



iBwave FiberPass™

A DRASTICALLY FASTER WAY TO DESIGN AND DEPLOY FIBER-TO-THE-HOME NETWORKS

iBwave FiberPass is a powerful solution that drastically accelerates the site survey and network design times for a Fiber-to-the-Home network deployment project. The result? Design and deployment rates up to 3X faster than the current average lifecycle - and the substantial cost savings that result. Here is how it works.



KEY BENEFITS



**ACCELERATE
NETWORK
DEPLOYMENT TIME
BY UP TO 300%**



**EXPEDITE THE
VALIDATION
AND APPROVAL
PROCESSES**



**ENSURE NETWORK
QUALITY WITH
STANDARDIZED
PROCESSES**



**ENABLE TRUE
COLLABORATION
WITH CLOUD
CONNECTIVITY**



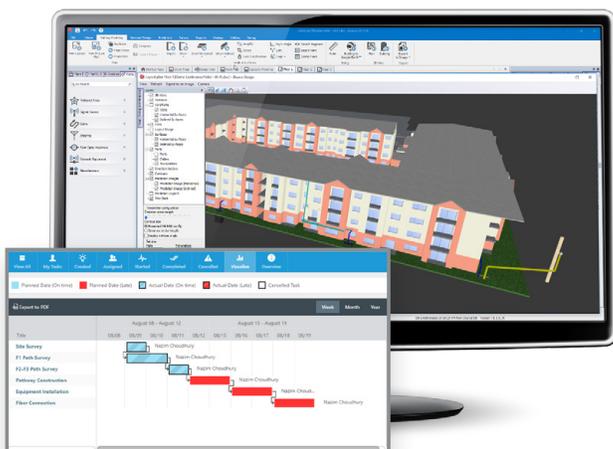
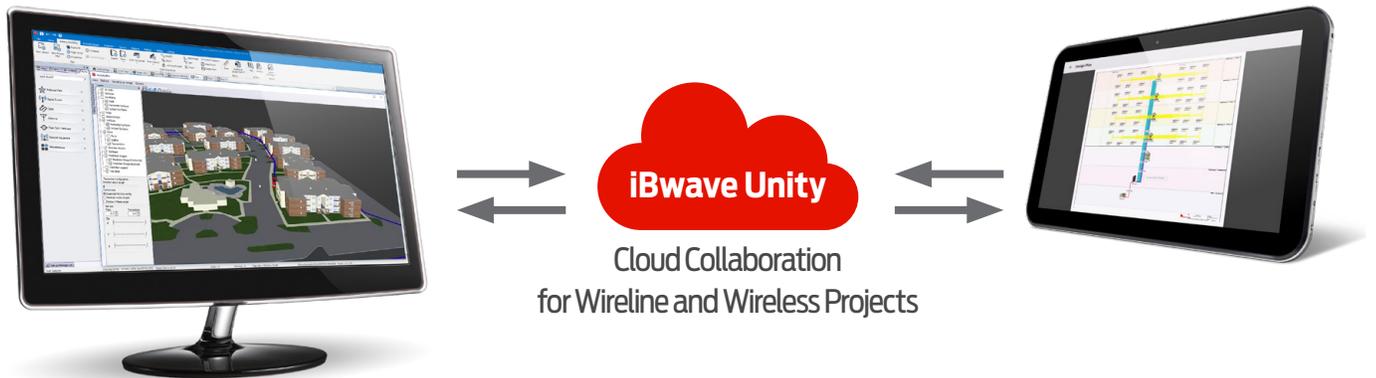
**SIMPLIFY
MAINTENANCE AND
FUTURE UPGRADES**

ACCELERATE NETWORK DEPLOYMENT TIME

The iBwave FiberPass solution automates the entire process of planning, designing and maintaining an in-building FTTx network. The result? Shorter projects and a lot less money spent.

- ✓ A STANDARD SITE SURVEY APPROACH.** Using the iBwave FiberPass Mobile tablet app, technicians will now have a guided and standard approach to do your measurements and properly document (with images, videos, notes) all required information of the FTTx site, directly on an electronic floorplan. In fact, using just the iBwave FiberPass Mobile you can complete up to 80% of the design work right there on-site, with just a tablet.
- ✓ DESIGN AUTOMATION AND COMPONENTS DATABASE.** With iBwave FiberPass, the entire design process is automated from start to finish. Drag and drop FTTx network components from our database of nearly 30,000 vendor-modeled parts, capture design errors as you go, and automate KPI and engineering rules validation.

- ✓ STANDARD DOCUMENTATION AND REPORTING.** With the ability to quickly generate a complete Bill of Materials, a compliancy report, project cost reports, living unit reports, and site survey documentation report (photos, images, notes), the need to manually track documentation is eliminated.
- ✓ CLOUD CONNECTED COLLABORATION.** Using iBwave Unity, you can easily save, access, and share all of your site information in a single cloud location. Complete your site survey and save it to iBwave Unity for easy collaboration with other team members or partners located off-site. Done with the design? Save it to iBwave Unity so it can be easily opened up on-site on a tablet for validation or maintenance in the future.
- ✓ ACCELERATED OBJECT AND SURFACE MODELLING.** You can eliminate repetitious object modelling on a floor plan with our Stencil Library - a collection of user-defined templates, or stencils, of frequently used markups, images, 3D materials and objects. You can grab a stencil, paste it to your floor plan with ease and radically accelerate and simplify your object and surface modelling.



EXPEDITE NETWORK VALIDATION AND APPROVAL PROCESS

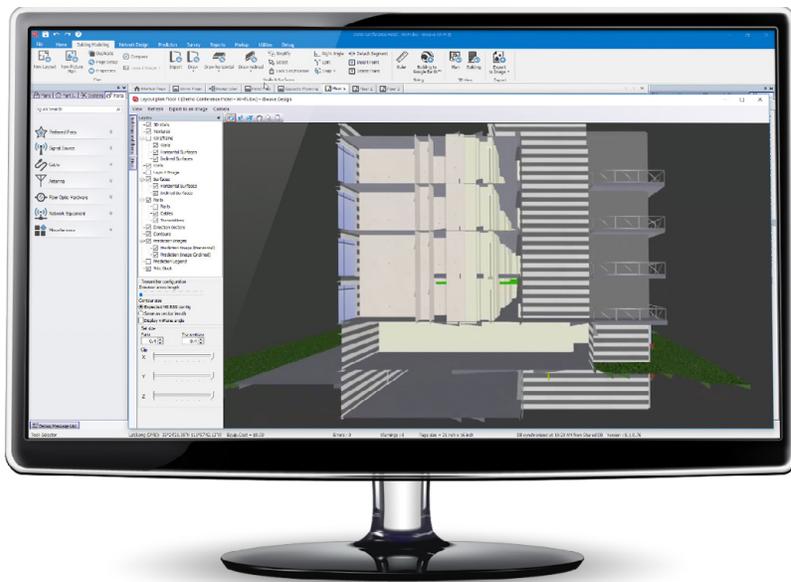
Accelerate the time it usually takes to validate the network by using a standardized tool which ensures the same level of quality from sub-contractors. Accelerate the approval process with both the property owner and network operator with easy-to-read design reports and a workflow schedule.

- ✓ AUTOMATIC BILL OF MATERIALS.** Generate a complete Bill of Materials in seconds with a cost detail analysis.
- ✓ PROPERTY OWNER REPORT PACKAGES.** Easily put together a package of reports for property owners, including: a detailed 3D model of the future network with the location of equipment, network schematic details for both inside and outside the building, a survey report with photo documentation and equipment location markups.
- ✓ WORKFLOW SCHEDULE.** Let the property owners know exactly what needs to be done and how long it will take with a workflow schedule.

ENSURE NETWORK QUALITY WITH STANDARD PROCESSES

Standardize the FTtx planning and design process to significantly reduce the risk of network errors post-installation. With iBwave FiberPass, you can better ensure KPI compliance and drastically reduce the risk of costly troubleshooting post-installation.

- ✔ **GUIDED SITE SURVEYS.** With iBwave FiberPass Mobile technicians will have a guided approach to help step them through a standardized method to perform in-building and outdoor site surveys. With this standardization, typical errors resulting from manual information collection will be eliminated, and the risk to the network’s performance is greatly reduced.
- ✔ **STANDARD DOCUMENTATION.** With iBwave FiberPass you can standardize the required documentation and information required for each project. As a result you will always have the right information you need to design and deploy the highest-quality network.



TRUE COLLABORATION WITH CLOUD CONNECTIVITY

With iBwave Unity, all of the work you do in both iBwave FiberPass Mobile and iBwave FiberPass PC will be synchronized and easy to access and share from a single location in the cloud.

- ✔ **CLOUD CONNECTIVITY.** Keep all your site information synchronized and available in a single cloud location in iBwave Unity. Easily share files and work with project partners via the cloud, eliminating coordination issues.
- ✔ **iBwave VIEWER FOR STAKEHOLDERS.** Send design files to property owners, sub-contractors, or any other external project partners, knowing they can easily open and reievw the files with iBwave’s free read-only ‘iBwave Viewer’ software.
- ✔ **WORKFLOW MANAGEMENT.** Plan tasks, estimate time and costs, and assign resources, in project plan in iBwave Unity. Setup workflow notifications to enable better team collaboration and alignment with the set schedule and budget.

SIMPLIFIED MAINTENANCE AND NETWORK UPGRADES

The iBwave FiberPass solution makes maintaining the quality of your networks, and any future upgrades of the network, much simpler and cost-effective.

- ✔ **AS-BUILT DOCUMENTATION.** Easily access historical as-built documentation and previous site survey images and notes via the cloud connected site management software iBwave Unity. Any time, from anywhere.
- ✔ **ENSURE CLEAN NETWORK INSTALLATION.** Eliminate the risk of performance issues by ensuring clean cable cabinets and terminal equipment by giving installers the right tools to document the installation.
- ✔ **SIMPLIFIED LIVING UNIT DESIGN.** Use the Living Units report to quickly display units by name or number, and easily view all the connection details (i.e. how it is connected to back-end equipment)



FEATURE SET

Included Software

- ▶ iBwave FiberPass Mobile (Android app)
- ▶ iBwave FiberPass (PC software)
- ▶ iBwave Unity (Cloud-based site management software)

Typical Venue Types

- ▶ Multi-Dwelling Units (MDU)
- ▶ Garden/Cottage Style Venues
- ▶ Enterprise Buildings (FTTB)
- ▶ Complex Venues

Site Surveys (FiberPass Mobile)

- ▶ Detailed In-Building Site Survey
- ▶ Integrated outdoor Mapping toolset
- ▶ Designated Zone Identification, Living Units, Closets or Equipment Areas
- ▶ Highlight and Document all possible Pathways
- ▶ Customizable Checklists to ensure all relevant information is captured on-site.
- ▶ Generic Cabling on-site to evaluate cable needs
- ▶ Detailed Outdoor Site Survey (Around venue)
- ▶ Digitize notes, pictures and drawings
- ▶ Create preliminary designs on-site
- ▶ Save all project information to the cloud
- ▶ Generate a preliminary Bill of Materials

Network Design (FiberPass)

- ▶ Access site survey information instantly from the cloud
- ▶ Create complete Fiber Backbone infrastructures for Feeder, Distribution, Riser and Drop Cables
- ▶ Design using all elements in an FTTX infrastructure
- ▶ Automatic Design Plan Organizer

- ▶ Integrated outdoor mapping toolset
- ▶ Mid-Span Outdoor cables to support Garden Style MDU's (With Adjustable Splice Plan)
- ▶ MidSpan Indoor Cables from Floor to Floor (With Adjustable Splice plan)
- ▶ Intelligent Pathways used to automatically route cables
- ▶ Dynamic Fiber Cable Selection Algorithm (Riser, Distribution and Drop Cables)
- ▶ Automatic cable length measurements

Building Modeling (FiberPass)

- ▶ Create multiple buildings and multi-layered floor plans
- ▶ Import floor plans and walls from .dwg, .dxf, .jpeg, .bmp, .tiff, .gif or .pdf files
- ▶ Import outdoor map images for outdoor view
- ▶ Draw walls and surfaces (including inclined), assign materials or create your own
- ▶ Advanced 3D Viewer to display buildings and floors
- ▶ Quickly drop user-defined stencils of frequently used objects and surfaces on your floor plan
- ▶ Export building to Google Earth

Project Documentation (FiberPass)

- ▶ Use drawing tools to add lines, shapes, text and images
- ▶ Create picture plans and photo mock-ups
- ▶ Create annotations (text, audio, picture, video)
- ▶ Create project revisions
- ▶ Protect project file with password
- ▶ Export project to .dxf format and all annotations to zip file

Reporting and Property Owner Packages (FiberPass)

- ▶ Site Survey Reports
- ▶ Equipment list and Cost Details Report
- ▶ Cable Routing and Cross-Reference Reports
- ▶ Compliance Report
- ▶ Living Units Report
- ▶ Free 'iBwave Viewer' for project stakeholders and property owners to view design files

Implementation (FiberPass Mobile)

- ▶ Access designs via the cloud to reference during installation
- ▶ Adjust designs on-site to have complete as-built documentation
- ▶ Document installations for quick acceptance testing and validations

Operation and Maintenance (Unity and FiberPass Mobile)

- ▶ Automatic Population of Project Data from Design Files
- ▶ Centralize all site Documentation
- ▶ Share and Collaborate Information and files
- ▶ Store all Project information for future access (Technology Upgrades)
- ▶ Data Mining Functionality (Generate valuable business intelligence)
- ▶ Generate Customizable Reports
- ▶ Complete Asset Management Tracking
- ▶ Customizable Dashboards
- ▶ API toolkit for cross functional platform collaboration
- ▶ Access and reference designs on iBwave FiberPass Mobile on-site
- ▶ Search and pinpoint living units requesting service and visualize their back-end connections with iBwave FiberPass Mobile