



# EchoStar & EchoStar + Installation Guide

*Note: Please read the entire Installation Guide before application.*

The installation guide is intended to provide installers with helpful information regarding EchoStar and EchoStar + prior to installing the material. Kirei accepts no responsibility for installation actions taken or not taken. This installation guide is not intended to be an in-depth guide; installers' knowledge as experienced tradesman needs to be applied.

This installation guide serves only as a recommendation for installing and handling EchoStar and EchoStar +. If you have questions about application or techniques, contact Kirei at [www.kireiusa.com](http://www.kireiusa.com) or 619.236.9924.

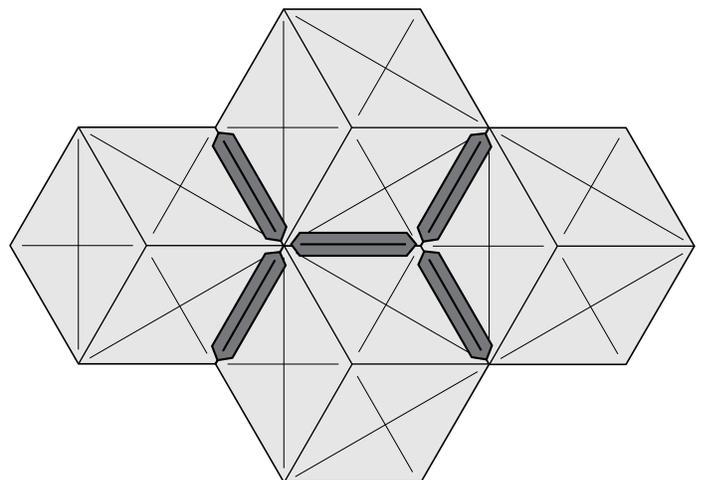
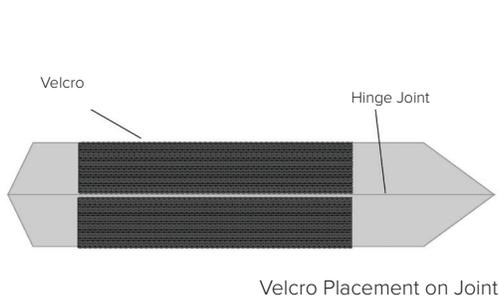
## Parts Included

- EchoStars or EchoStar + in amount ordered
- Joiners in amount ordered, based on number of seams between adjacent EchoStars (one joiner per seam between abutting EchoStars)

## Joiner Installation

1. Be sure to order adequate joiners. Prior to ordering count how many joiners will be needed to join each adjacent EchoStar at all adjacent edges.
2. Line up panel edge and corners with coinciding panel.
3. Apply 10" of velcro to edge of EchoPanels to be joined.
4. Joiner to be installed on top of velcro between the EchoPanels, to bridge EchoPanels together.
5. Press firmly on joiner to ensure full vecro engagement.

*Notes: Joiner color is matched to frames.*





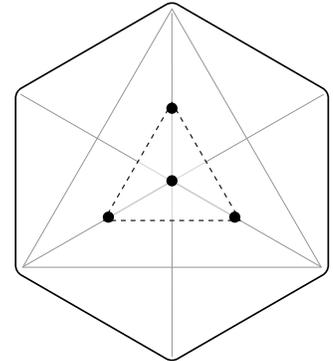
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## EchoStar Assembly

Each EchoStar and EchoStar + comes fully assembled and ready to hang with 3 integrated 1/4" diameter eyelets for connecting your cable system or chain.

The safest and easiest assembly is achieved by evaluating the installation location in advance. Typically, two or more installers are needed for most applications. See Cable Hanging Detail diagram to better understand how to hang EchoStar with three cables.

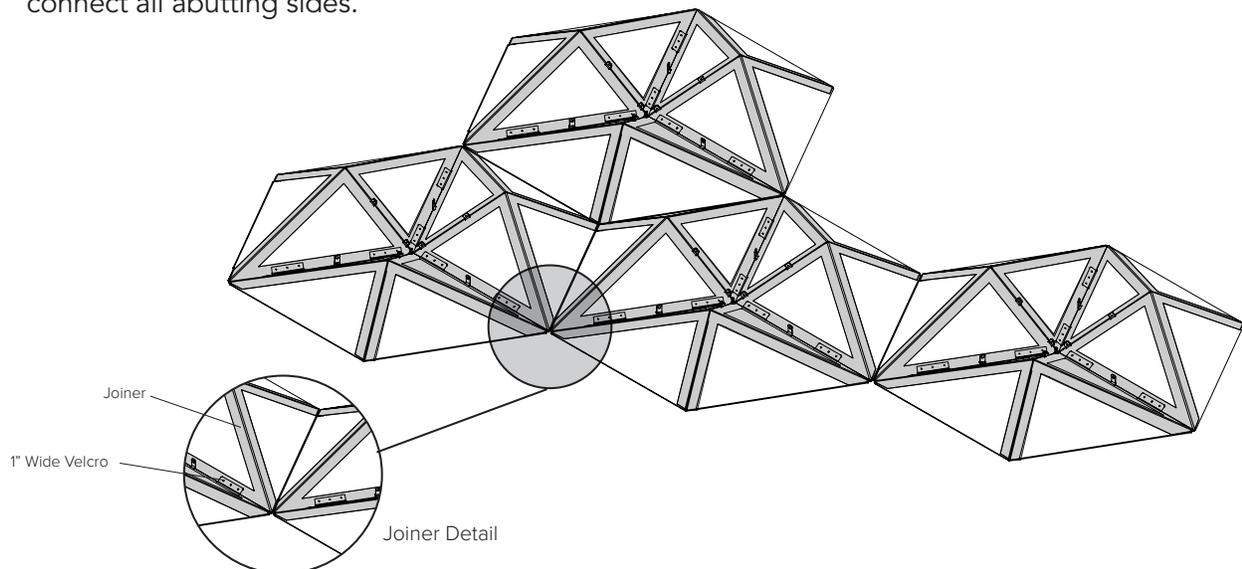
When installing EchoStars connected in sequence or in clusters, be sure to plan your layout in advance and begin the install in the center of the cluster, working outward. Be sure to note any conflicts with existing ducting, sprinklers or other ceiling protrusions. Also make sure to check local fire and seismic codes for compatibility.



**Cable Hanging Detail:** Mark the centerpoint. Then measure out 7.25" out from center in an equilateral triangle shape to locate cable hanging positions.

## EchoStar Installation

1. Determine the center point of the first EchoStar to be installed. Measure 7.25" from the center in an equilateral triangle to correspond to the 3 mounting eyelets standard on each EchoStar.
2. Drop mounting cable to these points, using appropriate ceiling mounting hardware and cable rated for the weight of the end system. (Each EchoStar and EchoStar + weighs approximately 8.5 lbs.) Cables should always be vertical. If vertical cables cannot be achieved due to specific site details, hedge cable positions towards the center of the cluster to ensure that the adjoining sides are pulled together.
3. When EchoStars are installed in rows or clusters with abutting sides, Joiners are required to connect all abutting sides.





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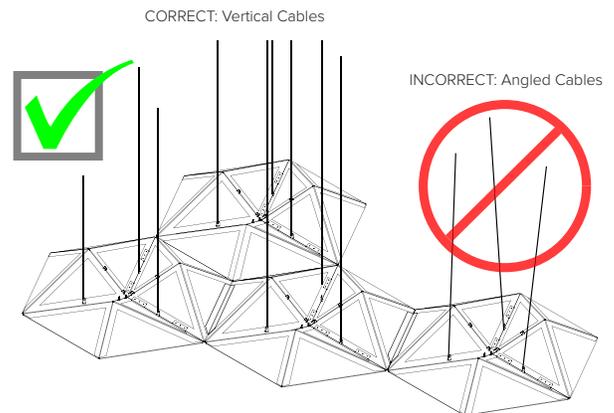
## To Apply Joiner

1. Peel Velcro paper off and affix Velcro strips to EchoStar along abutting exposed EchoPanel. Apply Velcro strips to the top of the EchoStar along all abutting edges (not on metal braces).
2. Press Velcro on joiner to Velcro on EchoStar unit. Apply pressure to joiner while supporting underside to be sure that the Joiner Velcro is firmly engaged before continuing.
3. Apply the Velcro Strips to the top surface of the adjoining EchoStar sides and firmly connect each before moving on to next adjoining EchoStars.
4. Joiners are required to attach adjacent EchoStar units at adjoining edges. All adjoining edges should have a joiner applied to both EchoStar units.

## Cable Drops & Joiners

EchoStars are sold as individual cloud elements and can be suspended individually or in arranged clusters with abutting edges. Proper hanging alignment and joiner installation is essential to ensure proper installation results.

Joiners are required for each abutting edge between EchoStars (see diagram).



## Cable Drops & Alignment

Each EchoStar has (3) attachments points for individual mounting cable drops. Installers typically supply gated hook grippers and 1/16" stainless cable for easy leveling at each attachment point.

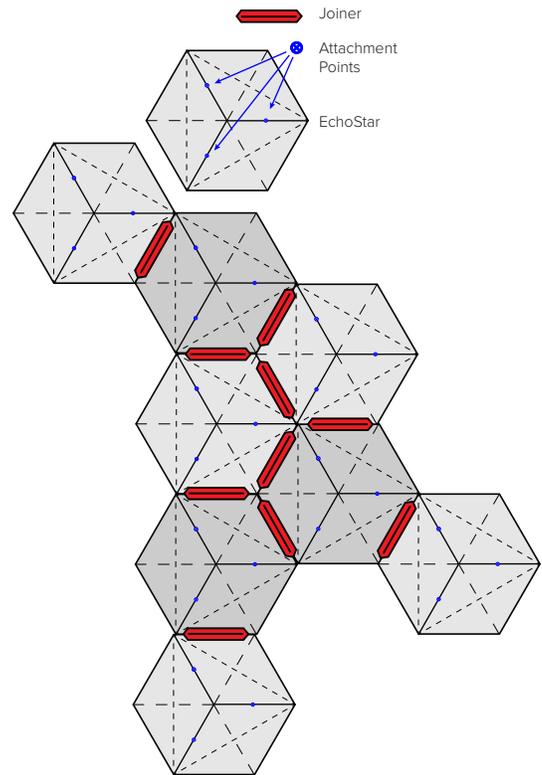
When installing in clusters, cable accuracy & symmetry is extremely important to avoid tension on abutting edges.



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## Cable Drops & Joiners Installation

1. Begin installation at the center of each EchoStar cluster and work your way outwards.
2. Ensure symmetrical and vertically aligned cable drops.
3. Cable drops should be both symmetrical to the abutting EchoStar and precisely vertical. If any overhead intrusions prevent this, always hedge the cables towards the center of the cluster to ensure that all elements are gently drawn together. (see diagram)
4. Any cables pulling outwards from the cluster will cause gaps to occur.
5. Apply Joiners after all EchoStars are suspended and leveled. Joiners are not intended to level or pull together improperly positioned cables.



## Work Safety

In the interest of work safety, it is recommended that people working with EchoStar and EchoStar + wear the appropriate safety equipment. Although the product emits zero off-gases, masks and gloves should be worn to ensure the maximum possible safety precautions. For an SDS form, please contact Kirei at [info@kireiusa.com](mailto:info@kireiusa.com) or 619-236-9924.

## Final Note

Kirei will not be responsible for any cutting or mounting not performed by Kirei staff.

**For any other questions or concerns, please contact Kirei.**