Overview
Developed specifically for synthesis of lumped-element and distributed filters, iFilter brings useful filter synthesis to the integrated desktop. iFilter also supports transmission zeros exploration. For a standard bandpass filter implementation, zeros can be weighted on the low side or the high side of the passband, allowing for extra emphasis on filter rejection for the selected side. The module is integrated as a wizard within the AWR Design Environment™ that plugs directly into Microwave Office circuit design software.

Features at a Glance
- Filter synthesis for ideal or real, lumped or distributed
- Works directly with AWR Design Environment layout, EM, and optimization
- Easy to use interface
- Lumped Element Filters
  - Chebyshev
  - Maximally Flat/Butterworth
  - Bessel
  - Linear Phase
  - Gaussian
  - Transitional Gaussian
  - Legendre
- Distributed Filters
  - Shunt Stub Bandpass
  - Stepped Impedance Resonator
  - Edge Coupled Bandpass
  - Interdigital Bandpass
  - Hairpin Bandpass
  - Combline Bandpass
How It Works

**Step 1.** Filter type and realization are simply and easily defined through an intuitive, fully descriptive interface that narrows down the realizable filters and options.

**Step 2.** Enter your physical stackup information and iFilter gives you feedback on higher-order modes, surface waves, and line widths for common characteristic impedances.

**Step 3.** Switch from an annotated schematic view to a physical view or netlists with parametric information.

**Step 4.** Having trouble realizing “real” filters with your filter synthesis? iFilter warns you when you may have a problem implementing!