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**SUMMARY**

Every wireless site requires a free-standing shelter or cabinet to secure network equipment. Equipment protection, power management, and power backup support are critical concerns when deploying electronics equipment in any setting.

Designed for indoor use, the active wireless components must be located on a site with environmental controls. A structure is required to ensure the equipment is protected from the elements—including heat, humidity and cold, as well as pests. Also, any cables running from the antennas to the equipment must be protected from falling ice that forms on towers.

**FEATURES OF SHELTERS**

- Secure environment for storing sensitive on-site equipment
- Large footprint provides room for deployment, room for technicians to work indoor, and enables future expansion
- Expensive to erect or install
- Can complicate lease provisions or zoning process

**FEATURES OF CABINETS AND ENCLOSURES**

- Capacity to secure most wireless equipment
- Numerous sizes to choose from based on location, equipment requirements and future expansion
- Small footprint allows for flexible deployments, often reduces zoning and leasing difficulties, and enables equipment to be secured separately
- Provides options for complete environmental controls based on geographic or equipment requirements
- Availability of all-in-one solutions that provide ample equipment space, power management solutions, alarming and battery backup

**REAL WORLD EXAMPLES**

**Situation:** A Wireless Internet service provider (WISP) was co-locating their access points on a tower.

**Problem:** While there was a shelter on the site, the WISP was concerned about other co-locaters having access to his equipment in the shelter.

**Solution:** Locating an enclosure on a small grated platform enabled the WISP to secure their equipment on-site with temperature controlled conditions.

**Situation:** A utility company needed to mount a critical repeater to backhaul traffic from their network in a remote location where no shelter was available.

**Problem:** The hop required the indoor PIDU equipment to be sheltered and backed up for a minimum of 8 hours.

**Solution:** Locating a solution designed for point-to-point radios offered shelter for the indoor units and 48VDC power with 8 hours of backup for the entire site—in a pole mounted package.

**Situation:** A tier-one carrier needed to migrate service platforms from GSM to UMTS for 3G Service.

**Problem:** The number of cabinets allowed at the site was restricted.


**Solution:** Locating a larger cabinet that could house both GSM and UMTS equipment with battery backup and power distribution for both allowed for deployment within their restrictions.

**ADDITIONAL CONSIDERATIONS**

- What is the temperature range at the site?
- How many rack units (RU) are required for the equipment?
- Is there a useable existing structure on the site?
- Is a platform required to support the enclosure?
- How is the coaxial cable protected from the tower to the shelter/cabinet?
- How is the coaxial cable supported inside the shelter?
- How will the equipment and shelter be grounded?
- Is battery backup or power management required?
- Is surveillance equipment required to prevent copper theft and vandalism?
- Is AC power available at the site? If so, what is the voltage?

**PRODUCTS**

- Shelters
- Cabinets
- Radios
- Coaxial cable systems
- Grounding and surge protection
- Amplifiers and repeaters
- Cavities and duplexers
- Filters and combiners
- Equipment racks and cabinets
- Site security equipment
- RF and safety signage
- Test equipment
- Installation tools and supplies
- Power and backup solutions
- Lighting



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