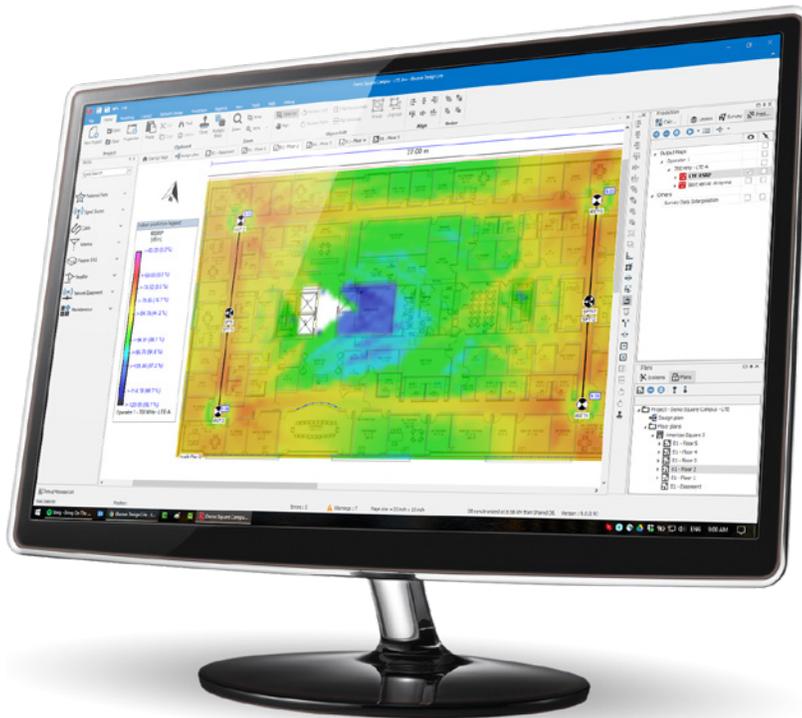


iBwave Design **LITE**

THE INDUSTRY STANDARD FOR DESIGNING IN-BUILDING WIRELESS NETWORKS

Created specifically for small to medium size projects, **iBwave Design Lite** is the most affordable way to simplify and accelerate your in-building wireless network design process. With dynamically calculated RF calculations, automatic Bill of Materials, on-screen error validation, 3D prediction capabilities and KPI compliance checks, iBwave Design Lite eliminates the manual steps of designing wireless networks so you can focus on the most important part - delivering high-quality networks that will impress your customers, win you more projects and grow your revenues.



KEY BENEFITS



Reduce network
design time



Improve network
quality



Reduce capital
expenditure



Quickly generate
reports

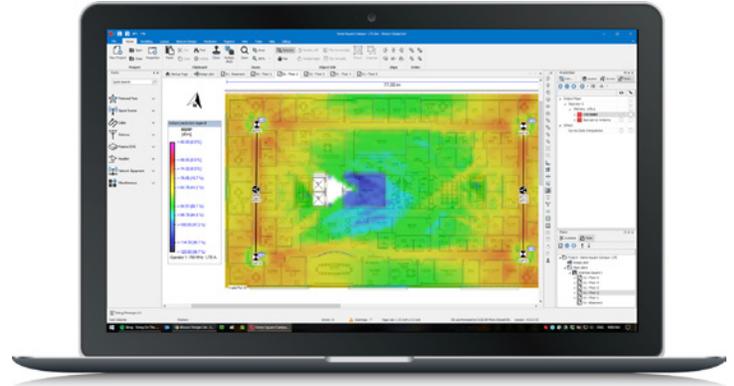


Collaborate on
designs more easily

Reduce network design time

Automate the manual work of designing in-building wireless networks and save an estimated 30% or more off your design time.

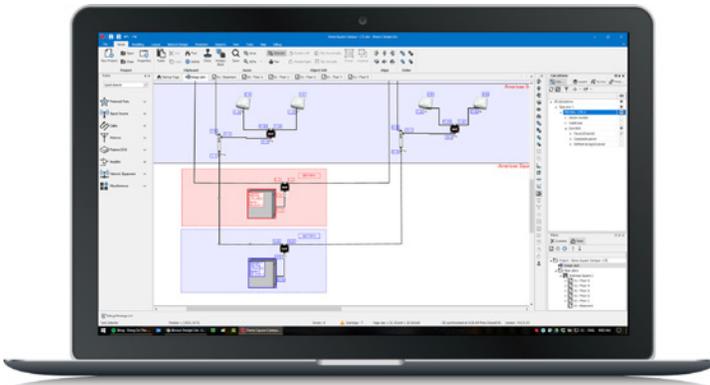
- ✓ Passive DAS, small cells
- ✓ Dynamically calculated RF calculations
- ✓ Automatic cable length measurements
- ✓ Automatically generated accurate Bill of Materials
- ✓ Over 34,000 network components to design with



Improve network quality

Use the optional propagation module to ensure the quality of your network. Model the building on top of your floor plan and run propagation to predict the signal strength of your design on each floor.

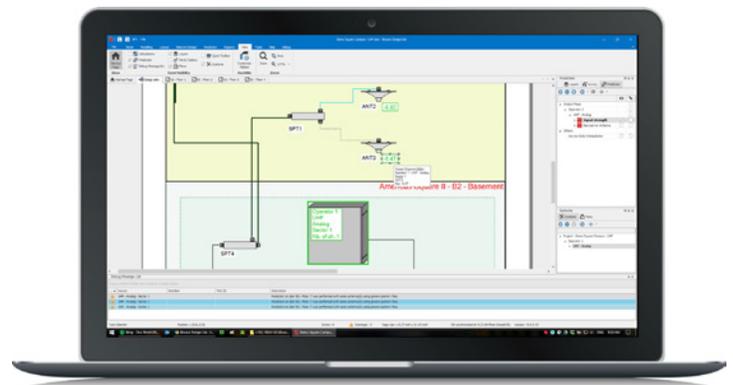
- ✓ Import walls from raster CAD files, PDF or images
- ✓ Assign materials from materials database
- ✓ Simultaneous multi-band propagation 3D prediction analysis
- ✓ VPLE propagation model using environment density zones
- ✓ COST 231 Multi Wall propagation model
- ✓ Compliancy results based on user defined criteria
- ✓ Customizable output map legends



Reduce capital expenditure

Over designing a network can be expensive. With iBwave Design Lite you can eliminate this risk by modeling your venue in detailed 3D and then simulating your network before it's deployed to optimize hardware placement for the most cost-efficient design.

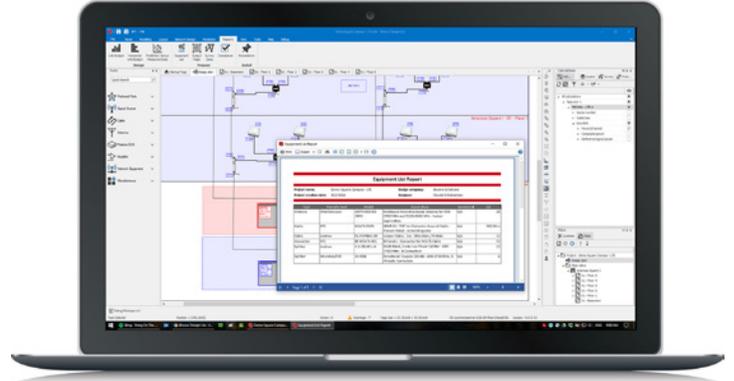
- ✓ Venue modeling and 3D viewer
- ✓ Automatic error-checking
- ✓ On screen debug list
- ✓ Network simulation



Quickly generate reports

Once your design is complete you can quickly generate your link budget, equipment lists and compliancy reports to ensure alignment with your customer's network requirements and close out your project quickly.

- ✓ Annotations report
- ✓ Output maps
- ✓ RF Survey
- ✓ Equipment list
- ✓ Link budget



Collaborate on projects more easily

Designing a network can be a big job with many different stakeholders involved. With iBwave Design Lite, you can easily collaborate with your customers, and your other team members with iBwave Viewer and seamless integration to iBwave Mobile and Unity.

- ✓ iBwave Viewer (free read-only viewer for customers)
- ✓ Seamless integration with iBwave Mobile
- ✓ Seamless integration with iBwave Unity

TYPICAL APPLICATIONS



**ENTERPRISE
BUILDING**



**PASSIVE DAS
PROJECTS**



**SMALL CELLS
PROJECTS**

FEATURE SET

SYSTEM DESIGN

- ▶ Trunking diagram for indoor RF system design per project
- ▶ Multiple systems, technologies and bands
- ▶ Support base stations and off-air repeaters
- ▶ Coaxial and CAT5 cable signal distribution
- ▶ Redundant DAS designs
- ▶ Connector validation for coaxial
- ▶ Network validation and error checking
- ▶ Custom labeling of system using the band, technology, operator and more
- ▶ Track cell codes as part of the system definition (PN code, scrambling code, PCI, cell ID)
- ▶ Support MIMO 2X2 DAS architectures
- ▶ Automatic wireless service creation Small Cells and Wi-Fi components

FLOOR PLANS

- ▶ Multi-layered floor plans with layout plans, walls, DAS equipments, cables, and more
- ▶ Import floor plans from .dwg, .dxf, .jpeg, .bmp, .tiff, .gif or .pdf files
- ▶ Automatic cable length measurements
- ▶ Basic drawing tools for walls, lines, shapes, text and images
- ▶ Ruler to calculate dimensions and areas

RF CALCULATION

- ▶ Downlink calculations (Power per Channel, Composite Power, LTE Reference Signal Power, Pilot-CPICH Power, CDMA Overhead, Absolute gain/loss)

3D BUILDING MODELING

- ▶ Draw curved stadium walls and surfaces
- ▶ Show floor plans and buildings in 3D showing DAS equipment
- ▶ Show building cuts in 3D

PROPAGATION MODULE (OPTIONAL)

- ▶ Propagation prediction analysis
- ▶ COST 231 propagation model
- ▶ Draw walls, surfaces and assign material from built-in materials database
- ▶ Import walls from raster images or AutoCAD files
- ▶ Create signal strength, best server, LTE RSRP and RSCP maps
- ▶ LTE, LTE Advanced, LTE LAA

PROJECT DOCUMENTATION

- ▶ Print project documentation
- ▶ Create project revisions
- ▶ Advanced text edition
- ▶ Export project to .dxf format
- ▶ Attach annotations (text, voice, picture, video) on design and floor plans
- ▶ Project file password protection

REPORTS

- ▶ Equipment list
- ▶ Link budget
- ▶ Annotations
- ▶ Output maps
- ▶ RF survey
- ▶ Horizontal Link Budget
- ▶ Compliance
- ▶ Version tracking for design consistency

COMPONENTS DATABASE

- ▶ Centralized component database of passive components including detailed technical specifications
- ▶ Over 34,000 components from more than 300 vendors
- ▶ Sub-component support
- ▶ Small cells and Wi-Fi categories for easy component searching
- ▶ Import and export libraries of components
- ▶ Database editor to add, edit or delete components
- ▶ Share component database between multiple users
- ▶ List of approved parts
- ▶ List of equivalent parts
- ▶ List of errors and warnings configurable in the Database of Components

TOOLS

- ▶ Frequency converter

PLATFORM SUPPORT

- ▶ 64-bit support
- ▶ Multiple processor support