



PRODUCT - WAVE TUNNEL™

The Next Generation of Indoor Wireless is Here – **WaveTunnel by Airvine**

Intro

Fifty years ago the first version of Local Area Networks (LAN) were emerging, connecting computers and providing a glimpse of the power and benefits to be had.

Over time those networks have expanded into every corner of our life supporting applications we could only dream of back then.

Today the LAN is being pushed to do more and provide a foundation of connectivity for more devices and more applications than ever before.

For Existing Networks

There are a host of new applications running on the LANs deployed in MDU, Hospitality and Offices. Backhaul for 5G small cells, support for gigabit Wi-Fi deployed in the latest APs - Wi-Fi 6 or 7, video security and IoT, VR/AR you name it, today's network must support them all.



For New Networks

New industries are racing to embrace the benefits of connectivity. Areas such as factories and warehouses, and Large Private Venues. The former are adopting robotics with real time control, 3D printing, inventory control and more being driven by Industrial 4.0.

What this means is in most cases is that either a network does not exist at all or only with limited coverage, or what you have is old and not able to deliver the support that new applications need.

For as long as the LAN has existed, the backbone or core infrastructure has been cables and fiber.

Not any more – enter WaveTunnel by Airvine, powered by VineSuite. WaveTunnel is the first indoor wireless backbone offering multigigabit speeds, is simple to deploy, simple to use, and highly secure.

What it Does

Airvine's WaveTunnel™ system uses the 60GHz unlicensed band.

The 60GHz band offers tons of GHz to deliver tons of Gigabits. Until now systems using these frequencies have been strictly Line-of-site (LOS), but with WaveTunnel you have true Non-line-of-site (NLOS) operation – a system that can punch through indoor walls.

WaveTunnel nodes also employ beamsteering – meaning a WaveTunnel network can steer around corners.

This makes the WaveTunnel system ideal for upgrading or extending existing wired LANs. It can also be deployed

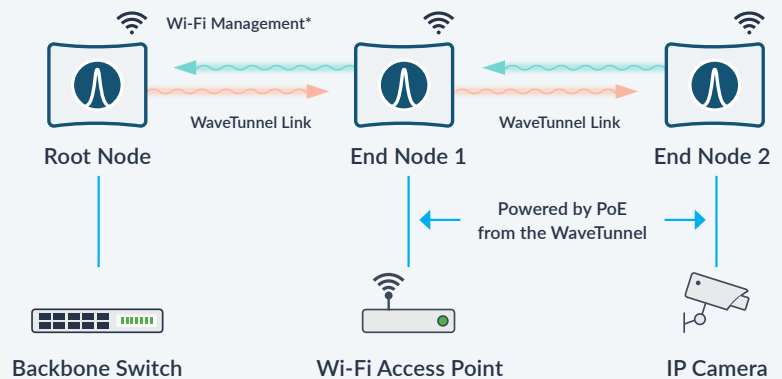
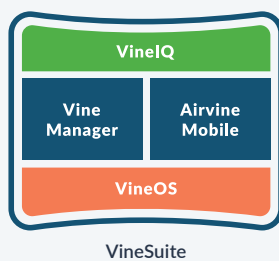
as a companion network allowing complete segmentation of Operational Traffic (OT) and Information Traffic (IT) for maximum security.

And do it fast and simple with minimum disruption. WaveTunnel networks and Nodes are easy to configure, simple to install in hours and when done just walk away and let it run. No construction or disruption – no drilling, no sawing, no patching and painting over holes.

What it is

The WaveTunnel systems consists of End nodes and Root nodes, all powered by VineSuite - a collection of modules that are the foundation of WaveTunnel capabilities.

A Root Node is the network anchor typically placed in a wiring closet to connect to the WAN or other portions of the LAN.



With VineOS, deployment can be either a spine or ring topology. The latter supporting resiliency by detecting a break and automatically re-routing traffic.

VineSuite is a collection of modules that a WT network runs on:

VineOS – is an adaptation of the MAC layer that the nodes run on. This is also where the magic of ring resiliency is controlled.

VineManager – simple, clean browser-based GUI for installing, monitoring and operating the WT network.

AirvineMobile – takes VineManager and puts the functionality on your phone.

VinelQ – a future module that will monitor WT networks in real time, adjusting and tweaking parameters for max performance, as well as providing predictive failure capabilities.



Summary

Wireless technologies continue to evolve enabling new use cases and applications. Until now indoor wireless has been used as access or at the edge of a network. WaveTunnel by Airvine introduces the next generation of indoor wireless with the newest application - indoor backbones and infrastructure.



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