

Semflex offers the broadest range of cable assemblies in the industry, covering a frequency range from DC to 50 GHz. We manufacture our own high performance coaxial cable and connectors, as well as utilize standard industry components. The RGI series consists of twinax, triax, coax, and harness assemblies using standard industry cable and connector types for both 50 and 75 ohm applications. The LAI, RTI, SWI, and HPI series use Semflex's own 50 ohm microporous cable and connector designs for low loss and low VSWR performance up to 50 GHz. Custom design options include: phase matching, weatherproofing, low intermodulation, ruggedization, high power, and solutions for all types of extreme environmental conditions. Semflex's test capabilities include testing for a wide variety of electrical mechanical and environmental parameters. All High Performance cables are tested 100% for VSWR and insertion loss performance. Additional testing can be done for phase, delay, group delay, velocity of propagation, impedance, phase stability or customer requirements. Custom cable designs can be prototyped and manufactured quickly with our vertically integrated capabilities, design and development, machining, plating, and assembly processes are all performed on site to ensure high quality, consistent performance, and short time to market cycles.

Applications	LAI	HPI	SWI	RTI	RGI	SCI/SCA	SRI
Interconnects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cable Type	Flexible	Flexible	Flexible	Flexible	Flexible	Semi-Rigid	Semi-Rigid
Low Inter-modulation	No	No	No	Yes	No	No	No
Power Handling	Yes	Yes*	Yes*	No	Yes*	No	Yes*
Outdoor / Field Uses	Yes	Yes*	Yes	No	Yes*	No	No
Chemical Resistance conditions	Yes	Yes	No	No	No	No	No

*Application specific

Cable Jackets and Outer Covers

Cable diameter (inch)	.290	.120 to .500	.086 to .450	.110 to .180	.060 to .500	.086 & .141	.086 & .141
Jackets Standard	FEP	FEP	FEP	FEP	FEP/PVC	Tin Braid	Copper
Polyurethane	YES	YES	NO	NO	NO	NO	NO
Armor	NO	YES	NO	NO	NO	NO	NO
Ruggedized	NO	YES	NO	NO	NO	NO	NO
Nomex	NO	YES	NO	NO	NO	NO	NO

Electricals

Maximum Frequency	18 Ghz	50 GHZ	18 GHZ	12GHz	12 GHZ	18 GHZ	18 GHZ
VSWR @ Max Freq	1.30:1*	1.20:1*	1.25:1*	1.30:1*	1.35:1*	1.25:1*	1.25:1*
Low Insertion Loss	YES	Yes	Yes	Yes	No	No	No
Impedance (ohms)	50	50	50	50	50/75	50	50
Shielding Effectiveness@Max Freq.	> -100	> -90dB	> -85dB	> -85dB	> -30 to -90dB	> -90dB	> -90dB
Power Handling	High**	High**	Medium**	Low	High**	Medium**	Medium**
Conductor types	Solid	Solid	Solid Stranded	Solid Stranded	Solid Stranded	Solid	Solid

*With SMA straight male both ends

** Larger diameter cables

Environmentals

Temperature Range (°C)	-65/+200	-65/+200	-65/+200	-65/+200	-40/+100	-40/+100	-55/+125
Temp/Humidity	Excellent	Excellent	Good	Good	Good	Good	Good
Vibration Shock	Good	Good	Excellent	Excellent	Good	Good	Good
Abrasion	Good	Good	Good	Good	N.A.	N.A.	N.A.

* with Nomex Jacket

Connectors

SMA	M,R,B	M,F,R,B,4F,SR	M,R,B	M,R,B	M,F,R,B,4F	M,F,R,B,4F	M,F,R,B,4F
Type N / TNC	M,R,B	M,F,R,B,4F,SR	M,R,B	M,R,B	M,F,R,B,4F	M,F,R,B,4F	M,F,R,B,4F
7mm	NO	Sexless	NO	NO	No	No	No
3.5mm/2.9mm/2.4mm	NO	M,F,R,B,4F,SR	NO	NO	No	No	No
SMC/SMB	NO	NO	NO	NO	M,B,R	M,B,R	M,B,R
MCX	NO	No	M,R	M,R	M,R	M,R	M,R
BNC	NO	No	NO	NO	M,F,R,B,4F	M,F,R,B,4F	M,F,R,B,4F
SC	NO	M,F,R,B,4F,SR	NO	NO	M,F,R,B,4F	NO	NO
HN	NO	M,F	NO	NO	M,F,R,B,4F	NO	NO
7/16	NO	M,F,R,B,4F,SR	NO	NO	M,F,R,B,4F	NO	YES
Custom Connector Designs	Yes	Yes	Yes	Yes	Yes	Yes	Yes

M STRAIGHT MALE | F- STRAIGHT FEMALE | R- RIGHT ANGLE | B- BULKHEAD FEMALE | 4F- 4-HOLE FLANGE FEMALE | SR SWEEPED RIGHT ANGLE