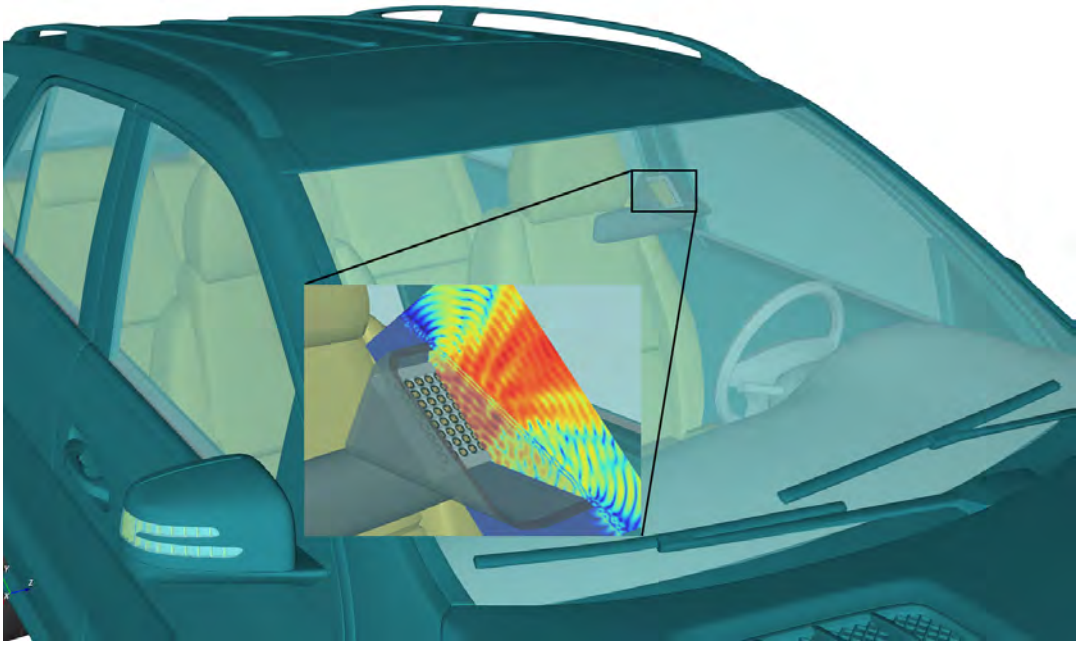
EMPIRE XPU 8.1
3D EM DESIGN SUITE

High performance 3D time domain EM modeling tool for Antennas, Microwave Circuits, EM Chip design and much more....

- **Extremely fast and highly memory efficient solver using IMST proprietary XPU technology**
  - Full parallelisation on modern PCs (outperforms GPU supercomputers)
  - Just-in-time code generation and caching reduce required memory by 50%
- **Interoperability with all common 3D CAD data, layout formats and vendor simulation projects**
- **Intuitive 3D Design Editor with fully integrated multilayer designer**

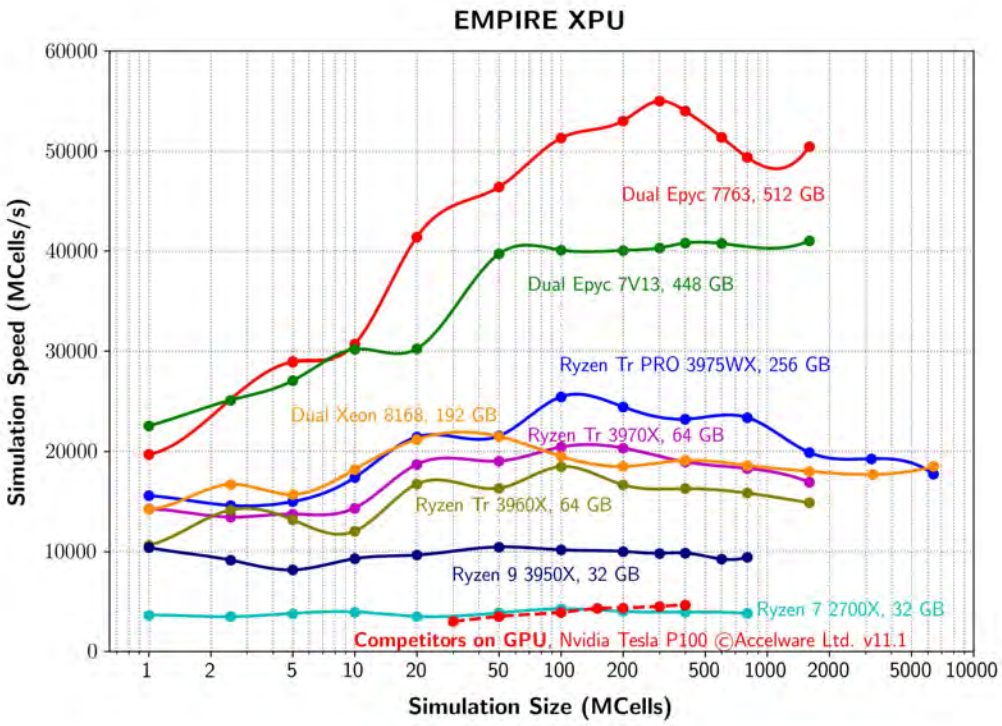


3D EMPIRE model of vehicle with 5G antenna integrated in back view mirror

NEW FEATURES INCLUDE:

- ✓ Improved simulation performance on modern multicore workstations (e.g. speed of 50 billion FDTD cells per second on AMD Epyc 7763 Dual-CPU server
- ✓ Result Plotting Engine: Parameter sweep tool
- ✓ Import & Export enhancements
- ✓ Circuit simulation based near field superposition
- ✓ Debye model variable support and dispersion preview

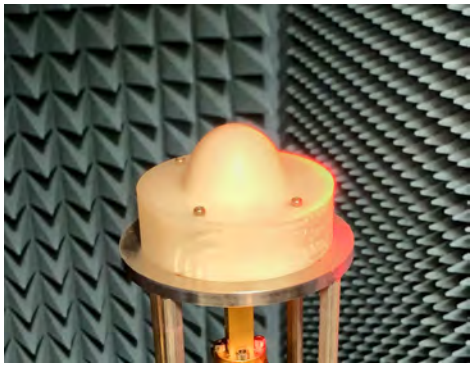
Simulation speed and size using EMPIRE XPU vs. GPU based FDTD on dual Xeon PC with one Nvidia Tesla K80 GPU card

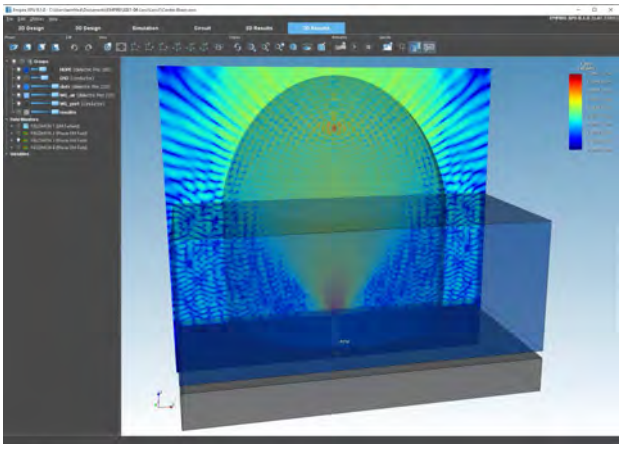


EMPIRE XPU TECHNOLOGY SURPASSES SIMULATION SPEED AND MAXIMUM MODEL SIZE OF GPU CARDS FOR FDTD SIMULATIONS

APPLICATION EXAMPLE:

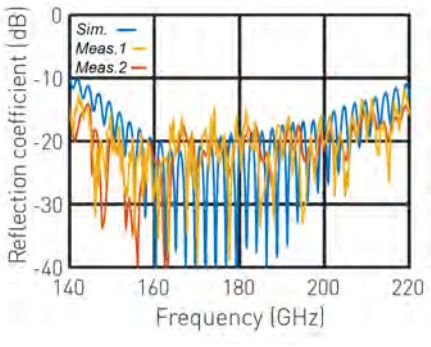
6G lens antenna

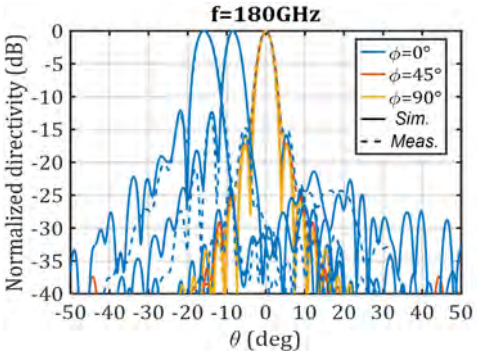




Electric field at 160 GHz

Frequency:
140 - 220 GHz
Size:
600 Million cells
Memory usage:
16 GB
Simulation time: < 1 h
Dual CPU workstation





S-parameter
Antenna
Farfield pattern
simulation
vs.
measurement

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