recommended that the modules be pre-wired like that seen in the diagrams, at right, on the ground prior to installation.
- If the jurisdiction you are installing in requires rapid shutdown in accordance with IBC 2018, the use of micro-inverters might be necessary to comply with the code.

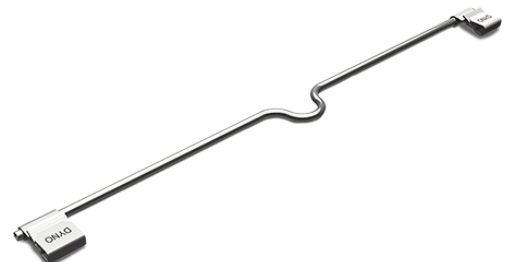


## System Bond Path

- System level bonding is achieved via a bond path through the RFS Hang and Dynobond components. The diagram here illustrates the path to ground.

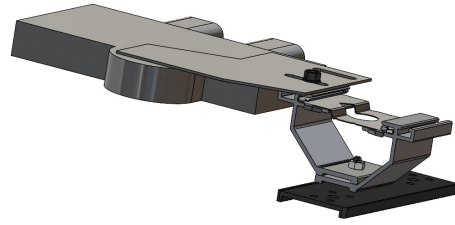


- Bonding between columns of module can be carried out by installation of a DynoBond bonding jumper on the flange of adjacent modules.



## Micro Inverters

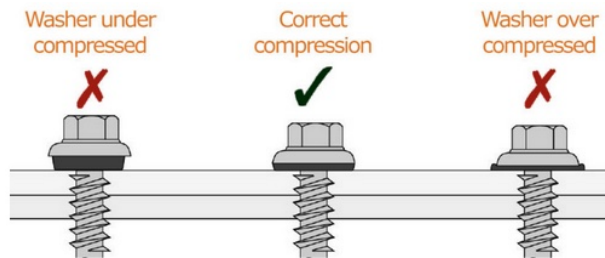
- The RFS Hang has an integrated T-slot for hanging Micro Inverters, DC optimisers and other components.
- To install just loosen the 1/4"-20 nut, install the device and thread back on the nut. It is recommended that you torque the nut to 80 in-lbs.



## Approved Sealants

- Geocel 2300 (Black) - Optional, for asphalt shingle installations

## Sealing washers



## Warranty

- Product warranty: 25 years
- See Starling RFS Warranty document at [www.StarlingRFS.com](http://www.StarlingRFS.com) for more details.

## Approved Module List

Module	Model
Longi	Longi modules with 30, 35 and 40 mm frames LRa-YYZZ-xxxM Where "a" can be 4, 5 or 6; "YY" can be blank, 60 or 72; and "ZZ" can be blank, BK, BP, HV, PB, PE, PH, HBD, HIB, HIH, HPB, HPH, or HIBD
LG	LG modules with 35, 40, and 46 mm frames LGxxxYaZ-bb Where "Y" can be A, E, M, N, Q, S; "a" can be A, 1, 2 or 3 "Z" can be C, K, T, or W; and "bb" can be A3, A5, A6, B3, B6, E6, G3, G4, J5, K4, L5, N5, V5 or V6
Q CELLS	Hanwha Q CELLS with 32, 35, 40, and 42mm frames aaYY-ZZ-xxx Where "aa" can be Q. or B.; "YY" can be PLUS, PRO, PEAK, LINE PRO, LINE PLUS, PLUS DUO or PEAK DUO; and "ZZ" can be ML-G10, BLK ML-G10, ML-G10+, BLK ML-G10+, ML-G10.a, BLK ML-G10.a, ML-G10.a+, BLK ML-G10.a+, XL-G10.2, XL-G10.3, XL-G10.c, XL-G10.d, XL-G10.d/BFG or XL-G10.3/BFG
REC	REC modules with 30, 38 and 45 mm frames RECxxxYYZZ Where "YY" can be AA, M, NP, NP2, PE, PE72, TP, TP2, TP2M, TP2SM, TP2S, TP3M or TP4; and "ZZ" can be blank, Black, BLK, BLK2, SLV, 72, or Pure
JA Solar	A Solar modules with 30, and 35 mm frames JAyyzz-bbww-xxx/aa Where "yy" can be M, P, M6 or P6; "zz" can be blank, (K), (L), (R), (V), (BK), (FA), (TG), (FA)(R), (L)(BK), (L)(TG), (R)(BK), (R)(TG), (V)(BK), (BK)(TG), or (L)(BK)(TG); "bb" can be 48, 60; "ww" can be D09, D10, D20, D30, S01, S02, S03, S06, or S09; and "aa" can be BP, MB, MR, SI, SC, PR, 3BB, 4BB, 4BB/RE, 5BB

## Other requirements

- This racking system may be used to ground and/or mount a PV module complying with UL 1703 only when the specific module has been evaluated for grounding and/or mounting in compliance with the included instructions.
- Periodic re-inspection of the installation should be conducted on a regular basis. Re-inspection should be done for loose components, fasteners, or signs of corrosion. If any evidence is found that would affects the components ability to perform their primary function they should be replaced immediately.
- Components in this manual have been evaluated for bonding for single-use only. For system reinstallation components should be replaced as a best practice.
- Ground Lug should be installed in the T-slot of the RFS Hang. A ¼"-20 bolt should be used in the T-slot and the hex nut torqued to 80 in-lbs. A solid or stranded copper wire (10-4 AWG) should be landed on the ground lug and secured with the set screw torqued to 20 in-lbs.
- The system shall be installed in accordance with the National Electrical Code, ANSI/NFPA 70

### Contact Info:

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info@StarlingRFS.com