

HaulPass V60™

Gigabit Ethernet Wireless Link



CUSTOMER SUCCESS

Fiber Internet Center Goes the Extra Mile with HaulPass V60 Wireless Broadband Solution

Headquartered in Palo Alto, California, Fiber Internet Center LLC provides high-speed, carrier-grade fiber connectivity solutions exclusively for business customers. The company understands how important reliable, fast connectivity is for today's business success. That's why "fiber for business" is the company's sole focus. Fiber Internet Center offer 100% fiber and backs it up with unsurpassed professional support and comprehensive service-level agreements.

The Problem: Short-Run Fiber Extensions

Increasingly, Fiber Internet Center has encountered business prospects where the closest fiber hub site or "lit building" was just a few hundred meters away from the required business location. Such businesses have traditionally relied on T1 or DSL connections to reach the fiber backbone. However, in today's bandwidth-hungry world, T1 or DSL connections are simply too slow to meet the demand, especially for companies who require Gigabit Ethernet transport speeds.

The cost to run additional fiber from an existing fiber hub site to a new customer building can often exceed \$100 per foot for underground installations. "The effort and related costs to run a fiber extension includes much more than just the cost of the fiber cable," said Bob Evans, Founder and CTO of Fiber Internet Center. "Running a fiber extension includes a myriad of costs, including engineering, permits, trench digging, filler removal, running the fiber, and

Solution at a Glance

Profile: Founded in 2001, Fiber Internet Center LLC provides carrier-grade fiber connectivity for its businesses customers.

Business Need: The company needed a cost-effective, high-speed broadband wireless solution to extend fiber optic connectivity to customer locations.

Vubiq Networks Solution: The HaulPass V60 advanced 60 GHz millimeter wave broadband wireless data connectivity solution delivers low-latency, full-duplex Gigabit Ethernet transport speeds in a small, ruggedized, easy-to-install enclosure.

Bottom-Line Benefits:

- 500-meter broadband wireless range for line-of-sight applications
- Full duplex (FDD), wire-speed Gigabit Ethernet
- 60 GHz license-free operation
- Small, lightweight footprint
- Simple POE+ operation
- Integrated carrier-grade Ethernet switch

"We selected HaulPass V60 from Vubiq Networks. They offered the best overall solution to meet the needs of our customers."

Gus Sanchez, Cofounder
Fiber Internet Center

then refilling the trenches. That can be a cost-prohibitive process for some business prospects who are otherwise located quite close to a fiber hub site or one of our existing buildings.”

In addition, there are situations where running a fiber extension to a new building is simply not possible, due to related factors such as right-of-way issues or the need to cross highways, rivers, or other physical or geographic barriers.

Evaluating Wireless Alternatives

To meet the need for cost-effective, short-run fiber extensions, Fiber Internet Center turned to wireless communications as a solution. Of course, wireless connectivity is nothing new. Traditional broadband solutions based on Wi-Fi connections at 2.4 and 5 gigahertz (GHz) technologies have been around for a long time. However, in the era of GigE, these technologies have reached their bandwidth limitations.

“Our solution was to go with 60 GHz broadband wireless,” said Evans. “60 GHz millimeter wave technology offers a number of advantages, including low cost of deployment, licence-free operation, high immunity from interference, and up to 500 meter line-of-site connections.”

“60 GHz wireless links transmit beamwidths that are very narrow, less than 5°,” said Evans. “The narrow beamwidth means that multiple links can coexist in the same area just by having them point in slightly different directions. Self-interference or interference from other wireless beams such as Wi-Fi is not a problem at the 60 GHz end of the radio spectrum.”

The company looked at available suppliers of 60 GHz hardware, known as wireless terminals or radios. “We selected HaulPass V60 from Vubiq Networks,” said Fiber Internet Center Cofounder Gus Sanchez. “They offered the best overall solution to meet the needs of our customers.”

The Solution: HaulPass V60

Today, HaulPass V60 provides Fiber Internet Center and its customers a number of important advantages, including:

- Wire-speed, wireless Gigabit Ethernet using frequency division duplex (FDD) operation, yielding 2 gigabit aggregate throughput
- Cost-effective, easy-to-deploy solution with immediate ROI
- Compact ruggedized outdoor enclosure designed for extreme weather operation, weighing only 1.5 kg (3.4 lbs)
- Fully integrated carrier-grade Ethernet switch
- Powered via POE+, drawing less than 15 watts
- Forward error correction, link budget, and automatic gain control

Successful Customer Deployments

Thanks to HaulPass V60, Fiber Internet Center has been able to deploy several new wireless rooftop-to-rooftop fiber extensions for its business customers.

“We are pleased with the ease of deployment, performance, and reliability of the HaulPass radios,” said Sanchez. “And support of full-duplex FDD operation means that our customers can transmit and receive simultaneously at full GigE speeds. That has proven to be a very popular feature for our bandwidth-hungry customers.”



A Fiber Internet Center HaulPass V60 roof-top installation in Palo Alto, California



Vubiq Networks, Inc.
9231 Irvine Blvd, Irvine, CA 92618 USA
www.vubiqnetworks.com