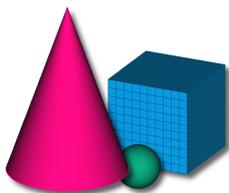


# QW-MODELLER

FREE  
CAD MODELLER FOR QUICKWAVE

PERFECT FOR QUICKWAVE SHORT-TERM LICENCES

*QW-Modeller* for *QuickWave* is a workbench for the open source FreeCAD general purpose parametric 3D CAD modeller (<http://www.freecadweb.org>). FreeCAD features tools are similar to Catia®, SolidWorks®, or Solid Edge®. It is a feature-based parametric modeler with a modular software architecture, which makes it easy to provide additional functionalities without modifying the core system. The CAD capabilities of FreeCAD are based on the OpenCasCade® kernel, a professional-level CAD kernel, featuring advanced 3D geometry manipulation on complex shape types, a wide range of geometric entities, boolean operations and fillets, and built-in support of STEP and IGES formats.



*QW-Modeller* for *QuickWave* allows preparing a **complete project** for electromagnetic simulation with *QuickWave* software.

*QW-Modeller* for *QuickWave* is **free** and can be used without any restrictions for creating geometry, assigning the materials, adding ports, boundary conditions, setting mesh, excitation parameters, postprocessings, etc.

Although *QW-Modeller* for *QuickWave* automatically generates the FDTD mesh, the user is equipped with many means of controlling the meshing process, including the enforcement of global and local maximum cell size, mesh snapping planes, mesh refinement in regions of expected rapid field variation and AMIGO (Automatic Meshing Intelligent Generation Option).

The screenshot displays the QW-Modeller 2017 x64 for QuickWave interface. The main window shows a 3D model of a broadband antenna structure within a green meshed volume. The left sidebar contains a 'Labels & Attributes' panel with a tree view including 'Ports', 'Field Monitors', 'PlaneWave', 'Probes', 'Absorbing BC', 'MURBox', 'NTF', 'Tools', 'BHM', 'Wires', and 'User Parameters'. The 'NTFBox' is selected, and its properties are shown in the 'Property' panel below, including 'Placement', 'Label', 'Geometry' (Height: 270.19 mm, Length: 223.2 mm, Width: 168.59 mm), and 'Support'. The bottom panel shows a 'Report view' with the following text:

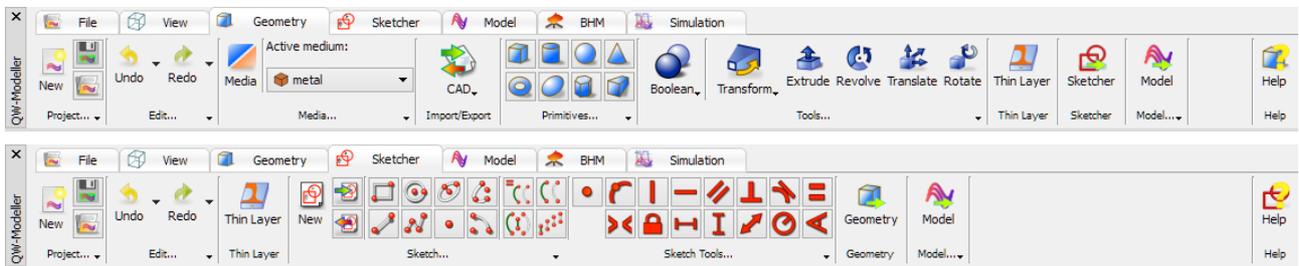
```
CellSizeMap content (-145.09500 ; 145.09500):  
-145.09500 [5.00000]  
Calculating FDTD mesh - second step  
FDTD mesh calculated (Fri Dec 01 18:16:36 2017)  
FDTD mesh cells number: X=58, Y=62, Z=70, Total=251720,  
TotalB=290532
```

The bottom right corner of the interface shows the dimensions '554.60 x 369.73 mm' and the QW-Modeller logo.

A broadband antenna project  
in QW-Modeller  
and surface current distribution  
simulated in QuickWave at 12 GHz

The Ribbon of *QW-Modeller* groups all necessary menus and commands that guide the user during project preparation, setting of the simulation parameters, and simulation starting process.

*Geometry* and *Sketcher* ribbon allows creating 3D and planar geometry and also assigning media types to the created objects.



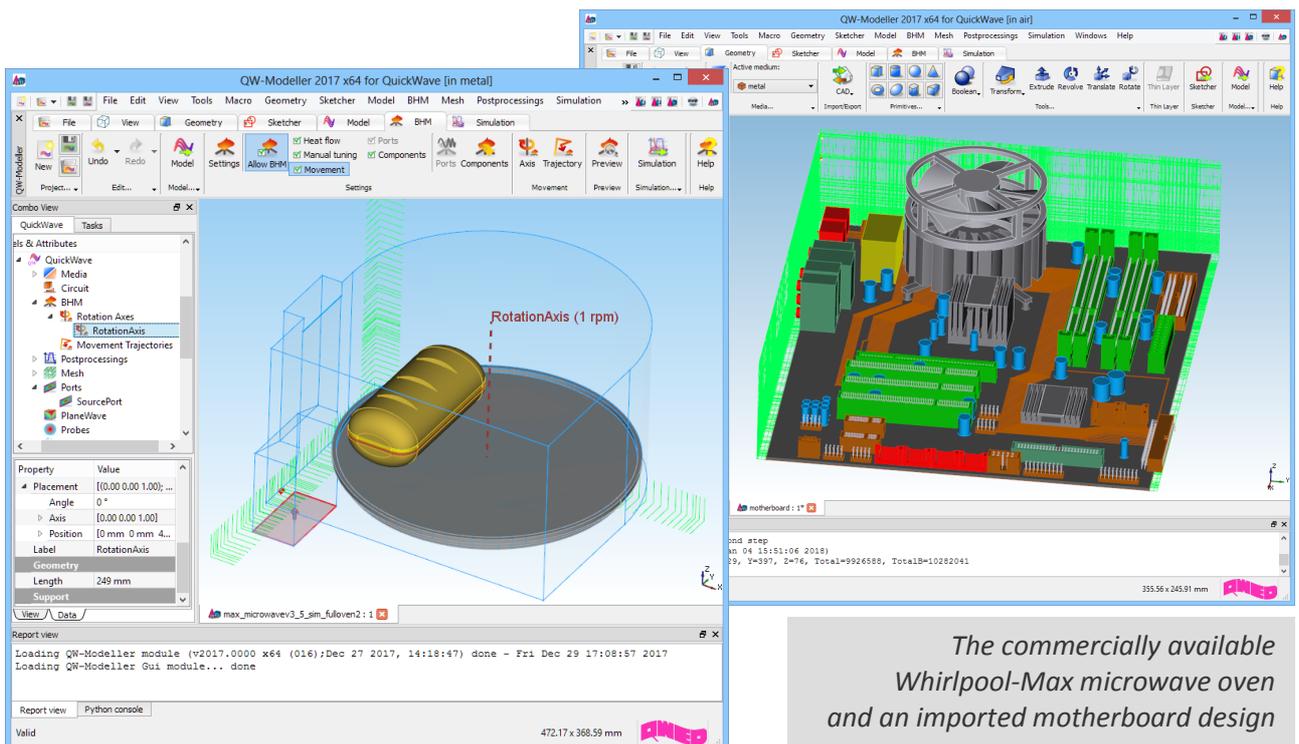
*Model* ribbon enables configuring the circuit parameters, adding ports and setting excitation, defining boundary conditions, mesh settings, and simulation parameters for *QuickWave* electromagnetic simulator.



*BHM* ribbon allows configuring the microwave heating simulation with the Basic Heating Module.



*Simulation* ribbon allows indicating and configuring simulation results to be calculated, choosing *QW-Simulator* type, exporting and starting simulation.



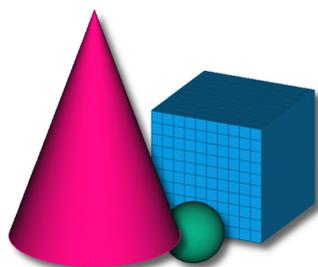
The commercially available  
Whirlpool-Max microwave oven  
and an imported motherboard design



*Design is as simple as it can be.*

*Simulation is as fast as you want it to be.*

*Results are as accurate as they should be.*



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