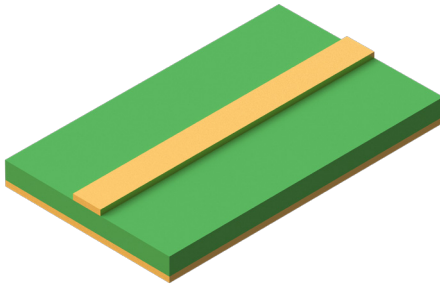


PCB Connector Basics

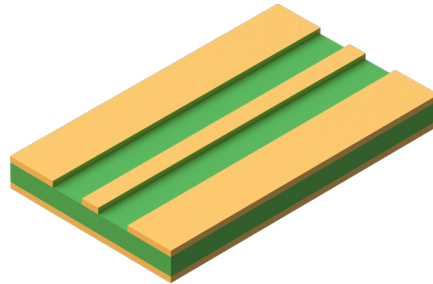
PCB connectors are essential for routing RF signals to and from boards, yet this transition is complex. SV designs various PCB connector styles and the requisite PCB footprints to maintain optimal performance.



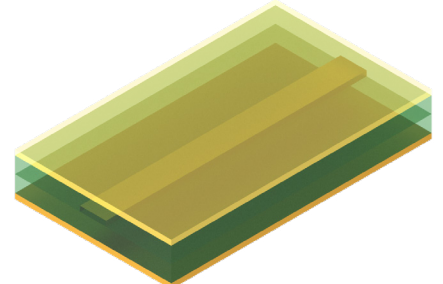
Microstrip



Grounded Coplanar Waveguide (GCPW)

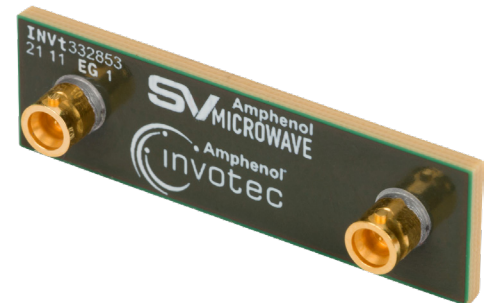
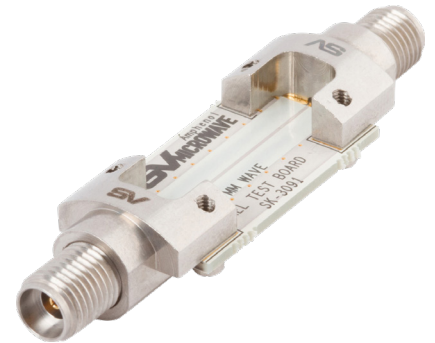


Stripline



SV Microwave offers PCB connectors in a variety of attachment styles, solderless and soldered. Both attachment styles are available in edge launch and surface mount configurations. See the chart below for pros and cons of each style.

Connector Attachment	Connector Placement
<p>Solderless</p> <p>Fastening with screws simplifies the assembly and reuse.</p>	<p>Edge Launch</p> <p>The best performing option due to the collinear transition from coax to PCB. Drawbacks may include limited real estate and proximity to the target.</p>
<p>Soldered</p> <p>Strong, durable, traditional connection ideal for rugged conditions and heavy use.</p>	<p>Surface Mount</p> <p>Launching perpendicular to the PCB impacts performance, but allows for placement anywhere on the board.</p>

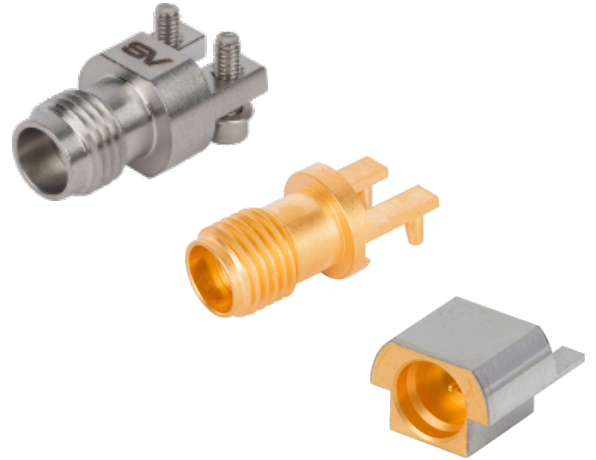


Common Problems and SV Solutions

SV offers many solutions to the typical challenges of RF PCB design.

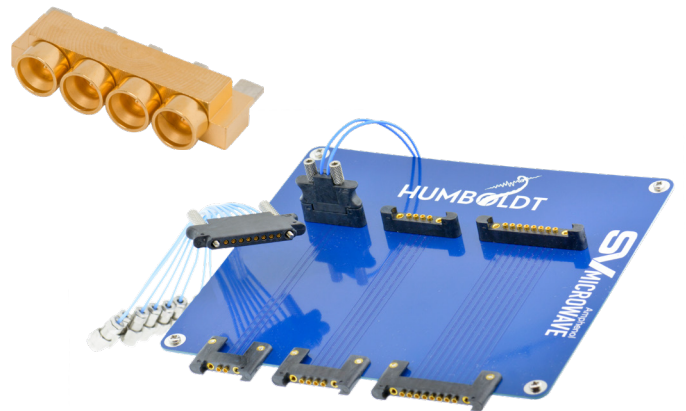
Solder

- Precision soldering may require extensive skill and expensive tooling to achieve desired results. Consider these options:
 - 30° Solderless Compression Mount Connectors achieve edge launch performance anywhere on the board.
 - Edge Lock Connectors use tapered pins to hold the connector firmly to the PCB during reflow, eliminating the need for complex fixturing.
 - Pre-Tinned Connectors eliminate the risk of gold embrittlement.



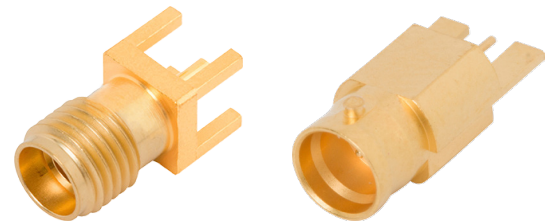
Bulky Connectors

- Space-saving multi-port connectors provide higher density.
- 2, 4, and 8-port SMPM, SMPS and Mini-D RF connectors are immediately available through distribution.
- Design and configure your own Multiport Harness with SV's Humboldt Builder.



PCB Attachment Damage

- PCB connectors with built-in thru-legs offer a strong mechanical bond when soldered. Available in surface mount and edge launch designs.
- QuarterBack and Threaded SMPM products feature reduced mating forces yet maintain reliable retention.



PCB Footprint Design Challenges

- SV offers encrypted models for PCB connectors in CST and HFSS, allowing full system simulation.
- Footprint designs customized to your specific project and PCB stack are available for all PCB products.