ANSYS EMA3D CABLE

Ansys EMC Plus (formerly EMA3D[®] Cable) is a 3D Finite-Difference Time-Domain (FDTD) solver with an integrated multi-conductor transmission line solver. The two electromagnetic solvers cosimulate to allow for a complex cable harness to be accurately modeled inside complex geometry, such as an electronic device, a piece of machinery, an automobile or an aircraft. Ansys EMC Plus has been validated on several high-profile aerospace platforms and the results were published at major conferences.

Ansys EMC Plus has an advanced CAD preprocessor and GUI engine. The user never has to leave the environment for CAD development, property assignment or post processing. Meshing in Ansys EMC Plus is fast and never fails, even with imperfections in the CAD geometry. Ansys EMC Plus allows the user to quickly define the contents of the cable with a few clicks of the mouse. The simulation workflows are easy to learn and intuitive to the user. These combined features greatly reduce the analyst time to develop and simulate Ansys EMC Plus models.

Ansys EMC Plus is well-suited for simulations addressing electromagnetic compatibility (EMC), High Intensity Radiated Fields (HIRF), and lightning requirements early in the program before physical prototypes are complete. Users can specify realistic system signals as a source on cables or shields. The source may also be at the platform or environment level.

Using Ansys EMC Plus, customers can analyze:

- Radiated coupling to cables
- Radiated emissions from cables
- Coupling through shields
- EMI cross-talk between cables
- Current return network optimization
- Coupling from static discharges
- Cable signal integrity
- Lightning coupling to equipment interfaces
- HIRF fields and cable coupling
- Thin material algorithm with Magnetic Materials
- Frequency-dependent material properties

- FDTD sub-grid modeling
- FDTD with solid bodies

Ansys EMC Plus' FDTD approach is the only EM tool capable of capturing the detail of highly complex platforms such as entire aerospace, automotive, ship or energy systems down to individual electronics interfaces in a computationally accessible manner.

Ansys EMC Plus is sold exclusively through <u>Ansys</u>, if you are interested in purchasing this software click <u>here</u>.