



Applications for 39 GHz Networking

Fiber Extensions for Carriers

Key Benefits of 39 GHz Broadband Wireless Solutions:

- **Cost and capital equipment** – Equipment supporting 39 GHz is carrier class and readily available at attractive values.
- **Fast to install** – Avoiding the FCC license application process can save weeks or months in many cases.
- **High capacity** – Each channel of 39 GHz spectrum has 100 MHz available and can carry up to 622 Mbps (OC-12).
- **Licensed** – Provides operators with the protection of interference-free operation.

Business Requirements

Fiber connectivity is problematic in the last mile yet there remains an unsatisfied need for fiber-like speeds in new locations. This need is immediate – often the sooner the better – and must be done in a cost efficient manner.

Extending a fiber network to additional locations is expensive, takes planning and operations time, and can be disruptive to the community. The average cost to provide a fiber lateral into a building easily exceeds \$200,000 and often takes nine or more months.

Solution

39 GHz fixed wireless broadband technology is an excellent compliment to fiber networks and provides a cost effective way of extending their reach to end customers. From a point of presence (POP) on the fiber network one can extend broadband connectivity to any location that has line of sight from the roof of the POP. There are significant financial and operational benefits to this alternative:

Financial Benefits

- The final mile cost is substantially less than fiber. The total cost of implementing a 155 Mbps OC 3 link is less than \$50,000. These costs are a mere fraction of the cost of extending a fiber lateral into a building.
- The financial risk associated with a last mile fiber application is substantial while the lower cost of a radio link commensurately lowers the financial risk.



- Secondary market equipment is readily available. You may also consider using equipment from the secondary market – there is an abundance of new equipment being sold in secondary channels at tremendous discounts. The cost of a broadband link can be reduced by approximately 50%.

Operational Benefits

Operational benefits can be realized in both the installation and ongoing operations of the systems.

- **Fast implementation.** The entire implementation process can be done in two to four weeks, and sometimes it can be done in a matter of days. The installation is straightforward – and non-disruptive to those using the facilities. The short timeframe allows carriers to capture the customer quickly after signing the contract, and the flow of revenue begins faster as well.
- **High reliability.** Broadband wireless connections are typically engineered to 99.999% reliability. The use of 39 GHz links means the system is protected from RF interference, thus increasing its reliability and decreasing the likelihood of maintenance visits.
- **Simple integration.** Radio systems can be easily integrated into your existing management systems using standard protocols such as SNMP. Monitoring a 39 GHz link is the same as monitoring any other component of your network.
- **Locational flexibility.** Radio systems can also be moved. If fiber is eventually extended into a location using wireless connectivity, the broadband link can be reinstalled between the two other locations as simply as it was initially put in.

*The partnership of First Avenue Networks and Comsearch is designed to help you through the process of implementing broadband wireless networking. Please contact us at customersupport@comsearch.com or at **800.318.1234** for more information.*