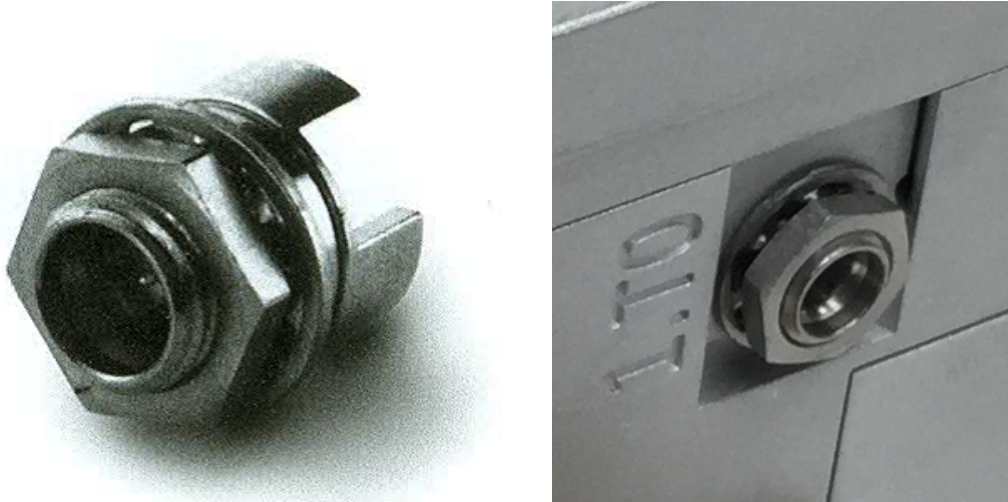


# Coaxial RF Interfaces

Created by Tyrel Newton, last modified on Nov 01, 2016

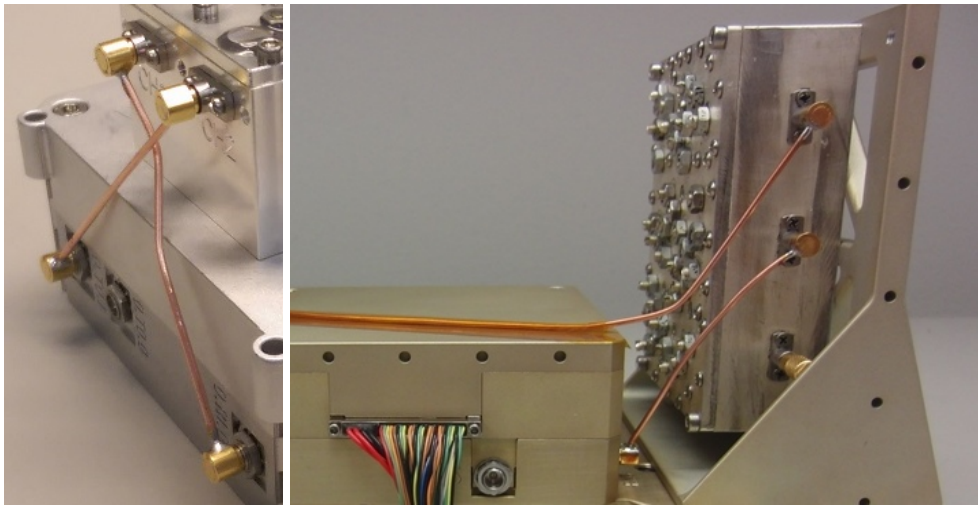
For RF interfaces operating below about 18 GHz, RF connections are made using **low-profile, full-detent GPO/SMP** connectors. GPO is a registered trademark of Corning Gilbert while SMP is the reasonably standard commercial trade name for the connector type. While GPO/SMP connectors may look like MCX connectors, they are **definitely not MCX** connectors. MCX connectors are relatively low cost and generally only rated to 6 GHz. GPO/SMP connectors typically cost a lot more and are rated to about 40 GHz. SWIFT radios utilize Corning Gilbert part number A010-L33-04 as the RF coaxial interface, which is pictured below. The [mechanical drawing for Corning Gilbert part number A010-L33-04](#) is attached to this page below.



For development units, TUI supplies [GPO/SMP to SMA adapters](#) to simplify benchtop laboratory integration of SWIFT radios. The GPO/SMP to SMA adapter is supplied by [Fairview Microwave](#), which is a great supplier for various RF connectivity products. **We do NOT recommend using the GPO/SMP to SMA adapter in flight unit configurations.** The GPO product catalog from Corning Gilbert and the SMP product catalog from Johnson (formerly Emerson, now Cinch Connectivity Solutions) are attached to this page.



For flight units, Fairview Microwave sells a variety of pre-terminated right-angle flexible SMP harnesses. A variety of these example products are shown and linked on the [RF Connection Examples](#) page. Additionally, TUI can build custom coaxial cable harnesses using formable semi-rigid coax. A couple of examples are shown below.



# Attachments

File	Modified
<a href="#">A010-L3X-04.pdf</a> A010-L33-04 mechanical drawing.	Sep 19, 2016 by <a href="#">Tyrel Newton</a>
<a href="#">A010-L33-04.PNG</a> Picture of A010-L33-04 GPO/SMP connector used on SWIFT radio units.	Sep 19, 2016 by <a href="#">Tyrel Newton</a>
<a href="#">Corning_Gilbert_GPO.pdf</a> GPO product catalog from Corning Gilbert.	Sep 19, 2016 by <a href="#">Tyrel Newton</a>
<a href="#">Johnson_SMP.pdf</a> SMP connector product catalog from Johnson.	Sep 19, 2016 by <a href="#">Tyrel Newton</a>
<a href="#">2015-10-22 13.35.46.jpg</a>	Sep 19, 2016 by <a href="#">Tyrel Newton</a>
<a href="#">Semi-rigid-1.png</a>	Sep 19, 2016 by <a href="#">Tyrel Newton</a>
<a href="#">Semi-rigid-2.jpg</a>	Sep 19, 2016 by <a href="#">Tyrel Newton</a>

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No labels

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