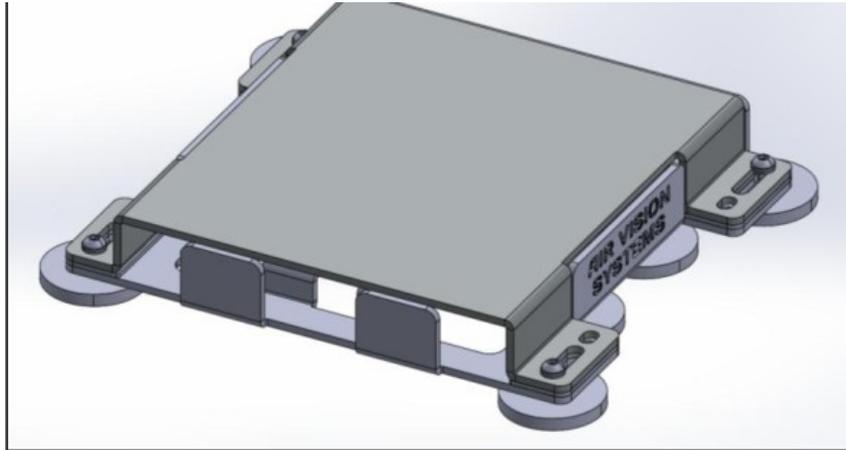




AVS Magnetic Roof Mount Assessment

External technical summary - redacted for approved partner circulation



This public-release summary preserves the comparative engineering outcome while withholding exact dimensions, detailed numerical derivations, internal assumptions, solver naming, and proprietary development inputs.

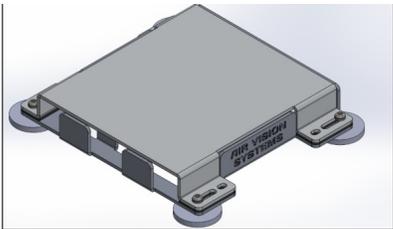
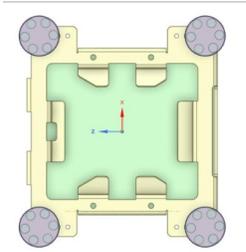
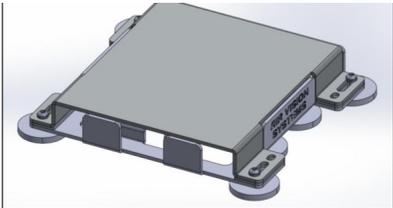
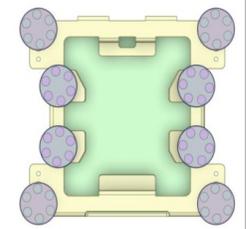
This version intentionally keeps the 4-magnet and 8-magnet configurations visible because the contact-point arrangement is central to the engineering conclusion.

Executive summary

<p>Application</p>	<p>Low-profile satellite terminal vehicle roof mount using a magnetically retained bracket assembly.</p>
<p>Assessment basis</p>	<p>Conservative interface assumptions with comparative review of a reduced 4-magnet layout versus an approved 8-magnet layout.</p>
<p>Comparison outcome</p>	<p>The 4-magnet layout was not accepted for release use, while the 8-magnet layout provided the retained contact condition required for AVS's external-use summary.</p>
<p>Protected content</p>	<p>Exact magnet model and grade, dimensions, detailed reaction-force derivations, software identifiers, and internal validation settings are withheld.</p>

Mount configuration comparison

The figures below show the mount body with the magnetic contact arrangement visible from isometric and plan views. These visuals are intentionally retained because the difference between four and eight magnetic contact points is central to the public-release engineering story.

<p>4-Magnet Configuration - Isometric</p> 	<p>4-Magnet Configuration - Plan</p> 
<p>8-Magnet Configuration - Isometric</p> 	<p>8-Magnet Configuration - Plan</p> 

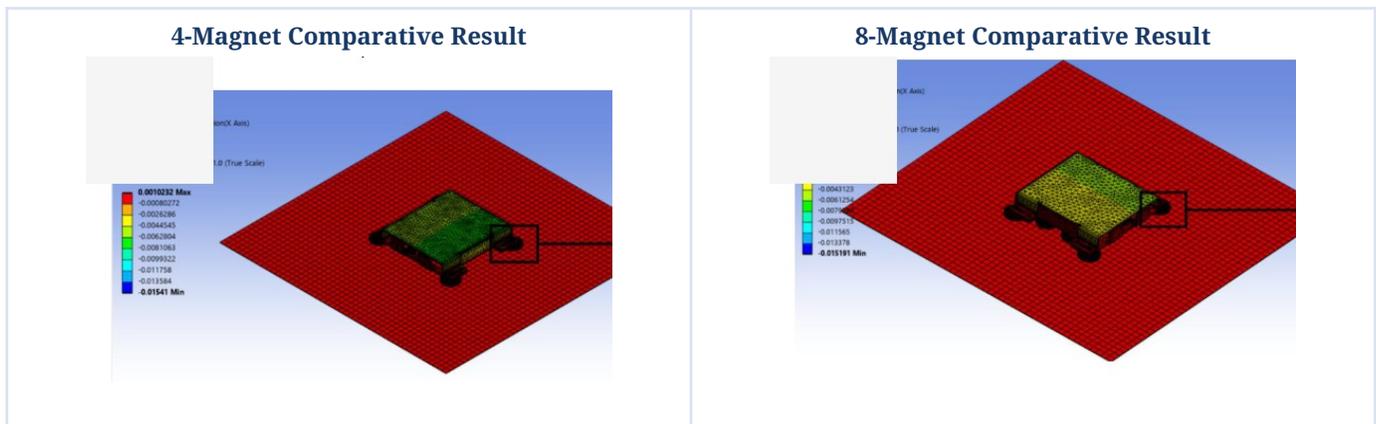
Technical description

- The mounting concept uses multiple discrete magnetic contact points to transfer normal force into the roof interface and develop frictional resistance against external shear loading.
- The mount body acts as a load bridge between the protected enclosure and the magnetic contact locations, so the number and distribution of contact points materially affect stability.
- The 4-magnet arrangement represents a reduced holding layout used for comparative review; the 8-magnet arrangement represents the approved holding layout retained in the external summary.

Key engineering interpretation

- Under conservative interface assumptions, the reduced 4-magnet layout showed insufficient retained holding response for release use and therefore trends toward sliding behaviour.
- The 8-magnet layout increases the number of contact points, improves load sharing through the mount, and produces the retained contact condition used as the AVS approval basis.
- Non-uniform load distribution remains expected across the mount, but the approved 8-magnet arrangement demonstrates adequate global system stability for the stated redacted release basis.

Comparative holding behaviour



Representative comparative visual evidence retained after redaction of software naming and detailed setup fields.

Magnetic mount holding assessment

Magnetic Mount Holding Assessment

Conservative friction coefficient assumption

4-Magnet Configuration	FAIL	Insufficient frictional resistance — sliding failure
8-Magnet Configuration	PASS	Acceptable holding capacity and safety margin

Summary: Under conservative friction assumptions, 4 magnets do not provide adequate resistance to sliding, while 8 magnets meet the required holding performance.

Release-ready assessment summary

Mount architecture	Discrete magnetic contact points are located at interface corners and mid-side positions, depending on the selected layout.
Reduced layout finding	The 4-magnet layout does not provide the retained holding condition required for AVS-approved external release and is therefore shown as FAIL.
Approved layout finding	The 8-magnet layout increases contact engagement and is the basis for the PASS status shown in this summary.
Use of this document	Suitable for distributor, installer, or partner discussion where a concise technical explanation is needed without disclosing proprietary design inputs.

Release limitations

- This summary is intentionally redacted and should not be treated as a manufacturing drawing or unrestricted design release.
- Exact dimensions, magnet properties, detailed numerical derivations, and internal validation settings remain withheld.
- The document communicates the comparative engineering conclusion only: four magnets were not accepted for external release use, while eight magnets were accepted on the stated redacted basis.

End of approved external technical summary