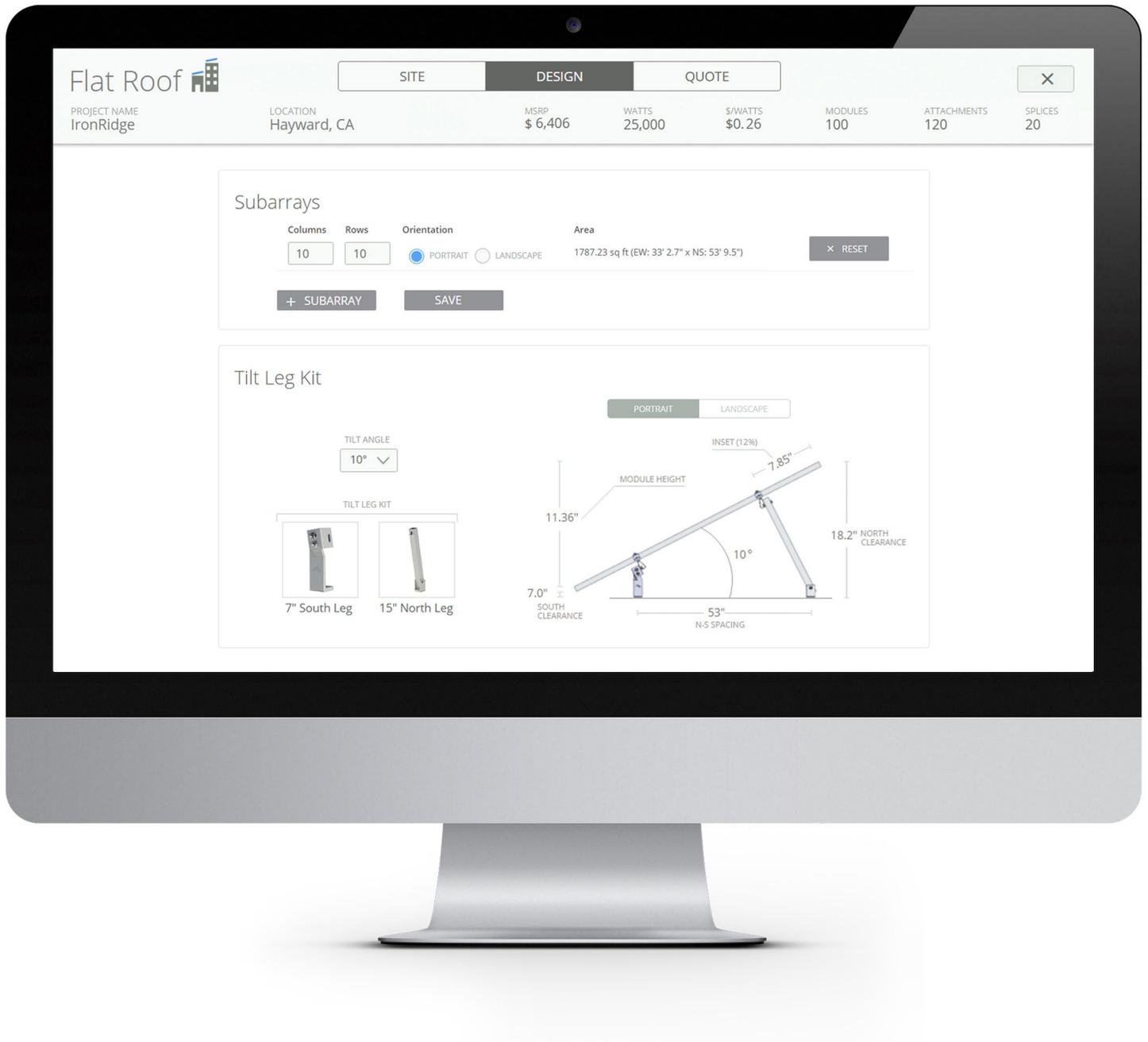


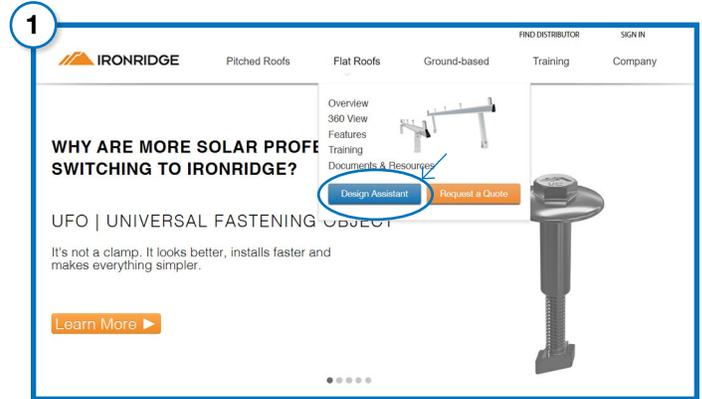
FLAT ROOF DESIGN ASSISTANT™



GET STARTED

1. START DESIGN ASSISTANT

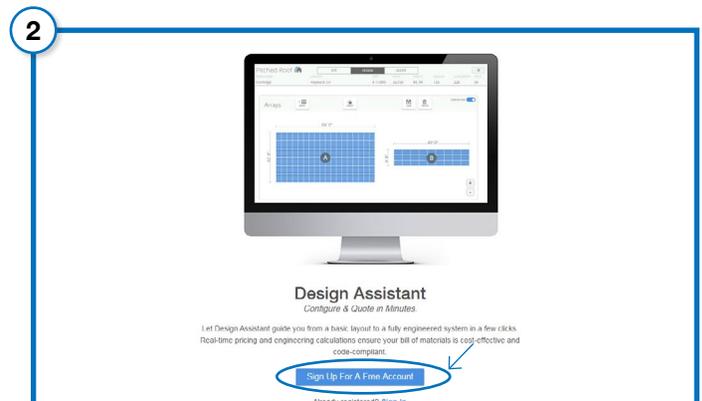
Go to the IronRidge home page at ironridge.com, then hover over the "Flat Roofs" menu at the top and click the blue "Design Assistant" button.



2. SIGN UP FOR AN ACCOUNT

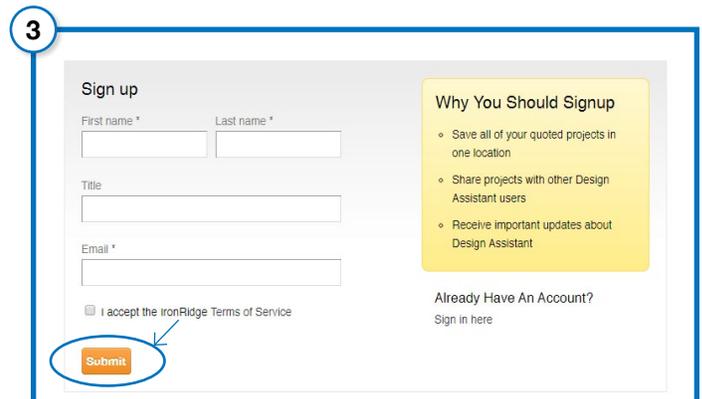
If you don't have an account, click the blue [sign up](#) link at the bottom of the page. If you already have an account click the [sign in](#) link.

💡 Having a Design Assistant account allows you to save all of your quoted projects in one location, share projects with other Design Assistant users, and receive important updates.



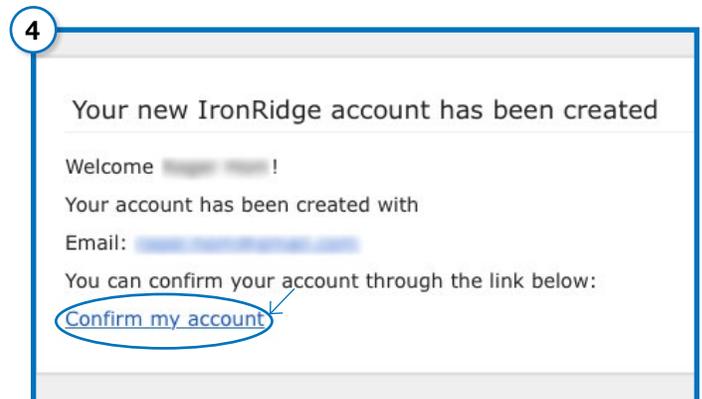
3. FILL OUT AND SUBMIT FORM

Fill out the web form as required, agree to the IronRidge [terms of service](#), and then click the "submit" button. You will then be logged into the Flat Roof Design Assistant.



4. CONFIRM YOUR ACCOUNT

Click the "confirm my account" link in your confirmation email. You will be automatically signed in. Now you're ready to create a new project.



Flat Roof

PROJECT NAME: IronRidge | LOCATION: Hayward, CA | MSRP: \$ 0 | WATTS: 0 | \$/WATTS: \$0.0 | MODULES: 0 | ATTACHMENTS: 0 | SPLICES: 0

Project Info

PROJECT NAME: IronRidge | ZIP CODE: 94544 | CITY, STATE: Hayward, CA | WIND SPEED (ASCE 7-10): 110 MPH | GROUND SNOW LOAD: 0 PSF

Building

ROOF SLOPE: 0-6 ° | BUILDING HEIGHT: 30 FT | WIND EXPOSURE: B | RISK CATEGORY: II

Module

MANUFACTURER: WINAICO | MODEL: WSP-250P6 | COLOR: [Blue] [Black] | DIMENSIONS: 65.6" x 39.3" x 1.6"

A NAVIGATION

Design Assistant starts by asking for site details in the "Site" section. Click the tabs to jump to the corresponding sections of your project.

B PROJECT INFO

Name your project, to identify it from other projects you make later. Then, enter the project zip code. Typical wind and snow values will be loaded for the zip code entered.

C WIND SPEED

The typical wind speed for your zip code is automatically loaded, but please verify with the local building authority.

D GROUND SNOW LOAD

The typical ground snow load for your zip code is automatically loaded, but please verify with the local building authority.

E BUILDING HEIGHT

Select the height of the building.

F WIND EXPOSURE

Select wind exposure category B, C or D.

G MODULE MAKE & MODEL

Select the module manufacturer and model. Confirm that the module dimensions listed are accurate.

⚠ Contact support@ironridge.com if a module is not listed or dimensions are inaccurate.

H MODULE COLOR

Select your module color. Rail and hardware component finishes will be automatically selected to match module color. Finishes can be changed later in the "Quote" tab.

PROJECT NAME
IronRidge

LOCATION
Hayward, CA

SITE

DESIGN

QUOTE

X

A

MSRP
\$ 6,406

WATTS
25,000

\$/WATTS
\$0.26

MODULES
100

ATTACHMENTS
120

SPLICES
20

Subarrays B

Columns
Rows

10

10

Orientation

PORTRAIT
 LANDSCAPE

Area
1787.23 sq ft (EW: 33' 2.7" x NS: 53' 9.5")

X RESET

+ SUBARRAY

SAVE

Tilt Leg Kit

TILT ANGLE

10°

C

7" South Leg

15" North Leg

PORTRAIT

LANDSCAPE

A PROJECT OVERVIEW

The cost, watts, cost per watt, and number of modules, attachments, and splices update as changes are made.

B SUBARRAY ENTRY

Enter the number of columns and rows for each subarray. Select the module orientation, either portrait or landscape.

C TILT ANGLE

Select your desired tilt angle.

Flat Roof Design Assistant supports a tilt angle of 4-30° for portrait orientation, and 6-30° for landscape orientation.

D TILT DIAGRAM

Refer to the visual diagram to see the dimensional implications of changing your tilt angle.

- 💡 Tilt Angle is measured from the bottom edge of the module to the roof surface.
- 💡 Inset is the distance from the edge of the module to where the module attaches to the rail.
- 💡 N-S Spacing is the center-to-center distance between the North and South Tilt Legs.
- 💡 North Clearance is the distance from the bottom edge of the module to the roof surface.
- 💡 South Clearance is the distance from the bottom edge of the module to the roof surface.
- 💡 Module Height is the vertical distance from the top of the southern edge to the northern edge of the module.

Flat Roof 

SITE DESIGN QUOTE

PROJECT NAME: IronRidge LOCATION: Hayward, CA MSRP: \$ 6,406 WATTS: 25,000 \$/WATTS: \$0.26 MODULES: 100 ATTACHMENTS: 120 SPLICES: 20

Rails ¹ ATTACHMENT SPAN ¹ FT ^E

VALUES FOR PORTRAIT/LANDSCAPE ^F

RAIL

| | |  |  |  |
|-----------------------------|---------------------|---|---|---|
| | | XR10 | XR100 | XR1000 |
| MAX SPAN ^H | Zone 1 ¹ | 5' 9" | 8' 8" | 11' 6" |
| | Zone 2 | 5' 3" | 7' 10" | 10' 4" |
| | Zone 3 | 4' 3" | 6' 4" | 8' 4" |
| MAX CANTILEVER ^I | Zone 1 | 2' 4" | 3' 6" | 4' 7" |
| | Zone 2 | 2' 1" | 3' 2" | 4' 2" |
| | Zone 3 | 1' 8" | 2' 6" | 3' 4" |

REACTION FORCES

| | DOWN ^J | UPLIFT ^K |
|--------|-------------------|---------------------|
| Zone 1 | 286.00 LBS | -183.00 LBS |
| Zone 2 | 286.00 LBS | -333.00 LBS |
| Zone 3 | 286.00 LBS | -526.00 LBS |

WEIGHT ^L

| | |
|---------------------|--------------------|
| TOTAL SYSTEM WEIGHT | WEIGHT/ATTACHMENT |
| 5639 LBS | 47.0 LBS |
| RACKING WEIGHT | DISTRIBUTED WEIGHT |
| 634.2 LBS | 3.2 PSF |

Array Details Rail Lengths: 11',14',17' ¹

| ARRAY | BLOCK | X | REQ RAIL ¹ | PROVIDED RAIL ¹ | ATTACH ¹ | CLAMPS | SPLICES |
|-------|--|-----|-----------------------|----------------------------|---------------------|--------|---------|
| A |  ... (10) | 10x | 33' 3" | 1 set of 34.0'[2 x 17'] | 12 | 22 | 2 |

^E ATTACHMENT SPAN

Enter the attachment span.

¹ Larger attachment spans reduce attachments and roof penetrations, but may require larger rail sizes and will increase the loads per attachment point.

^F ORIENTATION TOGGLE

Toggle between portrait and landscape array data.

^G RAIL SELECTOR

Select your rail.

^H MAX SPAN

The rail's maximum allowed span between attachments.

^I MAX CANTILEVER

The maximum length of rail past the last attachment.

^J DOWN (COMPRESSIVE) LOAD

The maximum downforce per attachment (perpendicular to roof) due to system weight and snow and wind loads.

^K UPLIFT

The maximum uplift at each attachment (perpendicular to the roof) due to wind load.

^L WEIGHT

The specific weights of the system, including modules.

Flat Roof 

SITE DESIGN QUOTE

PROJECT NAME: IronRidge LOCATION: Hayward, CA MSRP: \$ 6,406 WATTS: 25,000 \$/WATTS: \$0.26 MODULES: 100 ATTACHMENTS: 120 SPLICES: 20

Rails ¹ ATTACHMENT SPAN ¹ 6 FT

VALUES FOR PORTRAIT/LANDSCAPE 

| RAIL | |  |  |  |
|-----------------------------|---------------------|---|---|---|
| | | XR10 | XR100 | XR1000 |
| MAX SPAN ¹ | Zone 1 ¹ | 5' 9" | 8' 8" | 11' 6" |
| | Zone 2 | 5' 3" | 7' 10" | 10' 4" |
| | Zone 3 | 4' 3" | 6' 4" | 8' 4" |
| MAX CANTILEVER ¹ | Zone 1 | 2' 4" | 3' 6" | 4' 7" |
| | Zone 2 | 2' 1" | 3' 2" | 4' 2" |
| | Zone 3 | 1' 8" | 2' 6" | 3' 4" |

REACTION FORCES

| | DOWN ¹ | UPLIFT ¹ |
|--------|-------------------|---------------------|
| Zone 1 | 286.00 LBS | -183.00 LBS |
| Zone 2 | 286.00 LBS | -333.00 LBS |
| Zone 3 | 286.00 LBS | -526.00 LBS |

WEIGHT

| | |
|---------------------|--------------------|
| TOTAL SYSTEM WEIGHT | WEIGHT/ATTACHMENT |
| 5639 LBS | 47.0 LBS |
| RACKING WEIGHT | DISTRIBUTED WEIGHT |
| 634.2 LBS | 3.2 PSF |

Array Details

Rail Lengths: 11', 14', 17' ^P

| ARRAY | BLOCK | X | REQ RAIL ^M | PROVIDED RAIL ^N | ATTACH ^O | CLAMPS | SPLICES |
|-------|--|-----|-----------------------|----------------------------|---------------------|--------|---------|
| A |  ... (10) | 10x | 33' 3" | 1 set of 34.0'[2 x 17'] | 12 | 22 | 2 |

M REQUIRED RAIL

Required rail is the exact length of rail required to fully support the number of modules in each row of the subarray.

P RAIL LENGTHS

Select rail length. XR rails come in stock lengths of 11', 14' and 17', but custom lengths can be selected as well.

💡 If custom lengths are chosen, be sure to check with your distributor for availability and shipping times.

N PROVIDED RAIL

The optimal amount of rail needed for each row, based on minimizing rail scrap.

O ATTACHMENTS

The number of attachments required for the array.

Flat Roof 

SITE DESIGN QUOTE A X

PROJECT NAME: IronRidge LOCATION: Hayward, CA MSRP: \$ 6,406 WATTS: 25,000 \$/WATTS: \$0.26 MODULES: 100 ATTACHMENTS: 120 SPLICES: 20

Accessories B WIRE CLIPS ⓘ END CAPS ⓘ MICROINVERTER KITS ⓘ

Bill of Materials

| GROUP | COLOR | PART | DESCRIPTION | QTY C | PRICE/EA | TOTAL PRICE |
|--------------------|---|----------------|--|---|----------|-------------|
| CLAMPS & GROUNDING | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> D E | UFO-CL-001 | Kit, 4pcs, Universal Module Clamp | - 55 + | \$14.00 | \$770.00 |
| | | GD-LUG-003 | Kit, 2pcs, Grounding Lug, Low Profile | - 5 + | \$14.00 | \$70.00 |
| | | UFO-STP-40MM | Kit, 4pcs, Stopper Sleeve, 40MM, Clear | - 10 + | \$2.00 | \$20.00 |
| RAILS & SPLICES | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | XR-100-204A | XR100, Rail 204" (17 Feet) Clear | - 40 + | \$80.64 | \$3,225.60 |
| | | XR-100-SPLC-BD | Kit, XR100 Bonded Splice | - 20 + | \$8.00 | \$160.00 |
| TILT LEGS | <input type="checkbox"/> | TM-FTL-015 | Kit, Fixed Tilt Leg, 15" | - 60 + | \$36.00 | \$2,160.00 |

MSRP \$6,405.60

F Discount 0 % (\$0.00)

Total Price \$6,405.60

\$/Watt \$0.26

G  BOM CSV H  Request Quote

A SAVE & CLOSE

Exit the current project to view all past projects. The current project will automatically be saved to edit later.

B ACCESSORIES

Add accessories. Click icon next to part to learn more.

C QUANTITY

Use the plus and minus buttons to modify quantities.

D PRODUCT IMAGE

Click to view an image of the selected product.

E COLOR SELECTOR

Component colors are preset to match module color. Use the color selector to change finishes as desired.

 XR1000 is only available in clear finish.

F DISCOUNT LEVEL

Enter a distributor's discount, if given, to update pricing.

G DOWNLOAD CSV

Download the complete Bill of Materials spreadsheet.

H REQUEST QUOTE

Send the project to a local distributor for a final quote.

Flat Roof 

SITE DESIGN QUOTE X

| PROJECT NAME | LOCATION | MSRP | WATTS | \$/WATTS | MODULES | ATTACHMENTS | SPLICES |
|--------------|-------------|----------|--------|----------|---------|-------------|---------|
| IronRidge | Hayward, CA | \$ 6,406 | 25,000 | \$0.26 | 100 | 120 | 20 |

Documents I ZIP

| Installation | Design | Certification |
|---------------------------|---|---|
| Tilt Mount Install Manual | Tilt Mount AutoCAD DWG Tilt Mount AutoCAD PDF Preview | CA XR100 Tilt UFO Certification Tilt Mount Fire Rating Certification |

Print Project Share Project J

I DOCUMENTS

Relevant documents are provided, based on inputs. Download those you want or a ZIP file of all of them.

J SHARE PROJECT

Share your project with another Design Assistant user by entering their email. They can then edit the project also.

IronRidge.com/design

