Quick Rack™

Patented Rail-Free Mounting System
for Composition/Asphalt Shingle Roofs

Quick Mount PV®

RESPECT THE ROOF

Quick Rack Components & Tools

Components are pre-assembled and ready for installation right out of the box.
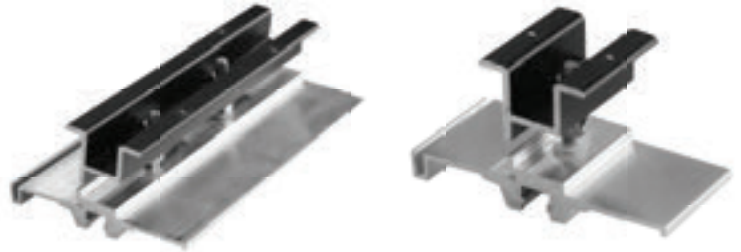
1
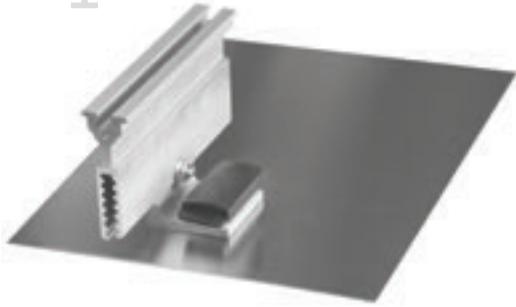
Base Mount
Featuring Quick Mount PV's patented Elevated Water Seal.

2

Panel Clamp
Available in two sizes (2" & 8") for both mid- and end-clamping that *works with standard module frames.*

3

Grounding Lug
Only one Ilsco GBL-4DBT grounding lug per system is needed. Lug replaces cap screw in base mount top slider.

4 *Optional*

Skirt
Snaps right into place for an elegant, streamlined finish.

Minimal tools are needed to install Quick Rack. They include:

- Drill with ½"deep socket and ⅛" x 6" drill bit (*optional*: may use T-30 Torx Bit for Base Mount Lag Bolt)

- Socket Wrench with same ½" deep socket

- ½" Box Wrench

- Flat Head Screw Driver

- Wire Clips

- Appropriate Sealant

- Chalklines

Important! This guide is not intended to replace the full *Quick Rack Installation Manual*.
This is a brief overview of the standard installation process of the Quick Rack™ Patented Rail-Free Mounting System for Composition/Asphalt Shingle Roofs. It is important to carefully read the full *Quick Rack Installation Manual* prior to installing your first Quick Rack System. See the last page of this document for more information.

Array Layout & Installing the Mounts

Using your engineered design, locate array layout on the roof, determine mount locations, and mark module intersections in front row. See the full *Quick Rack Installation Manual* for snow country requirements, span tables, wind exposure categories, cantilevers, and engineering rules.
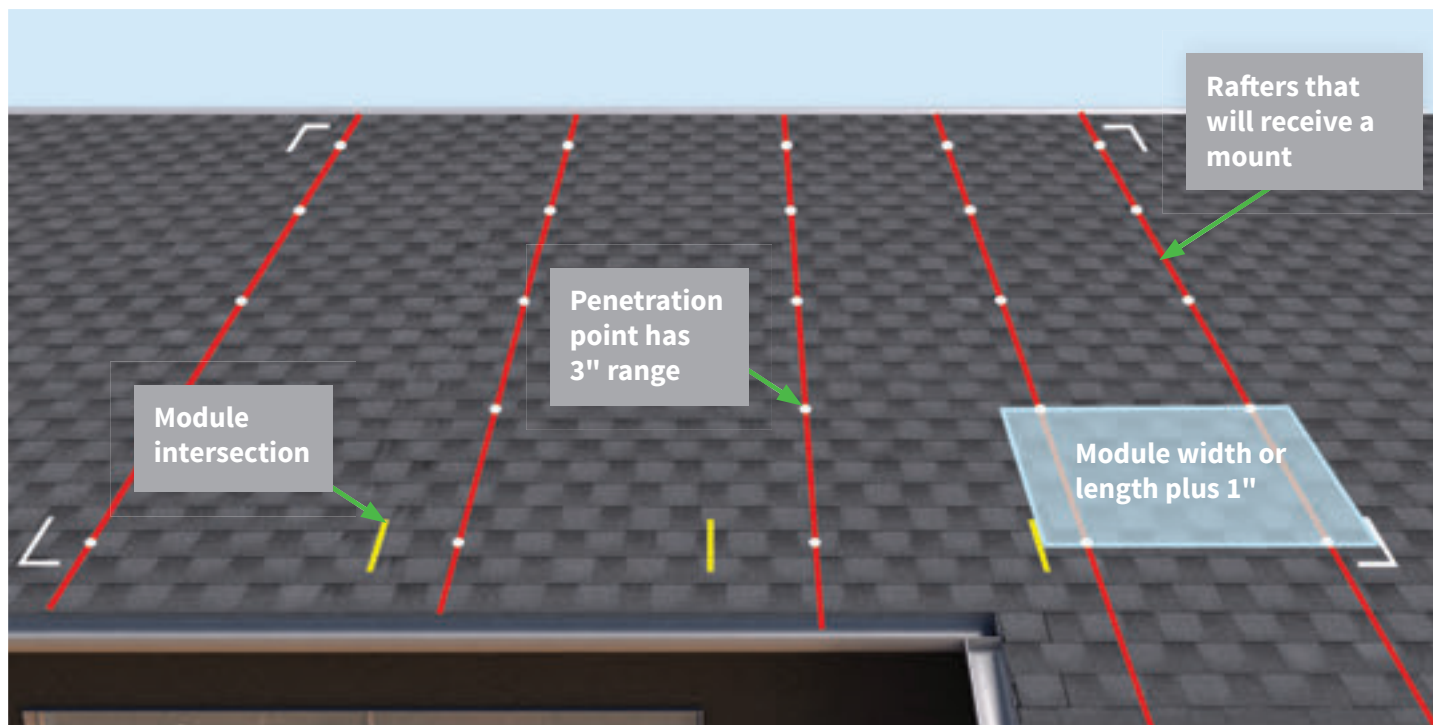
Locate rafters that will receive a mount.

Mark off the locations for the bottom row of mounts, typically 3" up from the butt of the shingle.

Measure from the bottom row up the module dimension plus 1" for the clamp spacing, to locate the center point of the next row of mounts' penetration zone. The penetration zone is a 3" range from 1½" above to 1½" below the center point and helps avoid shingle cutting. These measurements translate across the roof.

Drill pilot hole into center of rafter and fill with appropriate sealant. Slide the base mount up underneath the second course of shingles, so that the bottom edge of the flashing does not overhang the butt edge of shingles. Tighten until mounting block stops swiveling. (In 65°F weather, this would equal 13 ft-lbs.) Cap mounting block with EPDM rubber cover. For engineering best practices, it is best to alternate the left-right positioning of the base mount top sliders in each column when possible.

Leveling the System

The modules in the Quick Rack system are unified by rigid panel clamps into a single flush surface, so small dips and curves in the roofs surface may not require leveling of the mounts, use your own judgment about where leveling is required to maintain a smooth looking surface. However, mounts that are close together and in the front row should be leveled carefully.
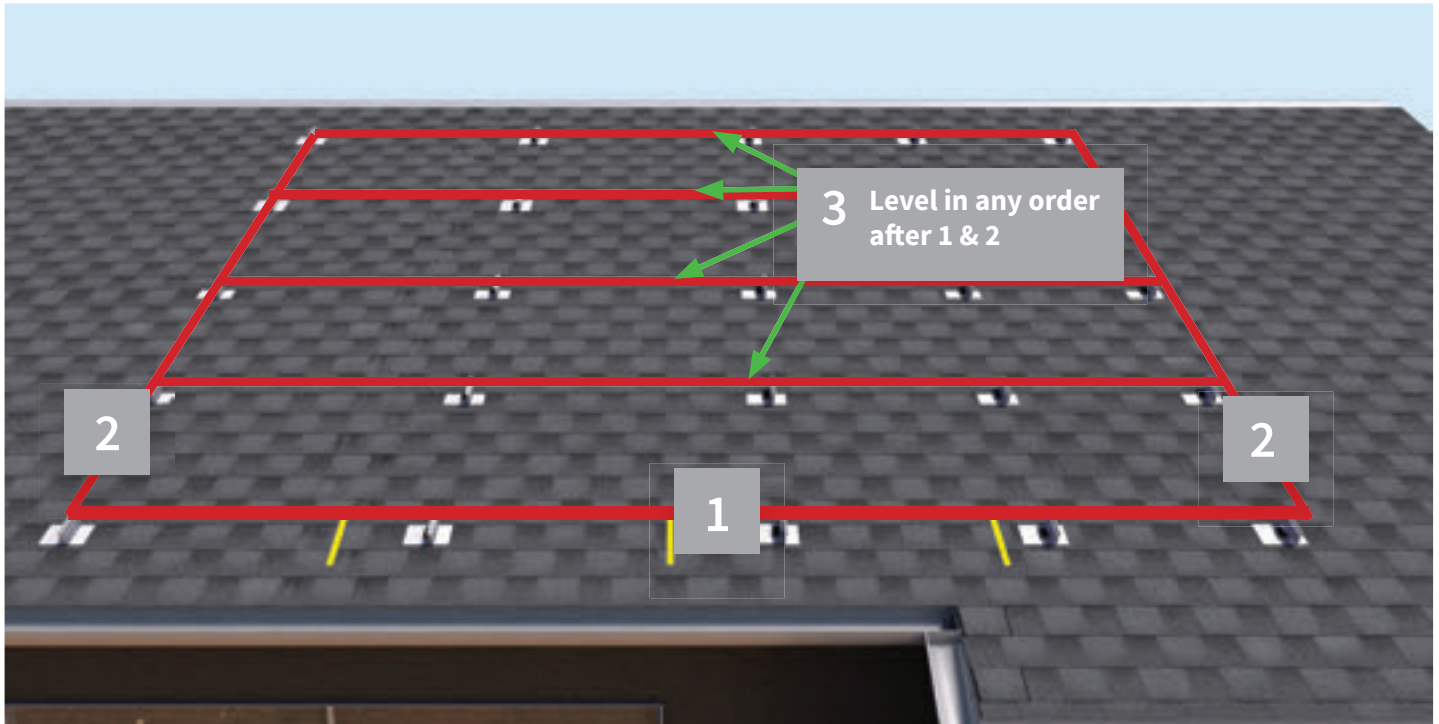

To level top sliders to the same height in the first row, run a string line between the first and last mounts in the first row. After aligning the first row horizontally, follow the same string alignment process vertically on far right and far left columns. Then align each remaining row of the array (in any order).


To adjust top slider height, remove machine bolt, separate top slider from QBlock slider and reinsert at proper location. To adjust in ¼" increments move the top slider up or down one notch. To adjust in ⅛" increments rotate the top slider 180 degrees. Repeat for the other mounts until top slider elevations are uniform across the row.

Installing the Clamps & Skirt

The modules are connected to the base mounts using 2" panel clamps, which can act as both mid clamps or end clamps. 8" clamps are used to structurally bridge together modules. Panel clamps include integrated grounding pins. See full *Quick Rack Installation Manual* for grounding information.
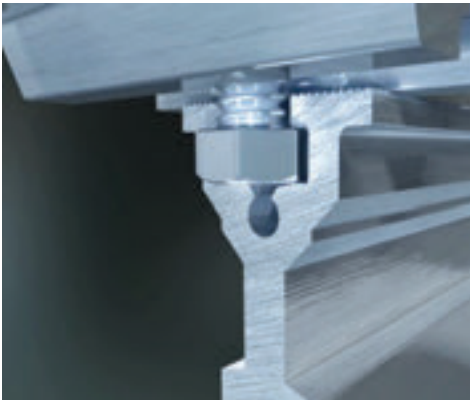
The bolt head underneath the clamp lines up and slides into the channel on the top of the slider of the base mount. At a module intersection that aligns with a rafter and mount location, engage either one of the bolts of the 8" panel clamp by pressing down the top clamp above the bolt, line up and slide into the channel on the top of the slider.
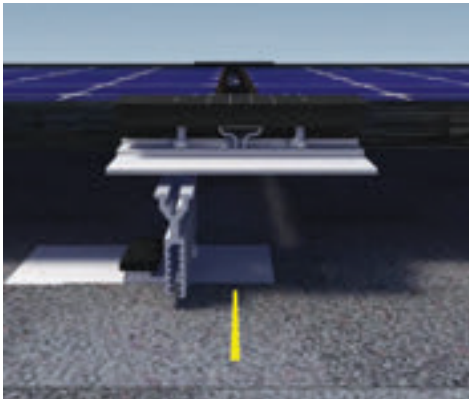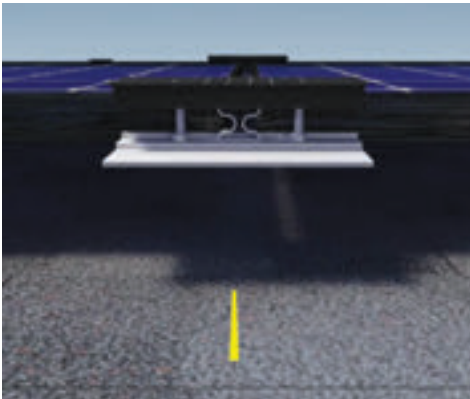
8" clamps are also used to structurally bridge together modules with no base mount unless a rafter or mount location lines up at a module bridge location.

Clamp Leg

Skirt snap channel

Mid-Clamp Assembly Nut
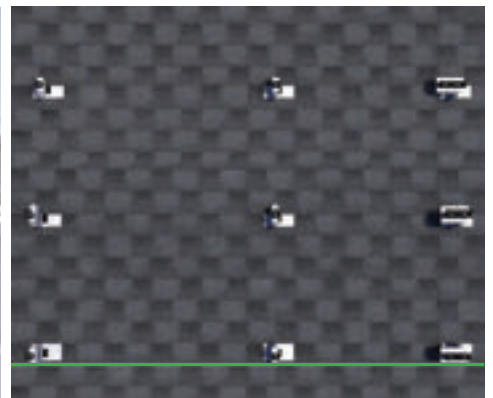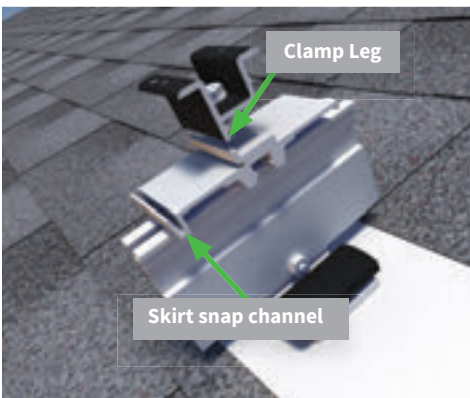
For the first row, clamp must be oriented with skirt snap channel in downslope position. When the 2" or 8" clamp is used as an end clamp in either first or last row, be sure that the long leg on the panel clamp aligns with the short leg on the panel base and is oriented away from the module. Use ½" box wrench on mid-clamp assembly nut to only tighten clamps on the far left and right top sliders. Align all clamps in first row using a string line. Tighten mid-clamp assembly nut on remaining loose first row clamps.

Only the front row needs to be aligned and locked down in order to assure a straight and secure skirt and array. The clamps in the rest of the rows will self align as you install the modules and do not need to be aligned or locked into the base mounts. For optional skirt attachment method see the full *Quick Rack Installation Manual*.

Slot in clamp base
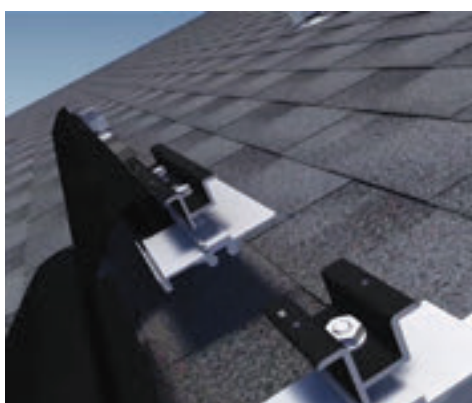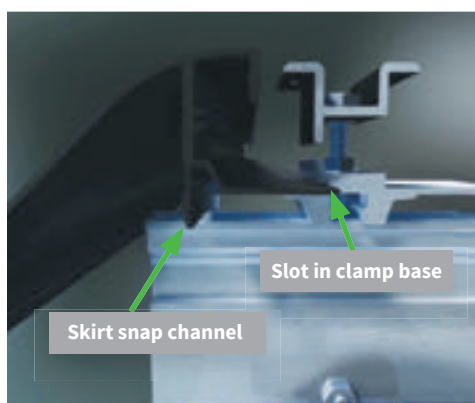
Skirt snap channel

Insert horizontal leg of the skirt into slot in clamp base, then snap the skirt down in skirt snap channel. Slide instead of snap the floating 8" bridge clamps halfway onto end of the skirt segments at the module intersections then slide the next segment onto the other side of the clamp making segments flush.

Installing the Grounding Lug
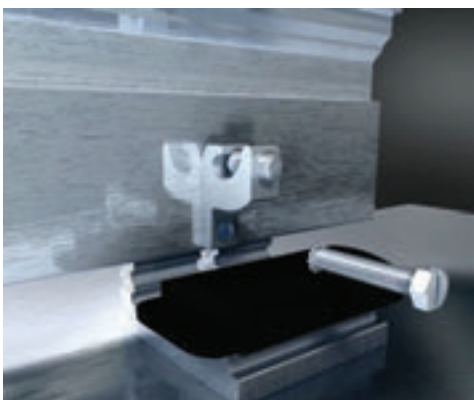
You can install the grounding lug at any time after the base mounts are installed. The system only requires one Ilsco GBL-4DBT grounding lug. Replace the cap screw in any base mount top slider with grounding lug hardware. Secure your wire to the lug by tightening the set screw. See full *Quick Rack Installation Manual* for system grounding specs and information.
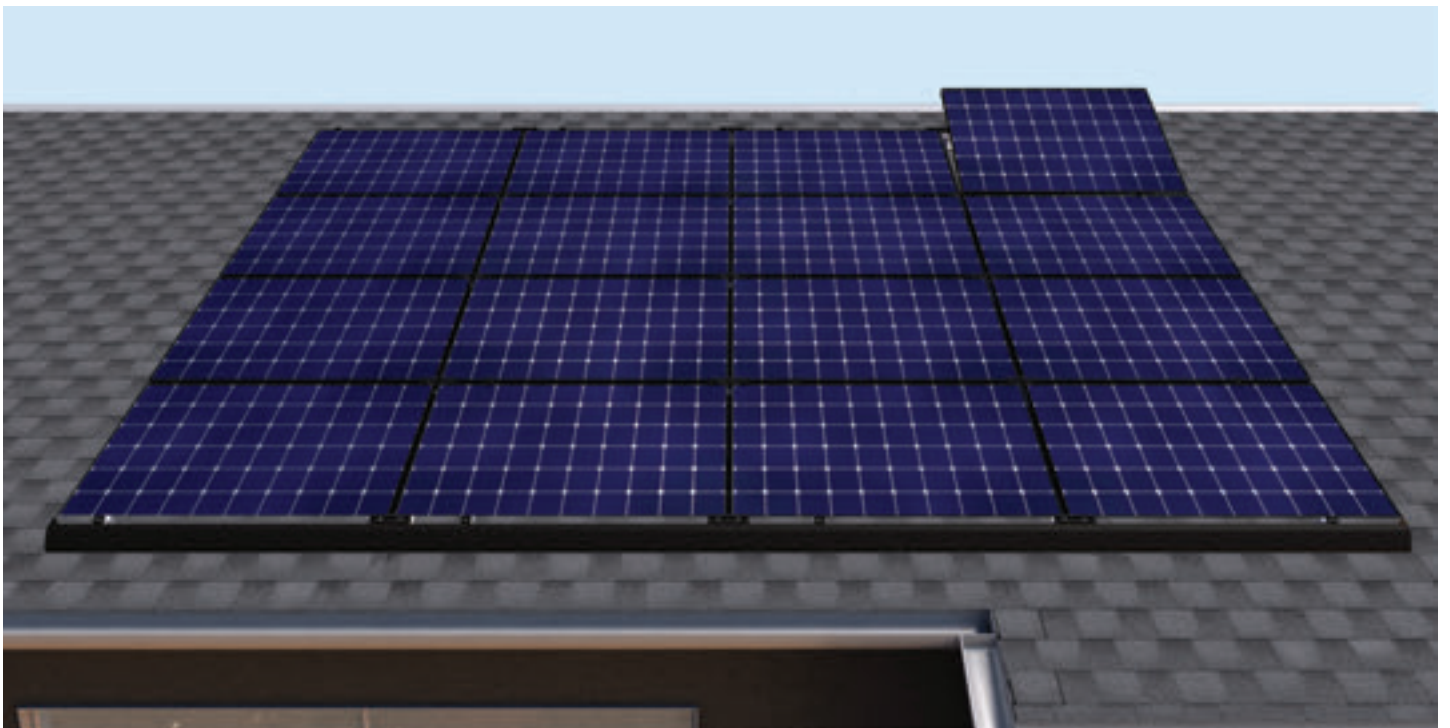
Installing the Modules

Insert the bottom edge of the module frame into the lower clamps. The top of the module sits on the lower portion of the clamp assembly for the row above.

Where 2 , 3, or 4 modules need to be connected, slide the 8" panel clamp over the module frame. The edge of the module frames must not sit outside the 2 ¼" allowable range indicated by the outer timing marks. Inner timing marks show the ¾" gap centered in the allowable space.

When the first row of modules is in place, tighten down the panel clamps to a torque setting of 13 ft-lbs in the bottom row only using a ½" socket on a drill or a torque wrench. DO NOT USE AN IMPACT GUN.

The upper row of clamps should remain loose to accept the next row of modules. Complete wire management for the first row and then continue installing modules for all rows, tightening the lower row of clamps and completing wire management for each row as it is installed. Tuck the wires inside the module frame with wire clips on each side of the connectors. See the full *Quick Rack Installation Manual* for more information on wire management configurations and wire clip recommendations.

For extensive information on the Quick Rack™ Patented Rail-Free Mounting System:

The full **Quick Rack Installation Manual** includes span tables, snow country requirements, engineering drawings, roof attachment figures, system specs and measurements, grounding information, wire management suggestions, UL Listing requirements, and much more.

You can download the full **Quick Rack Installation Manual** and find many other resources, including installation and Quick Tip videos, approved module list, training information, and other technical and certification documents, at **www.quickmountpv.com/quickrack.**

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