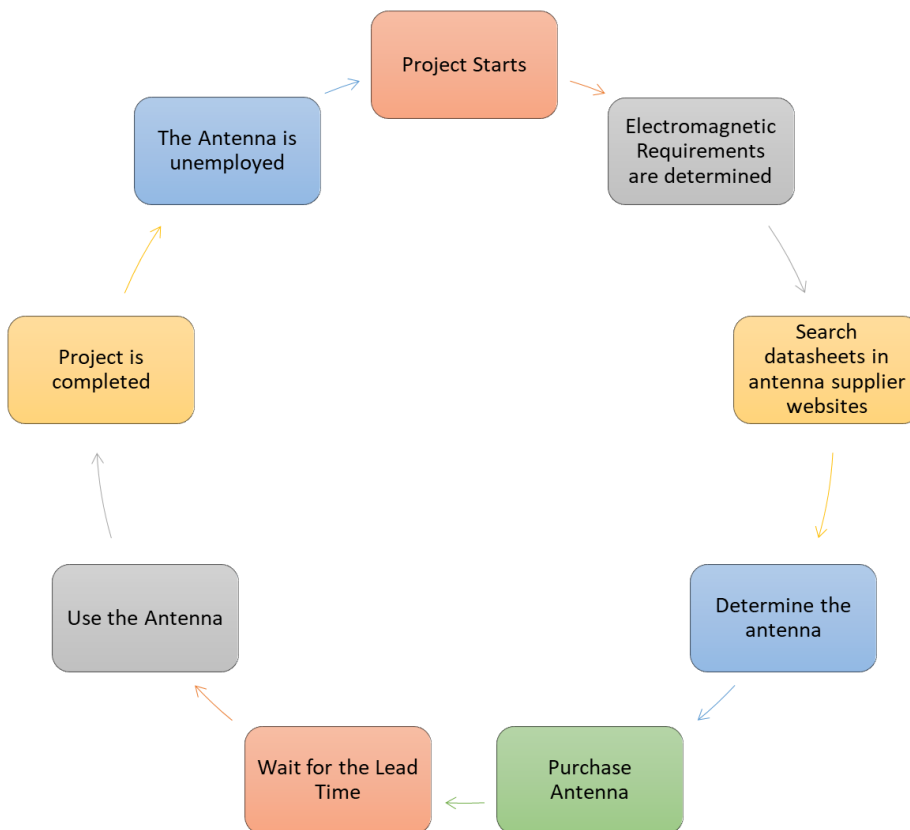




# Anten'it Multi-Antenna Kit for Researchers and System Engineers

**A MULTI-ANTENNA SOLUTION FOR YOUR LABORATORY/ DEPARTMENT INCLUDING MANY ANTENNAS UP TO 6 GHZ**

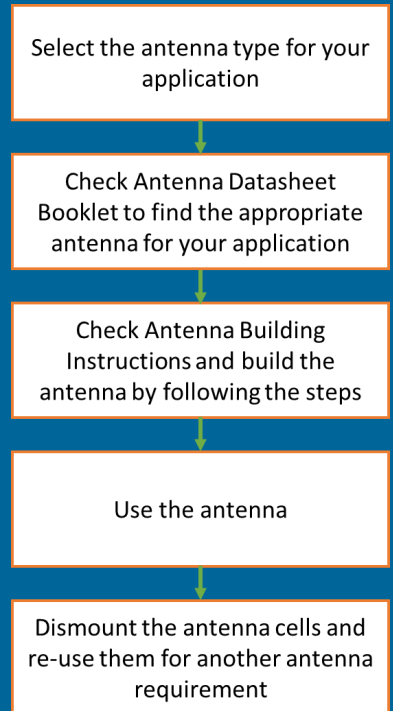


Researchers and systems engineers who use antennas in their projects but are not antenna designers start their project by determining electromagnetic requirements of their projects. They search datasheets to find corresponding antennas appropriate for their electromagnetic requirements. They purchase antennas, wait for the lead time and use it in their projects. After the project is completed, the antenna becomes unemployed. If there is any change in electromagnetic requirements of the project, they also need to purchase other antennas.

Anten'it provides them a multi-antenna kit. This kit includes over 100 datasheets at different frequencies and different types. They can select the antenna from the datasheet booklet and build it by following the steps in antenna building instructions. If there will be any change in electromagnetic requirements of the project, they can add/ remove cells or dismount the antenna cells to build another antenna. After the project is completed, antenna cells can be dismounted and they are ready to use in another project.

Anten'it can be ordered via distributors in [www.antenit.com](http://www.antenit.com) or [sales@antenit.com](mailto:sales@antenit.com)  
Anten'it is a patent pending product of Antenom Antenna Technologies

## Typical Application of Anten'it Multi-Antenna Kit



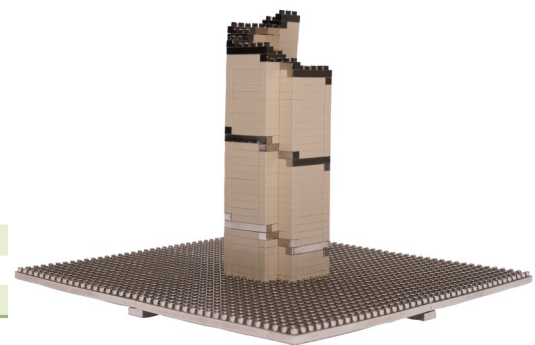


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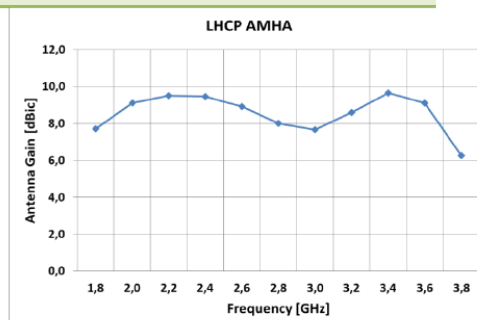
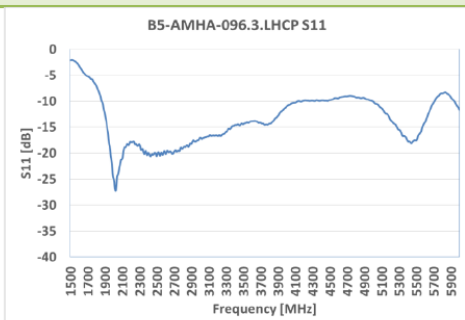
## ADVANTAGES FOR RESEARCHERS AND SYSTEM ENGINEERS

Anten'it multi-antenna kit provides many advantages to its users:

1. This kit is appropriate for researchers and system engineers at the universities, institutions and companies. They can use the kit in their research stages.
2. There are many datasheets with measured results in the datasheet booklet and antenna building instructions include how to build those antennas step by step. They can follow the steps, build the antennas. This is a useful method for urgent antenna needs.
3. It saves their budget for purchasing antennas.
4. It saves waiting duration of purchasing antennas.
5. System engineers and researchers need to iterate their system design. When antenna requirements change during the project, they can change the antenna parameters easily by hand. For example, if antenna gain or half-power beamwidth requirements change, they can add/remove cells or dismount the antenna cells and build another antenna to change the antenna parameters.
6. They acquire a complete solution for their antenna requirements up to 6 GHz.
7. Anten'it Multi-Antenna Kit can be used for conceptual designs.
8. They can build antennas for academic purposes (journals, conferences, books).
9. They can learn antenna design by using it and iterate in front of a network analyzer.
10. If they supply an antenna with specific requirements which needs to be designed by antenna engineers, they can use the kit to determine the antenna requirements and write the contract easier.
11. If your research partner has Anten'it kits, they can share the antenna/design with you and you can build the same structure in your organization.



<b>Polarization</b>	Left Hand Circular Polarized
<b>Antenna Pattern</b>	Directive





## Theoretical Background Behind Anten'it Kits

### HARDWARE MESH CELLS

Antenna simulation programs generally include CAD interfaces. When the designers draw a solid structure in CAD interface, simulation programs discretize the solid structure into small pieces called “mesh cells”. Maxwell equations are calculated within each mesh cell by using numerical methods such as method of moments (MOM), finite-difference time-domain (FDTD), finite element method (FEM) etc. Each numerical method uses different mesh cell shapes.

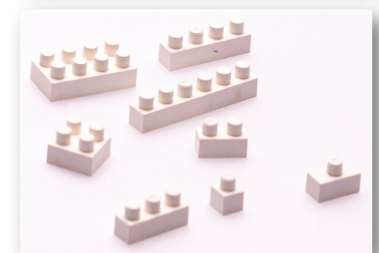
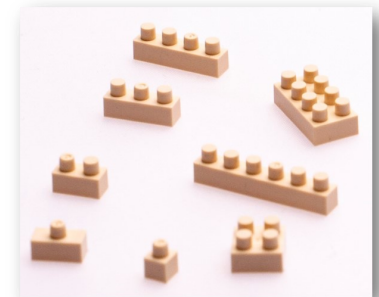
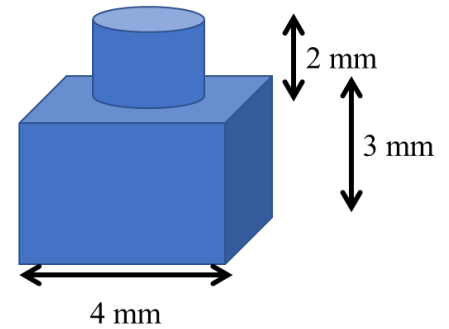
FDTD type of simulation programs use cubic mesh cells. In order to get accurate results, the mesh cell dimensions are selected lower than wavelength/10.

Anten'it Antenna Research Kit uses brick-type hardware cells. Brick type of mesh cells are very similar to cubic shapes. The resolution of Anten'it cells is 4 mm (length) X 4 mm (width) X 3 mm (height). 4 mm corresponds to wavelength/12.5 at 6 GHz. 6 GHz is the highest frequency of Anten'it kits.

The hardware mesh cells provide students and researchers to design their antennas directly in front of a network analyzer. They can start their design with calculations and iterate by adding or removing cells (bricks). Then, they reach the target design frequency and measure the radiation patterns of the antennas.

### CONTENT OF ANTENNA DESIGN AND PROTOTYPING KIT

1. Metal Cells
2. Dielectric Cells with 3 different dielectric constants and colours
3. Ground Planes
4. Connectors
5. Dipole Antenna Balun
6. Cables
7. Adapters
8. 50 ohm Terminations
9. Case
10. Anten'it Datasheet Booklet and Antenna Building Instructions
11. Anten'it User Manual
12. Removers



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