

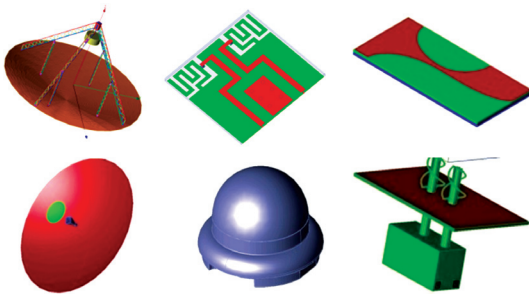


Web: www.2comu.com

GEMS EM Simulation Software and Systems

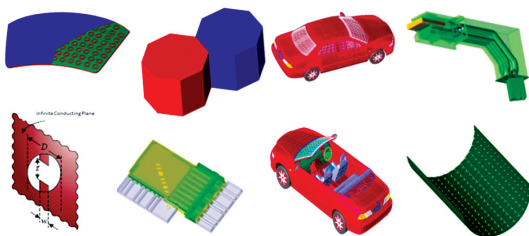
GEMS is a parallel EM simulation software package that is based on the parallel conformal FDTD method. Its interface is user-friendly, and it is an ideal EM simulation tool that can be used to solve various EM problems accurately and efficiently, including antennas, antenna arrays, EMC/EMI, microwave circuits, bio-electromagnetic problems and SAR, packaging problems, and EM scattering problems.

Antennas



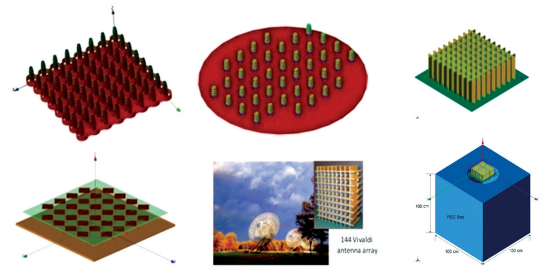
Simulate arbitrarily shaped antennas, optimize the antenna parameters, and generate the return loss, far field pattern, efficiency, direction, gain and other antenna parameters.

EMC/EMI



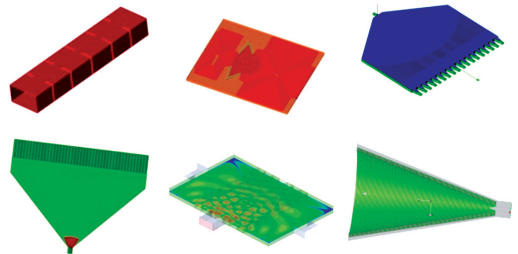
GEMS can simulate a microwave chamber, estimate leakage power from EM systems, and model vehicle antennas, FSS, absorbing materials, etc.

Antenna Arrays



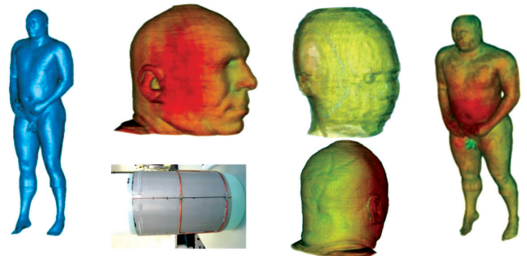
Import the model of phased antenna array and modified the imported models., and generate the total reflection coefficient, S-matrix, far field pattern related antenna array parameters.

Microwave components



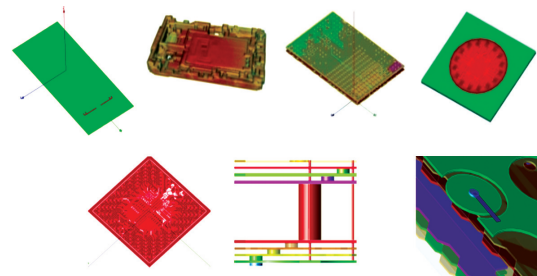
GEMS can simulate various microwave circuits, filters, Rotman lens for the power transmission, and derive frequency characteristics.

Bio-electromagnetics



We offer both adult and kid models with 1 mm resolution. GEMS can simulate SAR for whole body and personal body networks.

Packaging Problems



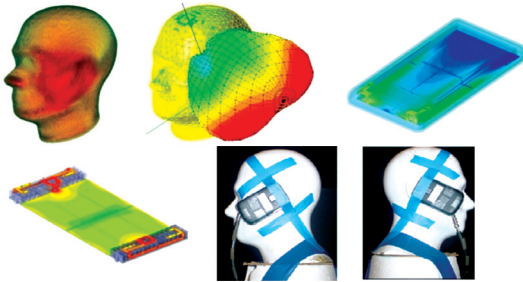
GEMS can simulate PCBs, packages, cell phones and other complex systems. It uses much less computer resources than any other time or frequency domain solver in the market.



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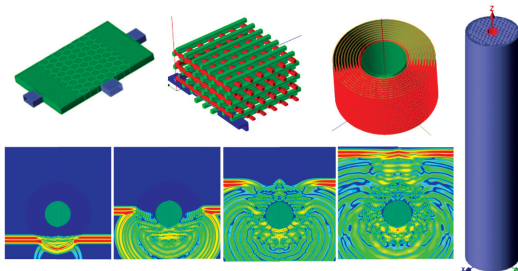
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Wireless devices



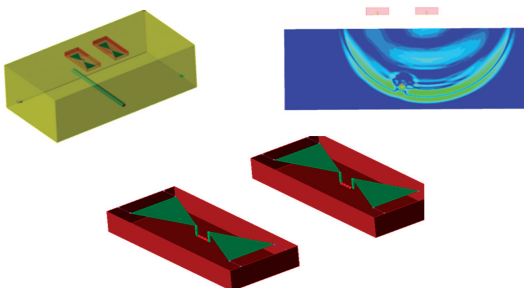
GEMS can simulate cell phone with SAM head model in a couple of minutes and generate the 3-D SAR distribution directly. GEMS can output MEG and ECC for the MIMO antennas.

Metamaterials



GEMS can simulate complex metamaterial structures by using the periodic or PML boundary conditions. Dispersive modes in GEMS includes Debye, Lorentz, plasma and Drude.

GPR (Ground Penetrate Radar)



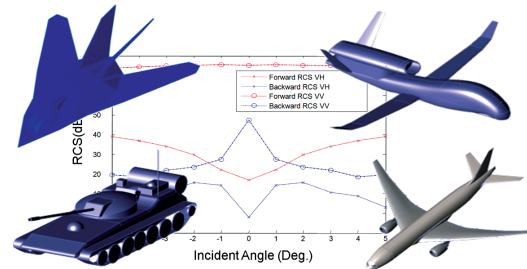
GEMS high performance boundary allows you to extract the very weak signals scattered from buried objects. The antenna shape can be arbitrary and the soil may be a Debye-type material.

GEMS Clusters



We offer both high performance EM simulation software and the combination of parallel EM simulation software and high performance cluster (turnkey system).

Scattering Problems



GEMS enables you to predict the bistatic RCS and monostatic RCS of the large aircrafts using a high performance cluster. GEMS is your best choice if the object has an inhomogeneous and/or lossy coating.

New features

- Friendly graphical user interface
- Parallel processing and domain decomposition
- Support SAT, ProE, Catia, IGES, STEPS, and DXF
- Save 80% memory for the same problems
- Accelerate simulation 100 times at the same cost
- Support online simulation

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