



# Product Catalog

Version 3.03

This catalog includes components for IronRidge® solar mounting systems.

Our products are supported with powerful online tools and experienced sales and service teams, who are dedicated to making solar easy to design, procure and install. Whether you have initial questions or need immediate assistance, our team is ready to help: **1-800-227-9523** and [support@ironridge.com](mailto:support@ironridge.com)

**Overview**

- 1 Overview

**Aire<sup>®</sup> Racking System**

- 2 Aire<sup>®</sup> Components

**XR Rail<sup>®</sup> Racking System**

- 3 Overview
- 4 XR Rail<sup>®</sup>
- 5 BOSS<sup>®</sup> Splices
- 6 Universal Fastening Objects (UFO<sup>®</sup>)
- 7 Stopper Sleeves
- 8 CAMO<sup>™</sup>
- 9 Calculating Rail Length
- 10 End Caps
- 11 Wire Clips
- 12 Grounding Lugs
- 13 Microinverter / Power Optimizer Bonding Hardware
- 14 Frameless Module Clamps & Hardware

**Flush Mount Attachments**

- 15 Overview
- 16 FlashFoot2<sup>®</sup>
- 17 FlashVue<sup>®</sup>
- 18 Knockout Tile
- 19 All Tile Hook & Deck Flashing
- 20 Slotted L-Foot
- 21 Bonding Attachment Hardware
- 22 Contour<sup>™</sup> Trim
- 42 HUG<sup>™</sup> Halo UltraGrip<sup>™</sup>
- 42 BUG<sup>™</sup> Conduit Mount

**Tilt Mount**

- 23 Overview
- 24 Fixed Tilt Legs
- 25 Flat Roof Attachment

**BX<sup>™</sup> Ballasted Mount**

- 26 Overview
- 27 BX Chassis
- 28 BX Clamps
- 29 BX Bonding Jumpers
- 30 BX MLPE Mounting Hardware
- 31 BX PV Module Grounding Lug
- 32 BX Cable Ties
- 33 BX Inverter Mounting Assembly
- 34 BX Flat Roof Mounting Assembly

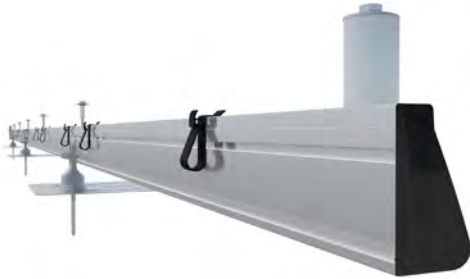
**Ground Mount**

- 35 Overview
- 36 Top Caps
- 37 Bonded Rail Connectors
- 38 Hex Head Set Screws
- 39 Diagonal Braces
- 40 Schedule 40 Pipe Summary

**QuickMount<sup>®</sup> Components**

- 41 QRail<sup>®</sup> Assembly
- 42 Comp Shingle Mounts
- 42 HUG<sup>™</sup> Halo UltraGrip<sup>™</sup>
- 42 BUG<sup>™</sup> Conduit Mount
- 43 Tile Roof Mounts
- 44 Lynx<sup>™</sup> Metal Roof Clamp
- 44 JayBox<sup>™</sup> Junction Box
- 44 Other Mounts & Accessories

## Overview



The **IronRidge® Flush Mount Systems** are rail-based system for mounting solar modules on pitched roofs. The system utilizes IronRidge Aire® Rails or XR Rails® with a variety of roof attachments to support extreme wind and snow loads. Each system uses only aluminum and stainless steel components to ensure complete corrosion resistance.



The **IronRidge® Tilt Mount System** is an attached, fixed-tilt assembly for mounting solar modules on flat roofs. The system pairs IronRidge XR Rails® with North & South Tilt Legs to achieve a wide range of mounting angles, while also supporting extreme wind and snow loads.



The **IronRidge® Ground Mount System** scales to support a wide range of site and terrain challenges. This system consists of components that allow for installer-supplied steel pipe or mechanical tubing to combine with our XR100® or XR1000® Rail assembly for simple, rapid, cost effective ground mounting.



The **IronRidge® BX Ballasted System** delivers superior power density and design flexibility to flat roof solar arrays. Made of a glass reinforced composite, the BX Chassis is engineered for extreme structural loading, yet is also shaped to be roof-friendly and easy to install.

## QuickMount®



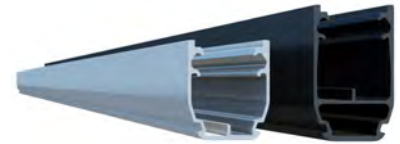
The **QuickMount®** product line is now a part of the IronRidge® solar mounting family of components. For more information on QuickMount® products, visit [QuickMountPV.com](http://QuickMountPV.com) or contact [support@ironridge.com](mailto:support@ironridge.com).

## Aire® Racking System

[IronRidge.com/Aire](https://IronRidge.com/Aire)

### Aire® Rails

Item Number	Description
AE-A1-170M	Aire Rail A1, Mill, 170"
AE-A1-170B	Aire Rail A1, Black, 170"
AE-A2-170M	Aire Rail A2, Mill, 170"
AE-A2-170B	Aire Rail A2, Black, 170"



### Aire® Rail Ties

Item Number	Description
AE-A1TIE-01-M1	Aire Tie, A1 (Bonded Splice)
AE-A2TIE-01-M1	Aire Tie, A2 (Bonded Splice)



### Aire Lock® Clamps

Item Number	Description
AE-MID-01-B1	Aire Lock Mid, Black (30mm - 40mm)
AE-END-01-B1	Aire Lock End, Black (30mm - 40mm)
AE-STLTH-01-M1	Aire Lock Stealth (Hidden End Clamp)



### Attachment Hardware

Item Number	Description
AE-DOCK-01-B1	Aire Dock, Black (for all approved attachments)
AE-ATH-01-M1	Aire All Tile Hook (Incl. 2 Lags and Aire Dock)



### Electrical & Grounding

Item Number	Description
AE-MLPE-01-M1	20mm T-Bolt w/ Nut, Patch, SS (6 Bags of 50)
AE-LUG-01-M1	Aire Lug
AE-CLIP-01-B1	Aire Clip (10 Bags of 120 Aire Clips)



### End Caps

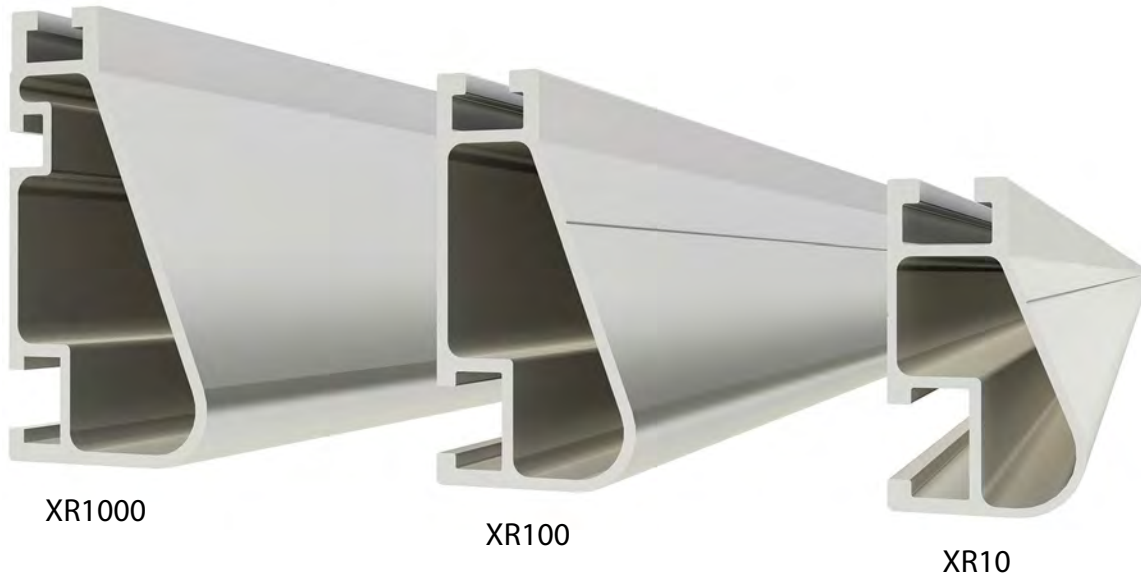
Item Number	Description
AE-A1CAP-01-B1	Aire Cap, A1
AE-A2CAP-01-B1	Aire Cap, A2



## XR Rail® Assembly Overview



Our product development team strives to keep things simple and intuitive for installers while accommodating a wide range of mounting scenarios. As a result, we offer three complementary types of rail within the XR Rail® Family. Please refer to our website or contact our customer service team so that we can best assist in determining which rail assembly is best for you and your specific project.

**XR Rail®**


Item Number	Description	Item Number	Description
XR-1000-168A	XR1000, Rail 168" (14 Feet) Clear	XR-10-168A	XR10, Rail 168" (14 Feet) Clear
XR-1000-204A	XR1000, Rail 204" (17 Feet) Clear	XR-10-168B	XR10, Rail 168" (14 Feet) Black
XR-100-168A	XR100, Rail 168" (14 Feet) Clear	XR-10-204A	XR10, Rail 204" (17 Feet) Clear
XR-100-168B	XR100, Rail 168" (14 Feet) Black	XR-10-204B	XR10, Rail 204" (17 Feet) Black
XR-100-204A	XR100, Rail 204" (17 Feet) Clear		
XR-100-204B	XR100, Rail 204" (17 Feet) Black		

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match. XR1000® is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans 12 feet or more for commercial applications. XR100® is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans. XR10® is a sleek, low-profile mounting rail, perfectly matched to regions with light or no snow. It achieves 6 foot spans, while also staying light and economical.

## BOSS® Bonded Structural Splices



Item Number	Description
XR10-BOSS-01-M1	Bonded Structural Splice, XR10
XR100-BOSS-01-M1	Bonded Structural Splice, XR100
XR1000-BOSS-01-M1	Bonded Structural Splice, XR1000

The BOSS® (Bonded Structural Splice) provides a truly seamless, hidden connection for XR Rails®. Built-in, one-piece springs feature bonding teeth that bite inside the rail, creating a bonded rail connection and meeting all UL standards without any extra tools or hardware. In addition, BOSS® eliminates installation restrictions. Place it anywhere except the outside cantilever.

## Universal Fastening Objects (UFO®)

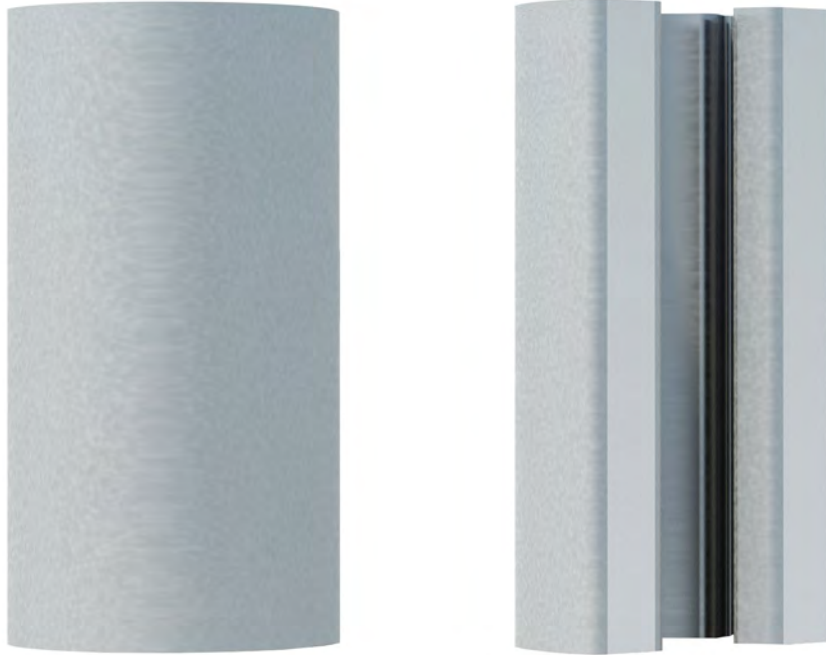


Item Number	Description
UFO-CL-01-A1	Universal Module Clamp, Clear
UFO-CL-01-B1	Universal Module Clamp, Black

The IronRidge UFO® (Universal Fastening Object) is a single-size, single-piece fastener, built to quickly and securely bond any solar modules to XR Rails. It comes fully-lubricated and fully-assembled, and it looks just as good as it performs. When combined with a Stopper Sleeve, the UFO® functions as an end clamp. It comes in two finishes: Clear and Black.



## Stopper Sleeves



Item Number	Description (Mill)	Item Number	Description (Black)
UFO-STP-30MM-M1	Stopper Sleeve, 30MM	UFO-STP-30MM-B1	Stopper Sleeve, 30MM
UFO-STP-32MM-M1	Stopper Sleeve, 32MM	UFO-STP-32MM-B1	Stopper Sleeve, 32MM
UFO-STP-35MM-M1	Stopper Sleeve, 35MM	UFO-STP-35MM-B1	Stopper Sleeve, 35MM
UFO-STP-40MM-M1	Stopper Sleeve, 40MM	UFO-STP-40MM-B1	Stopper Sleeve, 40MM

The IronRidge Stopper Sleeve snaps onto the IronRidge UFO® to transform it into an end clamp. It comes in mill and black finishes and is sized to match a range of module frames.

**CAMO™**

Item Number	Description
CAMO-01- M1	Hidden End Cam (Universal Clamp)

CAMO™ is a tool-less, end-cam clamp, designed to bond and secure while staying completely hidden under the solar module. It comes as one piece, fully assembled, and has been tested up to 5 times to ensure bonding after installation, removal, and re-installation. Certified to IBC ASCE/SEI-7 and UL 2703.

## Calculating Rail Length

Calculate the row lengths as follows:

1. Add module widths.
2. Add width of UFO® between modules.
3. Add allowances for UFO® and Stopper Sleeves on ends of rail.

Depending on the location of the UFO®, the clearance values will differ.

Location	UFO®
Mid Clamp	0.375"
End Clamp	1.0"

For example, to mount five modules that are each 40" wide (in portrait), the row length is calculated as follows:

Step	UFO®
1. Add module widths	$5 \times 40" = 200"$
2. Add width of mid clamps between modules	$4 \times 0.375" = 1.5"$
3. Add allowances for end clamps	$2 \times 1" = 2$
Total length of row	$203.5" = 16.96'$

Two 17' rails will be required to mount this row of five modules.

IronRidge stock rail lengths: 11', 14', 17'. Custom lengths available via special order. Contact IronRidge Customer Service for additional details at 800-227-9523, or [support@ironridge.com](mailto:support@ironridge.com).

## End Caps



XR1000®



XR100®



XR10®

Item Number	Description
XR-1000-CAP01-B1	End Cap, XR1000® (L-R Pair)
XR-100-CAP01-B1	End Cap, XR100® (L-R Pair)
XR-10-CAP01-B1	End Cap, XR10® (L-R Pair)

End Caps provide a finished look to rails, while preventing the collection of water and debris inside the rail. End Caps are molded from black polycarbonate with UV protection.

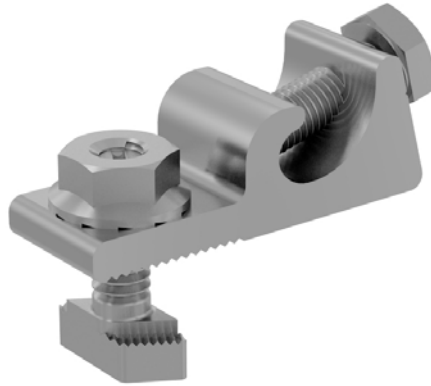
## Wire Clips



Item Number	Description
29-4000-077	Wire Clip, 20pcs

Wire Clips fit XR Rails<sup>®</sup>, and accommodate up to ten 5mm panel wires, or one MC4, one Enphase wire and one dual Enphase wire. Molded from black polycarbonate with UV protection.

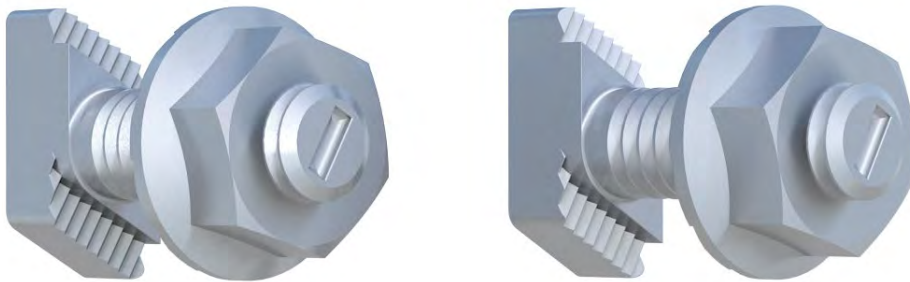
## Grounding Lugs



Item Number	Description
XR-LUG-03-A1	Grounding Lug, Low Profile

A single Grounding Lug connects an entire row of PV modules to the grounding conductor.

## Microinverter / Power Optimizer Bonding Hardware



Item Number	Description
BHW-M1-01-A1	Microinverter Bonding Hardware, T-Bolt

Use IronRidge<sup>®</sup> Microinverter Bonding Hardware to bond compatible microinverters and power optimizers to the racking system.

### COMPATIBLE PRODUCTS

Enphase - M250-72, M250-60, M215-60, C250-72, S230, S280

Darfon - MIG240, MIG300, G320, G640

Solar Edge - P300, P320, P400, P405, P600, P700, P730, P800p, P800s

## Frameless Module Clamps & Hardware



Item Number	Description
FMLS-BHW	Kit, 4pcs, Frameless Module Clamp Bonding Hardware, T-Bolt
FMLS-MC-001-B	Frameless Module Mid Clamp, Black
FMLS-EC-001-B	Frameless Module End Clamp, Black

Use the Frameless Hardware Kit with IronRidge's Frameless Clamps to mount frameless solar modules (one piece needed per clamp). IronRidge's Frameless Module Mid and End Clamps mount frameless solar modules.





**FlashFoot2®**


Item Number	Description
FF2-02-M2	FlashFoot2®, Mill
FF2-02-B2	FlashFoot2®, Black

IronRidge FlashFoot2® features a completely redesigned seal that is both elevated and fully encapsulated, protecting against water intrusion. The flashing's profile minimizes interference with roofing nails. FlashFoot2® has alignment markers help to quickly align the flashing with pilot holes. Twisting on the Cap makes FlashFoot2® ready to mount XR Rails®. Comes with flashing, lag bolt, and Cap.

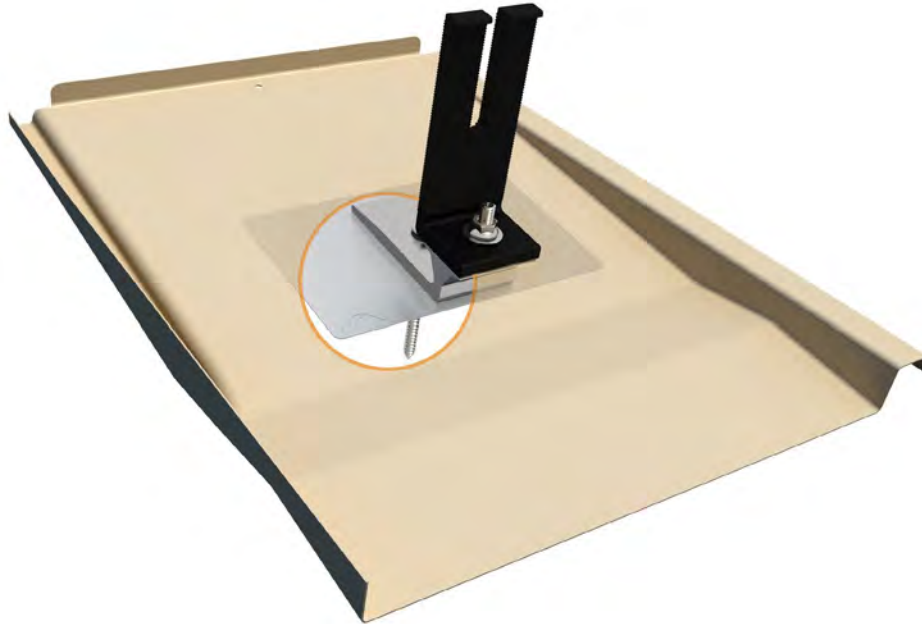
**FlashVue®**


Item Number	Description
FV-01-M1	FlashVue®, Mill (GripCap® Included)
FV-01-B1	FlashVue®, Black (GripCap® Included)
FV-GCP-01-B1	GripCap+®, Black

We set out to design a flashing that checked all the boxes: fully waterproof, fast and easy to install correctly, economical, and strong enough to handle every environmental condition. FlashVue® does it all. The optimized flashing design features a large viewport, for easy alignment with the pilot hole. And the GripCap® and GripCap+® sit snugly in place, so the lag can be driven single-handedly.

GripCap+® adds another full inch of height and replaces the standard GripCap® on FlashVue®. This is helpful on older roofs with varying undulations that can make low-profile mounts a challenge.

## Knockout Tile



Item Number	Description
KOB-1L02-B1	Tile Replacement Base (Incl. 1 Open-Slotted L-Foot (Black), 1 Lag and Hardware)
KOF-F01-T1	Tile Replacement Flashing Flat, Tan
KOF-S01-T1	Tile Replacement Flashing S, Tan
KOF-W01-T1	Tile Replacement Flashing W, Tan
KODF-1L01-M1	Knockout Tile Deck Flashing (Optional)

IronRidge Knockout Tile is a tile replacement mount that installs fast and works on flat, S, or W tiles, as well as, on roofs with battens or roofs that are battenless. Its simple base allows you to put it anywhere within the flashing pad on the rafter, and just punch a small hole in the flashing where it is needed—with no cutting or grinding. Open-Slotted L-Foot included. Knockout Tile is fully tested to our rigorous standards, certified as a system with XR Rail® and covered by our 25-year warranty. The Knockout Tile Deck Flashing can add an extra layer of water protection, when necessary.

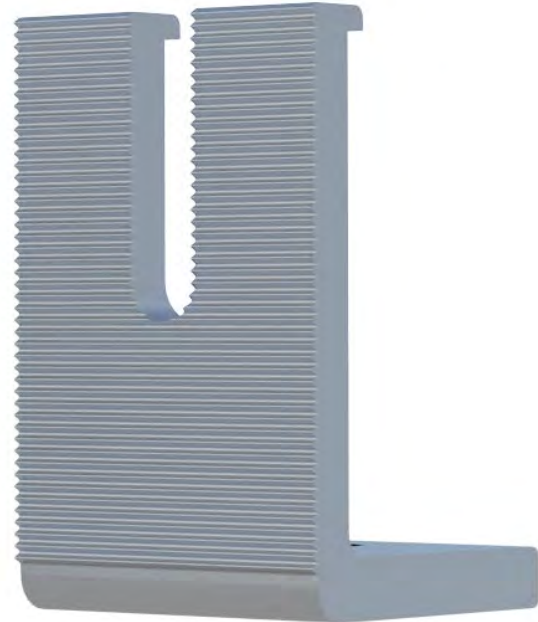
## All Tile Hook & Deck Flashing



Item Number	Description
ATH-01-M1	All Tile Hook (Incl. 2 Lags)
QM-THDF-01-M1	QuickMount® Tile Hook Deck Flashing

All Tile Hook is a simple, adjustable roof attachment for mounting solar on tile roofs. It works with flat, S, and W tiles, can be used with our universal Tile Hook Deck Flashing (compatible with both IronRidge All Tile Hook and Quick Hook®), and utilizes 7/16" hardware—making it a single socket installation. All Tile Hook is fully tested to our rigorous test standards, certified as a system with XR rail and covered by our 25-year warranty.

## Slotted L-Foot



Item Number	Description
LFT-03-M1	Slotted L-Foot, Mill
LFT-03-B1	Slotted L-Foot, Black

Our Slotted L-feet are engineered for most roof mounting applications. Vertical slots allow for easily dropping in rails with pre-attached hardware and provide adjustability to account for roof irregularities. Our L-feet are manufactured using 6000 series aluminum and are also available in black anodized finish.

## Bonding Attachment Hardware



Item Number	Description
BHW-SQ-02-A1	Square Bolt Bonding Hardware, 1 pc
BHW-TB-02-A1	T-Bolt Bonding Hardware, 1 pc

Attachment bonding hardware available in both square bolt and t-bolt options, based on personal preference. Bonding hardware is used to attach and bond the rail to the FlashFoot2®, Slotted L-Foot, or a third-party roof attachment. The step nut allows installers to use the same socket as the rest of the system.

## Contour™ Trim



Contour™ Trim



Contour™ Splice



Contour™ Clamp



Contour™ Outer Corner Cap



Contour™ Inner Corner Cap



Contour™ End Caps

Item Number	Description
CTR-TR84-01-B1	Contour Trim, 84"
CTR-SPLC-01-M1	Contour Splice
CTR-CL-01-B1	Contour Clamp
CTR-OUT-01-B1	Contour Corner Cap, Outer
CTR-IN-01-B1	Contour Corner Cap, Inner
CTR-CAP-01-B1	Contour End Caps (L-R Pair)

IronRidge Contour™ Trim elevates the look of any solar array by providing a sleek trim (or skirt) across the south edge or around the perimeter to hide components that are visible beneath the solar panels. Homeowners want the solar on their home to meet their energy needs, while not detracting from their home's aesthetics. Contour™ will make any array look great, and have your crew on and off the roof in a snap.

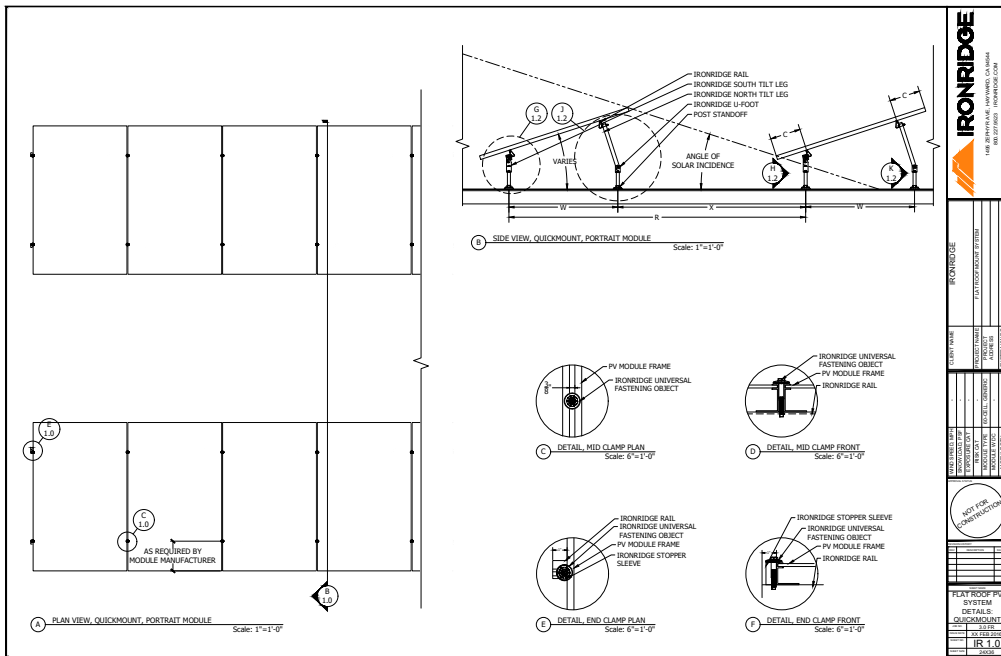


### Tilt Mount Overview



The IronRidge® Tilt Mount System is an attached, fixed-tilt assembly for mounting solar modules on flat roofs. The system pairs IronRidge XR Rails® with North & South Tilt Legs to achieve a wide range of mounting angles, while also supporting extreme wind and snow loads. The entire system uses only aluminum and stainless steel components to ensure complete corrosion resistance.

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## Fixed Tilt Legs



Item Number	Description
TM-FTL-010	Kit, Fixed Tilt Leg, 10", Mill
TM-FTL-015	Kit, Fixed Tilt Leg, 15", Mill
TM-FTL-020	Kit, Fixed Tilt Leg, 20", Mill
TM-FTL-025	Kit, Fixed Tilt Leg, 25", Mill
TM-FTL-030	Kit, Fixed Tilt Leg, 30", Mill

Fixed Tilt Leg Kits are available in multiple lengths to support a wide range of mounting angles. The Fixed Tilt Leg Kit includes a North & South Tilt Leg, plus hardware for attaching to XR Rails®. South Tilt Legs come assembled and feature angle indicator markings to simplify installation. North Tilt Legs consists of a slotted aluminum tube and a pivot bracket for full adjustability.

## Flat Roof Attachment



Item Number	Description
FRA-BASE-01-M1	Flat Roof Attachment, Mill
FRA-M60T-GF-W1	Flat Roof Attachment, Membrane, 60 mil, TPO, GAF, White
FRA-M60P-GF-W1	Flat Roof Attachment, Membrane, 60 mil, PVC, GAF, White
FRA-M60T-JM-W1	Flat Roof Attachment, Membrane, 60 mil, TPO, Johns Manville, White
FRA-M60T-MH-W1	Flat Roof Attachment, Membrane, 60 mil, TPO, Mule Hide, White
FRA-M60P-MH-W1	Flat Roof Attachment, Membrane, 60 mil, PVC, Mule Hide, White
FRA-M60T-FS-W1	Flat Roof Attachment, Membrane, 60 mil, TPO, Firestone, White
FRA-M60T-CA-W1	Flat Roof Attachment, Membrane, 60 mil, TPO, Carlisle, White
FRA-M60K-CA-W1	Flat Roof Attachment, Membrane, 60 mil, KEE, Carlisle, White
FRA-M60P-SN-W1	Flat Roof Attachment, Membrane, 60 mil, PVC, Sarnafil, White
FRA-M60T-VS-W1	Flat Roof Attachment, Membrane, 60 mil, TPO, Versico, White

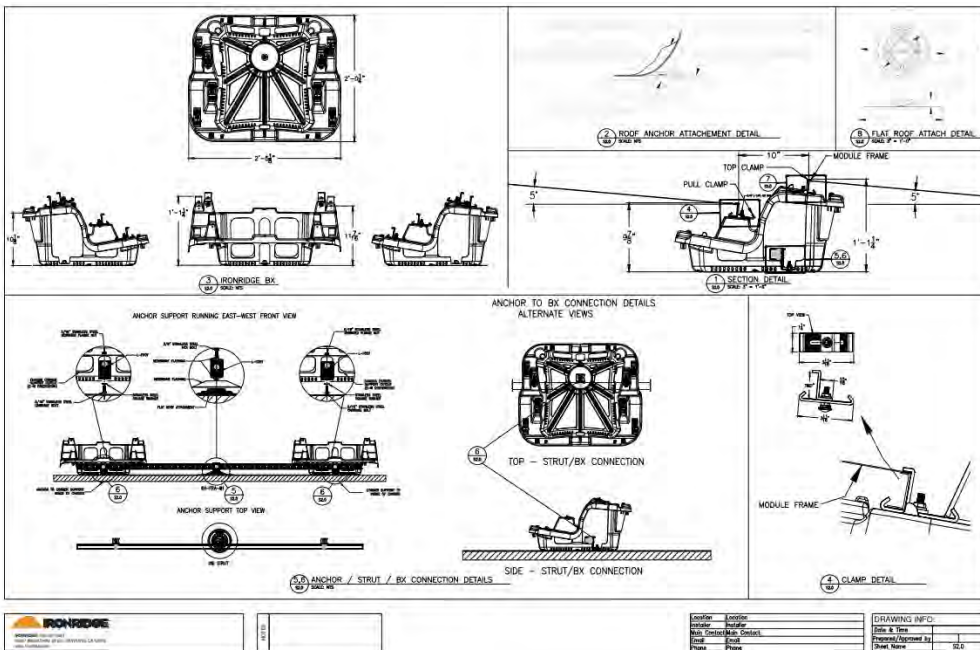
The IronRidge® Flat Roof Attachment combines a high-strength cast aluminum base with a 16-point fastening pattern to enable the widest range of design options on low-sloped roofs. In addition, it is compatible with most of the common low-slope roofing materials to ensure a system that is both easy to integrate and engineered down to the deck.

## BX Overview



The IronRidge® BX System is designed to meet the needs of commercial solar—navigating complex roof layouts, while also handling the most extreme environmental conditions. At the very core of the system is the Chassis, a ballasted mount made of lightweight glass-reinforced composite and molded specifically for the needs and challenges of solar installations.

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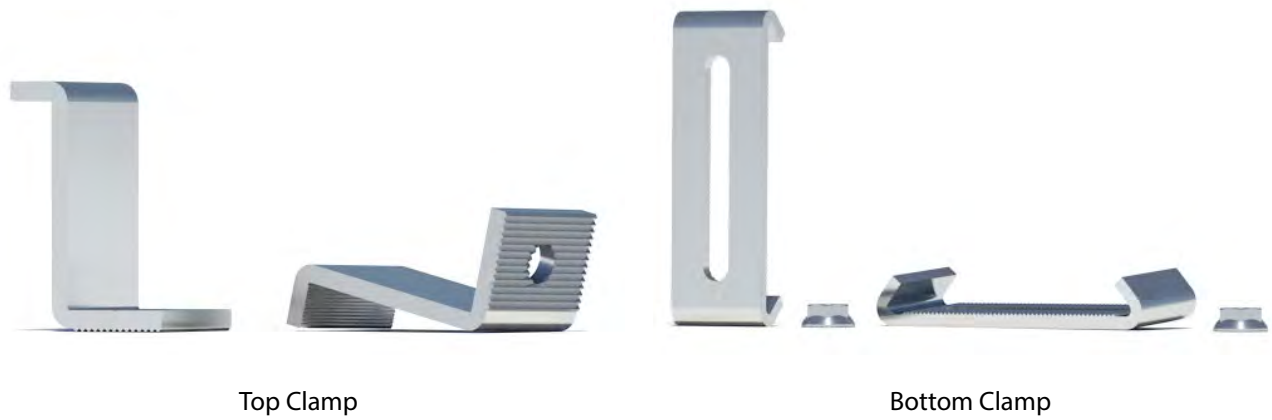
## BX Chassis



Item Number	Description
BX-5D-P1	BX Chassis, 5 Degrees
BX-10D-P1	BX Chassis, 10 Degrees

At the core of the BX system is the Chassis, a ballasted mount made of BASF Ultramid. Ultramid polyamides (nylon) are exceptional for their high mechanical strength, rigidity and thermal stability. Moreover, Ultramid polyamides afford good impact resistance even at low temperatures, advantageous sliding friction properties and problem-free processing. Chassis come in 5° and 10° options.

## BX Clamps



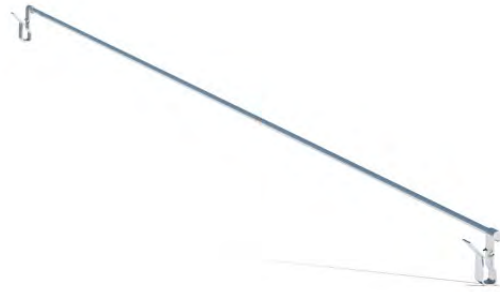
Item Number	Description	Item Number	Description (Black)
BX-TCL-30MM-M1	BX Top Clamp, 30MM, Mill	BX-BCL-M1	BX Bottom Clamp, Mill
BX-TCL-32MM-M1	BX Top Clamp, 32MM, Mill		
BX-TCL-35MM-M1	BX Top Clamp, 35MM, Mill		
BX-TCL-40MM-M1	BX Top Clamp, 40MM, Mill		

The Top and Bottom Clamps of the BX System combine to create a multi-directional grip on the module from above and below, ensuring a strong connection regardless of force direction.

## BX Bonding Jumpers



8" Module Bonding Jumper



38" Row Bonding Jumper

Item Number	Description
BX-MB8-M1	8" Module Bonding Jumper
BX-RB38-M1	38" Row Bonding Jumper

8" Module Bonding Jumper bonds adjacent modules in the array, while the 38" Row Bonding Jumper completes row-to-row bonding in the array. BX Bonding Jumpers use a press-on installation, being made of tin-plate copper wire and providing a factory-crimped connection.

## BX MLPE Mounting Hardware

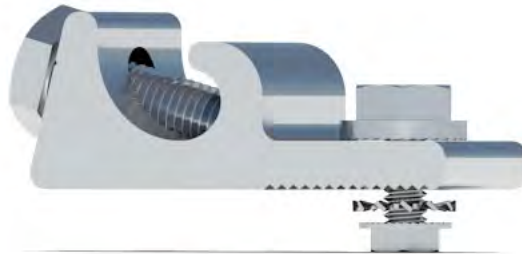


Item Number	Description
BX-CMA-MI-M1	BX MLPE Mounting Assembly

Optional mounting hardware for mounting MLPE devices to BX Chassis. Kit includes stainless steel 300 series cap screw and cage nut.



## BX PV Module Grounding Lug



Item Number	Description
PV-LUG-01-A1	PV Module Grounding Lug

At the core of the BX system is the Chassis, a ballasted mount made of BASF Ultramid. Ultramid polyamides (nylon) are exceptional for their high mechanical strength, rigidity and thermal stability. Moreover, Ultramid polyamides afford good impact resistance even at low temperatures, advantageous sliding friction properties and problem-free processing. Chassis come in 5° and 10° options.

**BX Cable Ties**


Cable Tie



Cable Tie &amp; Edge Clip

Item Number	Description
BX-CT-UV-P1	BX Cable Tie, UV Rated, Black
BX-CT-EC-P1	BX Cable Tie and Edge Clip, UV Rated, Black

Complete wire management with weatherproof ties that are made of UV stabilized polyamide. Cable Ties come in 12" length, bundles of 100. Cable Tie with Edge Clips help to manage wires underneath module and Chassis flange by clipping to module and Chassis.

## BX Inverter Mounting Assembly



Item Number	Description
BX-CMA-SI-M1	BX Inverter Mounting Assembly

The BX Inverter Mounting Assembly includes all parts needed (Chassis, XR10<sup>®</sup> Rail, and hardware) to create a mounting platform for an inverter (with up to a 4' base).

## BX Flat Roof Mounting Assembly



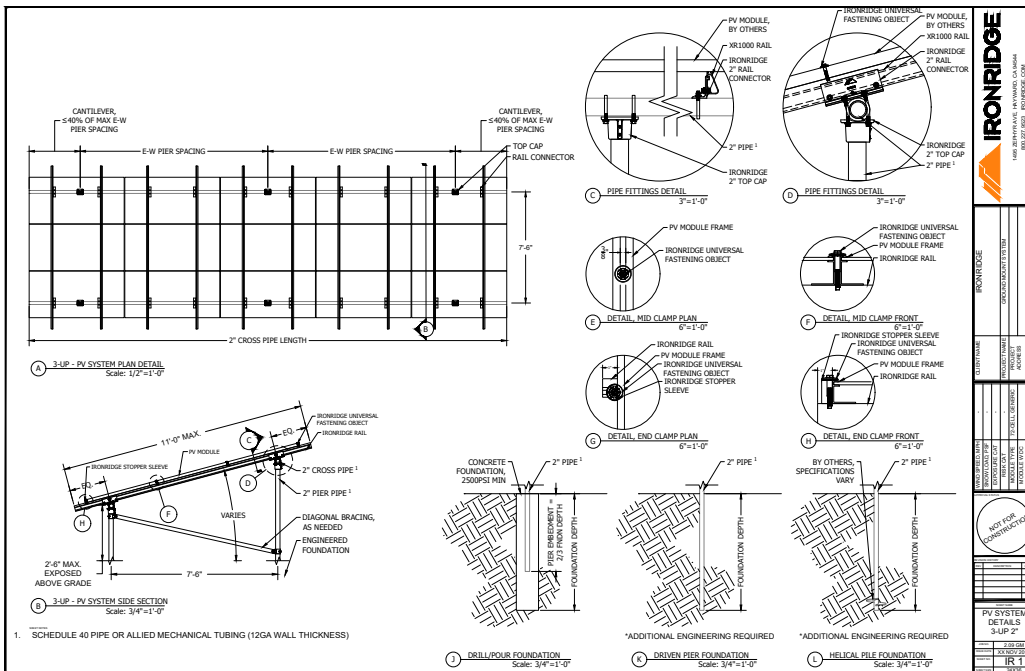
Item Number	Description
BX-MA-FRA-M1	BX Flat Roof Mounting Assembly

The BX Flat Roof Mounting Assembly provides parts (to be combined with the IronRidge Flat Roof Attachment and locally-sourced strut and channel nuts) to add Flat Roof Attachment anchors to the BX System.

### Ground Mount Overview



The IronRidge® Ground Mount System scales to support a wide range of site and terrain challenges. This system consists of components that allow for installer-supplied steel pipe or mechanical tubing to combine with the XR100® or XR1000® rail assembly for simple, rapid, cost effective ground mounting.



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## Top Caps



Item Number	Description
70-0200-SGA	SGA Top Cap at 2", Mill
70-0300-SGA	SGA Top Cap at 3", Mill

Our heavy duty cast aluminum IronRidge Top Caps secure quickly and easily to galvanized schedule 40 pipe (ASTM A53 Grade B) or mechanical tubing (i.e. Allied Flo-Coat, Gatorshield, Gatorshield-Plus) piers with with 2 set screws. Available in sizes that fit either 2" or 3" steel pipe and mechanical tubing, the top cap supports cross pipes with U-bolt hardware. The top caps are manufactured using cast aluminum ALMAG 535 and come with a mill finish. As a reminder, the substructure pipe and mechanical tubing are not included.

2" Pipe/Tubing Outside Diameter = 2.375" (2 3/8")

3" Pipe/Tubing Outside Diameter = 3.5"

2" Schedule 40 Pipe Wall Thickness = 0.154"

2" Allied Mechanical Tubing Wall Thickness = 0.109"

3" Schedule 40 Pipe Wall Thickness = 0.216"

3" Allied Mechanical Tubing Wall Thickness = 0.165"

## Bonded Rail Connectors



Item Number	Description
GM-BRC2-01-M1	Ground Mount Bonded Rail Connector - 2"
GM-BRC3-01-M1	Ground Mount Bonded Rail Connector - 3"

Our Bonded Rail Connectors attaches and bonds horizontal cross pipes to XR100® or XR1000® Rails. Each rail requires two connectors to create a secure and bonded attachment. Available for both 2" and 3" sizes, these Rail Connectors are manufactured using extruded 6000 series aluminum. Review the images on the section overview for added context.

## Hex Head Set Screws



Item Number	Description
GM-HSHW-01-M1	Hex Head Set Screw for Ground Screws

To connect the IronRidge® Ground Mount System to your ground screw, you simply insert the downtube pipe into the top of the installed ground screw and tighten the required number of hex head set screws to the appropriate torque.



## Diagonal Braces



Item Number	Description
GM-DB2-SLV01-M1	GM 2" Sleeve, Diagonal Brace
GM-DB2-TB02-M1	GM Diagonal Brace, 2" Square Tube, 106.5" LG (For 2" Pipe)
GM-DB2-TB01-M1	GM Diagonal Brace, 2" Square Tube, 88.5" LG (For 2" Pipe)
GM-DB3-SLV01-M1	3" Sleeve, Diagonal Brace
GM-DB3-TB02-M1	GM Diagonal Brace, 2.5" Square Tube, 105.0" LG (For 3" Pipe)
GM-DB3-TB01-M1	GM Diagonal Brace, 2.5" Square Tube, 87.0" LG (For 3" Pipe)
GM-DB-HW01-M1	GM Diagonal Brace Hardware (For 2" & 3" Pipe)

This optional diagonal brace is for installations that require extra support. Pieces include the brace, sleeves, and hardware for installation between one north and south pair of support legs.

## Pipe & Mechanical Tubing Summary

To save installers money, we have engineered the use of locally sourced 2" or 3" schedule 40 steel pipe or mechanical tubing as the primary substructure element of our Ground Mount System. By allowing customers to source these materials locally, installers benefit from reduced shipping, product and inventory costs, and shortened delivery times. We provide intuitive online tools that will help you quickly and easily craft a bill of materials to simplify substructure costing and purchasing.

When additional assistance is needed to address ground mounting your array, please contact our customer service team at 800-227-9523, or at [support@ironridge.com](mailto:support@ironridge.com). Many IronRidge customers prefer to use our online Design Assistant, found at [www.ironridge.com/design](http://www.ironridge.com/design).

A soils report is widely considered the most reliable and accurate method for determining the type and depth of piers for any Ground Mount System. Soils reports can be obtained through a Geotechnical Engineer. A commonly relied upon alternative to obtaining a site-specific soils report is to use the IBC 2006 Table 1804.2. The advantage of purchasing a site specific soils report is that the information provided often results in shorter embedment depths, thus lowering both material and installation cost.

In many cases installers rely on our easy to use PE stamped certification and post/pier installation guides that our engineering staff has made available for download. You will find these and other IronRidge Ground Mount System documents located at [ironridge.com/products/groundmounting/resources](http://ironridge.com/products/groundmounting/resources).

### Schedule 40 Pipe

ASTM A53 Grade B standard weight (schedule 40) steel pipes or structural equivalent, with minimum geometry and material properties of:

- 3" pipe: OD 3.5", wall thickness 0.216", 35ksi yield strength
- 2" pipe: OD 2.38", wall thickness 0.154", 35ksi yield strength

### Mechanical Tubing

Steel mechanical tubing or structural equivalent, with minimum geometry and material properties of:

- 3" Tubing: OD 3.5", wall thickness 0.165", 45ksi yield strength
- 2" Tubing: OD 2.375", wall thickness 0.109", 50ksi yield strength

\*Always check local building codes for pier mounting requirements specific to your location.



## QRail® Assembly

### Rails

Item Number	Description
QMR-RL14-A-60	QRail Light, 14 ft., Mill
QMR-RL14-B-60	QRail Light, 14 ft., Black
QMR-RS14-A-60	QRail Standard, 14 ft., Mill
QMR-RS14-B-60	QRail Standard, 14 ft., Black



### Rail Skirt

Item Number	Description
QMR-QS14-B-24	QSkirt 14ft
QMR-QSS-A-12	QSkirt Splice
QMR-QSE-B-12	QSkirt End Cap Pairs



### Rail Splices

Item Number	Description
QMR-ISL-A-15	QSplice Internal, Light, Mill
QMR-ISS-A-15	QSplice Internal, Standard, Mill



### Rail End Caps

Item Number	Description
QMR-CPL-B-50	End Cap Light, Black (5 Bags of 10)
QMR-CPS-B-50	End Cap Standard, Black (5 Bags of 10)



### Rail Mid Clamps

Item Number	Description
QMR-UMC3045-A-20	Universal Mid Clamp, 30-45mm, w/ Bonding, Mill
QMR-UMC3045-B-20	Universal Mid Clamp, 30-45mm, w/ Bonding, Black



### Rail End Clamps

Item Number	Description
QMR-UEC3045-A-20	Universal End Clamp, 30-45mm, Mill
QMR-UEC3045-B-20	Universal End Clamp, 30-45mm, Black
QMR-HEC-A-20	Hidden End Clamp, Mill



### Rail Attachment & Grounding

Item Number	Description
QMR-TB20P-A-300	20mm T-Bolt w/ Nut, Patch, SS (6 Bags of 50)
QMR-GLQ-A-50	Grounding lug, QRail, AL, w/T-Bolt



## QRail® Assembly (Continued)

### L-Feet

Item Number	Description
QM-TLF5-M1	L-Foot, Fixed Tilt, 5 Degree, Mill
QM-TLF10-M1	L-Foot, Fixed Tilt, 10 Degree, Mill



## Composition Shingle Mounts

### HUG™ Halo UltraGrip™

Item Number	Description
QM-HUG-01-M1	Halo UltraGrip - Mill
QM-HUG-01-B1	Halo UltraGrip - Black
RD-1430-01-M1	RD Structural Screw



### L-Mount®

Item Number	Description
QM-LM-01-M1	L-Mount, 9" x 12", Mill
QM-LM-01-B1	L-Mount, 9" x 12", Black
QMLM-ST-B-12	L-Mount 5/16" Structural Screw, 9" x 12", Black



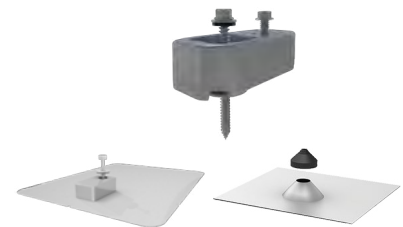
### Comp Mounts

Item Number	Description
QMNC-A-12	QBase Comp Mount, 3.25" Post - 3.75" Net, 12" x 12", Mill



### Conduit Mounts

Item Number	Description
QM-BUG-01-M1	BUG, Conduit Mount, Mill (10 Pairs Per Box)
QMCC-A-12	Classic Conduit Composition Mount, 9" x 12", Mill
QMCPA-A-12	Conduit Penetration Flashing, Mill



## Tile Roof Mounts

### QBase Universal Tile Mount

Item Number	Description
QMUTM-A-12	QBase Universal Mount, 6.5" Post - 7" Net, 18" x 18", Mill



### Tile Replacement

Item Number	Description
QMTR-BM-A-12	Tile Replacement, Base Mount, Mill
QMTR-S3.25-A-12	Tile Replacement, S-Tile, 3-1/4" Post, Mill
QMTR-S3.25-B-12	Tile Replacement, S-Tile, 3-1/4" Post, Black
QMTR-F3.25-A-12	Tile Replacement, Flat Tile, 3-1/4" Post, Mill
QMTR-F3.25-B-12	Tile Replacement, Flat Tile, 3-1/4" Post, Black
QMTR-W4-A-12	Tile Replacement, W-Tile, 4" Post, Mill
QMTR-W4-B-12	Tile Replacement, W-Tile, 4" Post, Black
QMC-TRF-F-A-12	Tile Replacement Flashing, Flat Tile, Mill
QMC-TRF-S-A-12	Tile Replacement Flashing, S-Tile, Mill
QMC-TRF-W-A-12	Tile Replacement Flashing, W-Tile, Mill



### Tile Hook Deck Flashing

Item Number	Description
QM-THDF-01-M1	Tile Hook Deck Flashing, Mill



### Conduit Mounts

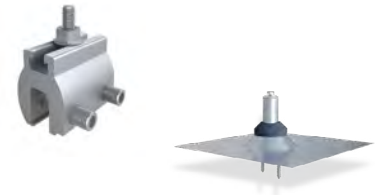
Item Number	Description
QMCMT-A-12	Conduit Mount for Tile, Mill
QMCPT-A-12	Conduit Penetration Flashing, Tile, Mill



## Other Mounts & Accessories

### Metal, Shake & Slate

Item Number	Description
QM-LYNX-SS	Lynx™ Standing Seam Metal Roof Clamp
QMNS-A-12	QBase Metal, Shake & Slate, 3.25" Post - 3.75" Net, Mill



### QBase® Mount (Low Slope Roof Attachment, No Flashing)

Item Number	Description
QM-QBB-01-M1	QBase Base (incl. base to post h/w), Mill
QM-QBP-3.25-M1	QBase 3.25" Post (incl. post to rack h/w), Mill (3.75" Net)
QM-QBP-4.5-M1	QBase 4.5" Post (incl. post to rack h/w), Mill (5" Net)
QM-QBP-6.5-M1	QBase 6.5" Post (incl. post to rack h/w), Mill (7" Net)
QM-QBP-8.5-M1	QBase 8.5" Post (incl. post to rack h/w), Mill (9" Net)
QM-QBP-11.5-M1	QBase 11.5" Post (incl. post to rack h/w), Mill (12" Net)
QM-QBP-12.5-M1	QBase 12.5" Post (incl. post to rack h/w), Mill (13" Net)
QM-QBP-14.5-M1	QBase 14.5" Post (incl. post to rack h/w), Mill (15" Net)
QM-QBP-17.5-M1	QBase 17.5" Post (incl. post to rack h/w), Mill (18" Net)



### Grounding

Item Number	Description
QMR-ECW-A-50	WEEB BMC, SS (5 Bags of 10)
QMR-WC-A-300	Trunk/PV Cable Clip, SS (25 Bags of 12)



### Accessories

Item Number	Description
QMAFBU-A-25	Accessory Frame Bracket, Universal, Mill
QM-JBX-RF02-B1	JayBox™ Junction Box, Roof Mount (Comp Shingle)
QM-JBX-RL02-B1	JayBox™ Junction Box, Rail Mount*



\*Rail hardware sold separately:  
 BHW-MI-01-A1 (XR Rails)  
 QMR-TB20P-A-300 (QRail)