



© 2008 TESSCO Technologies ■ May not be reproduced without permission

SUMMARY

A rooftop is often an ideal location for a wireless network installation, especially in suburban and urban areas. It is important that this type of antenna mounting system is securely installed, not only to meet network specifications, but also to reduce the potential for theft of recyclable parts and damage by vandals.

FEATURES AND BENEFITS

Rooftops can provide the height required for proper operation, without the necessity of erecting a tower or monopole in areas with difficult zoning requirements. Also, most rooftop locations can be used without lease negotiations because the network user is likely to be leasing the office or warehouse space already.

REAL WORLD EXAMPLES

Situation: A value-added reseller (VAR) needed to install a wireless network that would connect several buildings in an office park.

Problem: Ground space was limited and aesthetics were important to the owner, so a tower solution was not practical.

Solution: Since the office park owner was installing a wireless network to encourage new tenants, the VAR was not required to lease the roof-top space. He installed a series of tripods in the required locations, ran the cable along the roof via an aluminum ladder tray, penetrated the roof using a pass-through (similar to the power cabling), and ran the wire to the building's communications closet.

Situation: A wireless carrier was looking to enhance their coverage in an urban area.

Problem: There was no room available for a tower or monopole.

Solution: The carrier approached several building owners about leasing their rooftop space for a new wireless site. After signing a lease, the carrier's tower contractor installed the site using four roof-top sector frames, running the cable via an aluminum ladder tray to a "dog house" that transitions the cable into the cabinet located in the building's HVAC room. Using the building's riser, the cabinet was connected and backhauled to the carrier's network via fiber optics.

ADDITIONAL CONSIDERATIONS

- Does the existing lease allow for penetration of the roof?
- Is there easy access to the roof or is a crane required?
- Is vandalism or theft a concern?
- How high off the roof does the antenna need to be mounted?
- Is there an existing structure secured to the roof that can be used as a mounting base?

PRODUCTS

- Rooftop sector frame—primarily used for carrier applications
- Tripods—primarily used for microwave or broadband applications
- Telescoping masts—primarily used for light-weight broadband applications
- Wall mounts—can be used for all applications
- Aluminum ladder tray—lighter weight and easier to handle, but limited protection from foot traffic and vandalism
- Rooftop bridge kits—heavier duty and more difficult to transport, but can support limited foot traffic and prevent vandalism

Knowledge Solutions

Providing the intelligence for optimum, faster decisions

- TESSCO.com
- The Wireless Guide
- The Wireless Journal
- The Wireless Updates
- The Wireless Bulletins