



INVENTSIM

Community Edition

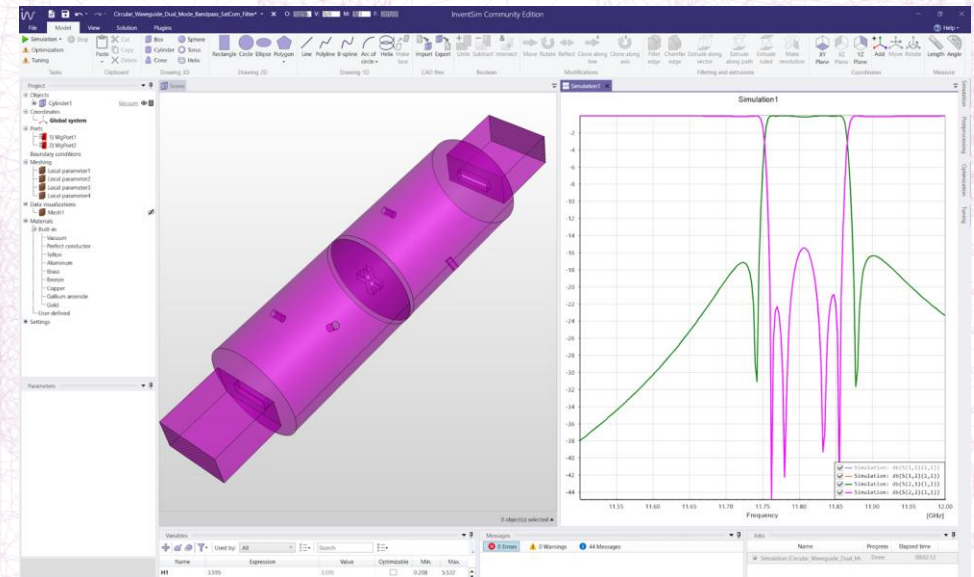
**Electromagnetic field simulator for RF, microwave
and sub-THz passive component design**

www.inventsim.com

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Meet InventSim Community Edition: free and powerful EM field simulator

- Frequency domain solver based on 3D Finite Element Method (3D FEM) for **solving complex engineering and scientific problems**
- Multicore implementation and fast frequency sweep give **remarkable simulation efficiency**
- Complete package with **intuitive** graphical user interface **minimizes learning time**
- Unique **design optimization** algorithms **improve productivity**



Example: Dual-mode filter for SatCom applications



Introducing InventSim Community Edition (CE)!

- **Free of charge for everyone** – Available at no cost for both educational and commercial purposes. Start experimenting without license barriers.
- **Practical engineering capability** – Although a reduced-functionality version, it still solves real-life engineering tasks such as low-order filter design, design optimization, or basic antenna design.
- **Professional-grade engine** – Built on the same simulation core as the full version, ensuring reliable results and scalability when upgrading.
- **Quick start with examples** – Comes with ready-to-use example projects so you can learn the workflow and achieve results fast.
- **Community-driven support** – Connect with peers, share insights, and get help via our dedicated, public user forum.
- **Learning-friendly** – Ideal for students, researchers, and engineers to explore concepts, validate ideas, and gain hands-on simulation experience.
- **Path to growth** – Seamlessly upgrade to the full version with no need to relearn tools or workflows!

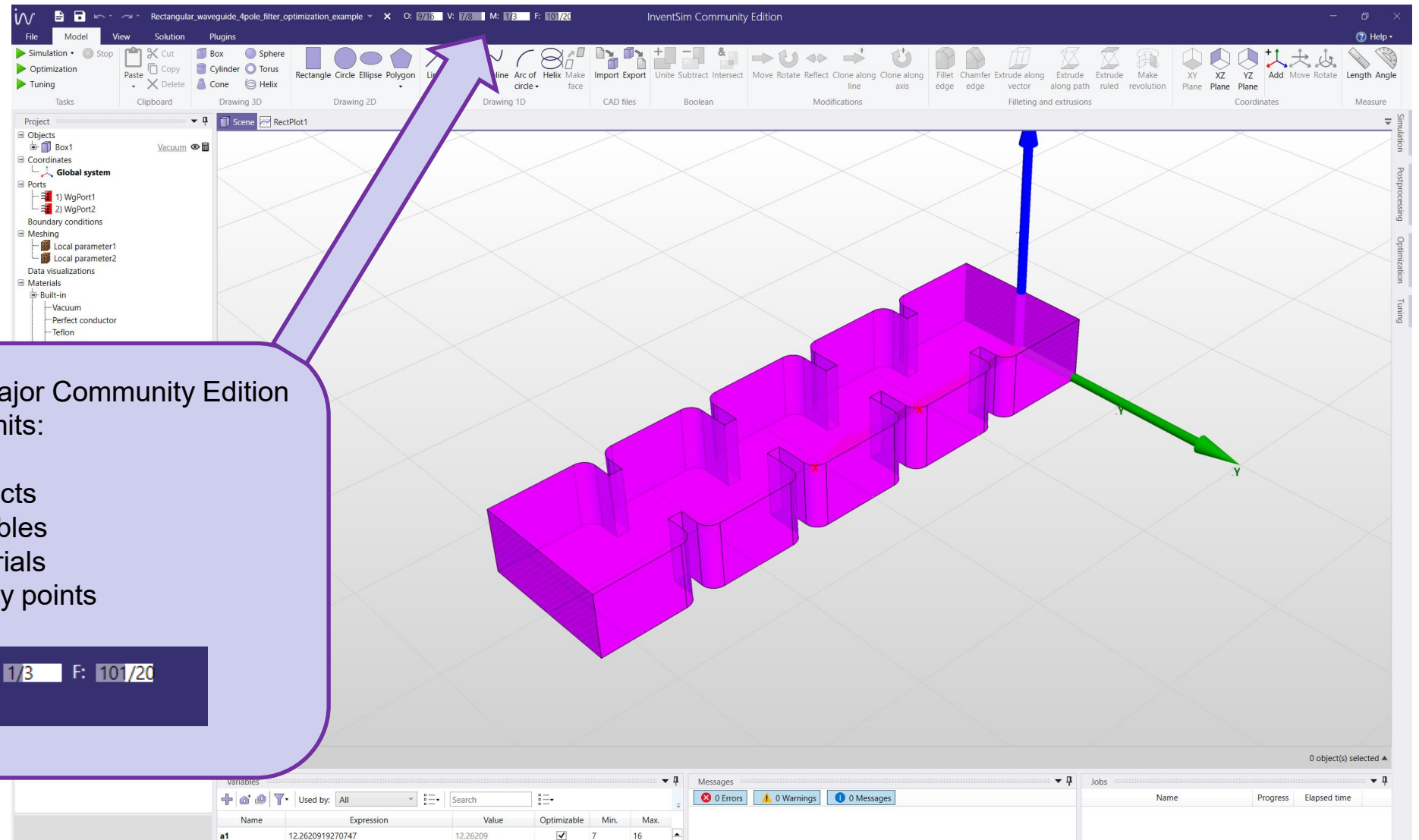


InventSim Community vs. Standard Edition - comparison

| Feature | Community Edition | Standard Edition |
|---|-------------------|------------------|
| Max. number of top level objects in a project | 16 | Unlimited |
| Max. number of faces in a project | 127 | Unlimited |
| Max. number of materials used in a project | 3 | Unlimited |
| Max. number of frequency points in a project | 201 | Unlimited |
| Max. number of optimization variables in a project | 8 | Unlimited |
| Automation plugins | Some | All |
| STEP file interoperability | Export only | Import / Export |
| COM server for scripting and automation | No | Yes |



InventSim Community Edition



Enables live monitoring of major Community Edition usage limits:

- Objects
- Variables
- Materials
- Frequency points

O: 9/16 V: 7/8 M: 1/3 F: 101/20



Summary of selected InventSim Community Edition features

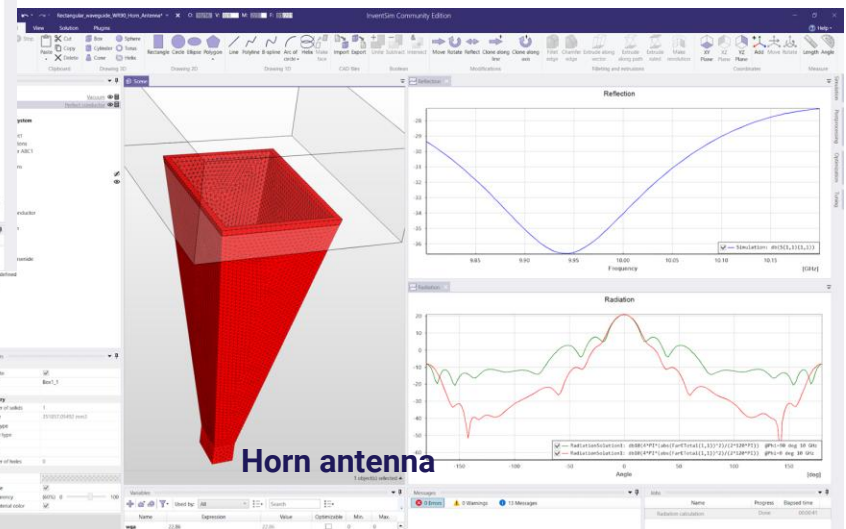
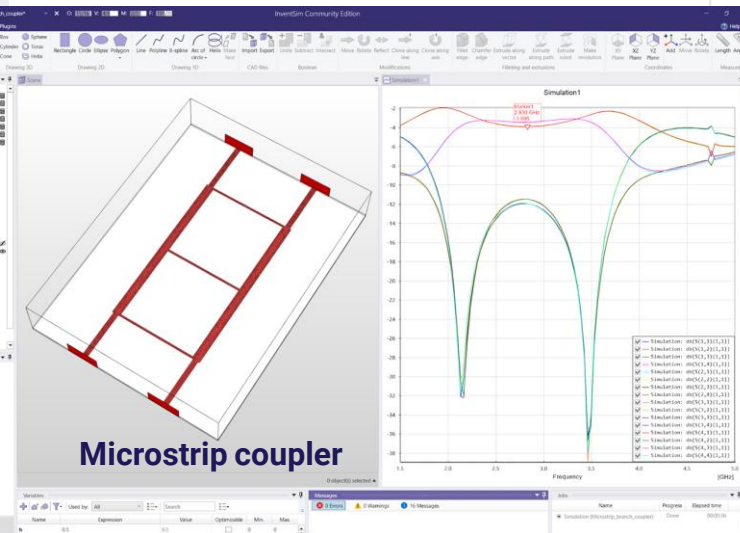
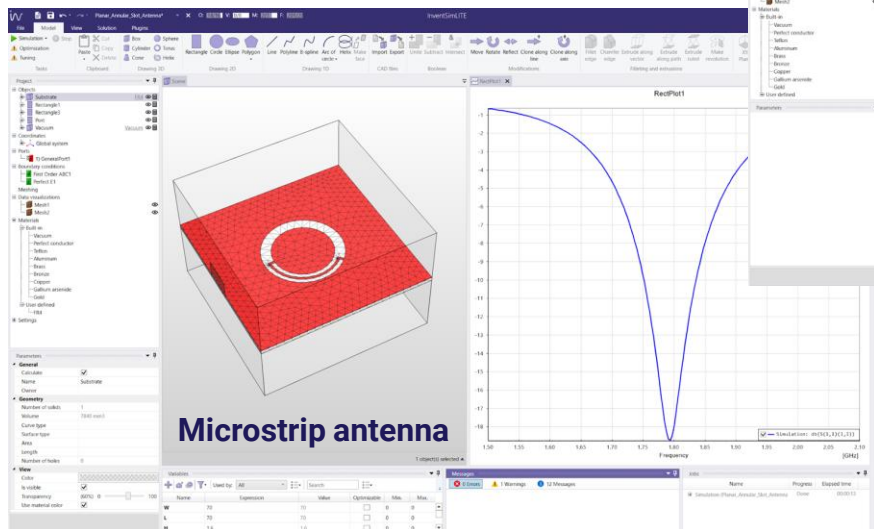
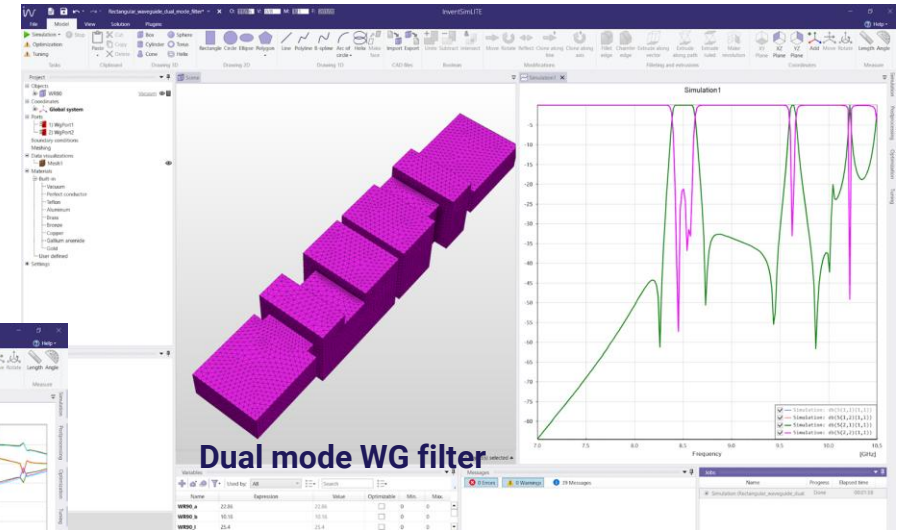
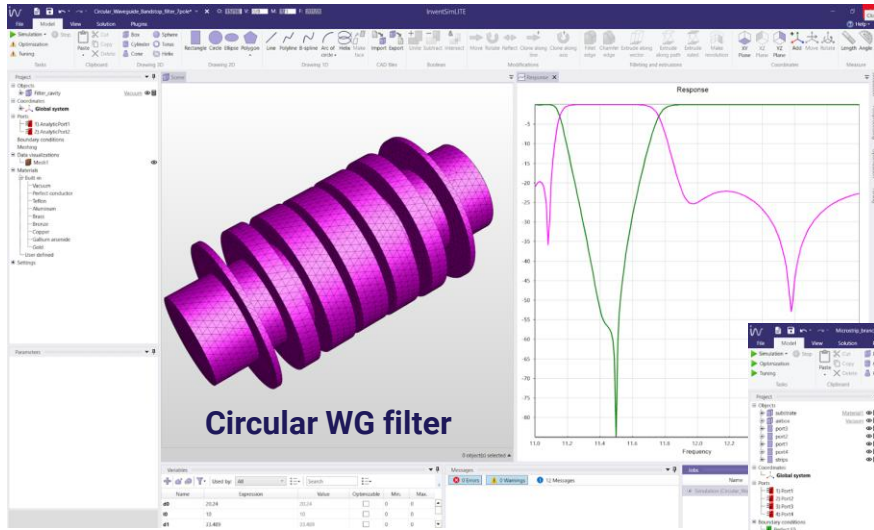
- Design of RF/microwave passive components: **transmission lines, feeding networks, couplers, power dividers, filters, multiplexers, antenna systems and many more...**
- Analysis of components including but not limited to ferromagnetic materials and bulk conductors (THz applications)
- **Fast frequency sweep algorithm for evaluating response in frequency domain**
- Reliable FEM based **design optimization** thanks to accurate sensitivity analysis
- **Optimization of multiple of design variables** possible without significant performance loss
- Dedicated optimization module for filter designers,
- **Shape deformation module for design of complex devices with non-conventional geometries,**
- Antenna simulation with absorbing boundary conditions and dedicated postprocessing,
- Modern and easy to use graphical user interface

- **Powerful and free!**

- **Handy package for rapid prototyping and testing!**



Check what you can do with InventSim Community Edition 2025:



InventSim: Electromagnetic field simulator for RF/microwave/mm-wave & THz component design. ©2025 EM Invent. All rights reserved.

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How to Get Started with InventSim Community Edition?

- **Explore the Example Library**
 - Includes selected projects that can be fully solved with the Community Edition.
 - Also provides read-only access to Full Edition examples, so you can preview what's possible with the full version.
- **Learn by Doing**
 - Download step-by-step tutorials from our website to build your first waveguide filter or microstrip antenna project.
 - Perfect for beginners who want hands-on guidance.
- **Connect with the Community**
 - Join the Community Edition forum to share your experience, ask questions, and find solutions.
 - Learn from other users and contribute your own tips.
- **Share Your Experience**
 - Post your results, tips, or projects in the community forum.
 - Inspire others, showcase your skills, and contribute to the InventSim ecosystem.



Need more? Try InventSim Standard Edition!

- **Experience the full power** – Get unrestricted access to all InventSim features.
- **Free trial available** – Fully functional, time-limited evaluation to explore advanced capabilities.
- **Go beyond limits** – Simulate and optimize complex designs without restrictions.
- **Seamless integration** – Export geometry to STEP files for mechanical post-processing and advanced workflows
- **Automate your work** – Leverage COM server for design automation, scripting, and integration into your own engineering toolchain



Benefits for you & your organization with InvenSim Std. Ed.

- **A lightweight, highly efficient** solver for **rapid prototyping and testing**
- **Support services** provided directly **by the software developers**
- **Flexible team** – we accept bespoke requests!
- **Free your resources** of heavier tools – offload your work
- **Save on license fees!**





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Contact us & find out more!

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