

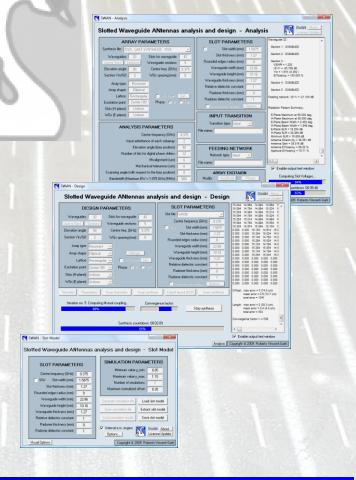
SWAN Slotted Waveguide ANtennas™ ANALYSIS AND DESIGN

SWAN is a powerful CAD tool for the design and analysis of very large slotted waveguide arrays having a wide range of capabilities: fixed or scanning beam, very low side lobe patterns, shaped beams such as

cosecant or flat top patterns, etc.

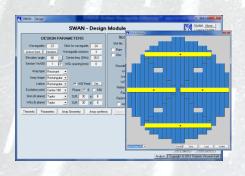
Its main features are:

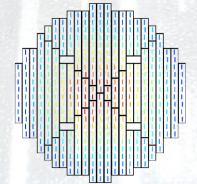
- Beam scanning, monopulse, resonant and traveling wave slotted waveguide arrays analysis and design
- Shaped beam (complex excitation coefficients) synthesis through an automatic optimization tool
- · Subarray division in arbitrary number of sections
- Single sections can be enabled or disabled in order to give an arbitrary shape to the radiating aperture
- Waveguide BFN using inclined coupling slots automatic synthesis
- · Machine-ready layout of the complete antenna
- · SIW technology is supported

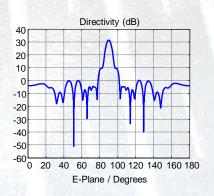


New Features

New features are continuously being developed to meet all customer requirements.







Each section can be disabled in order to generate aperture of arbitrary shape

High Accuracy and Straightforward Design

- <u>SWAN is fast</u>, as it makes use of a rigorous equivalent circuit for the single slot obtained with an accurate full-wave analysis. The design and analysis of large arrays with thousands of slots can be easily carried out.
- <u>SWAN is accurate</u>, as internal and external mutual coupling effects and their dependence on frequency and scanning angle as well as dielectric and metal losses are rigorously taken into account. Feeding network and input transitions can also be considered.
- <u>SWAN is *flexible*</u>, as it allows for customizable waveguide dimensions, dielectric filling of the waveguides, many different feeding configurations, beam scanning optimization, shaped beam synthesis, etc.

