

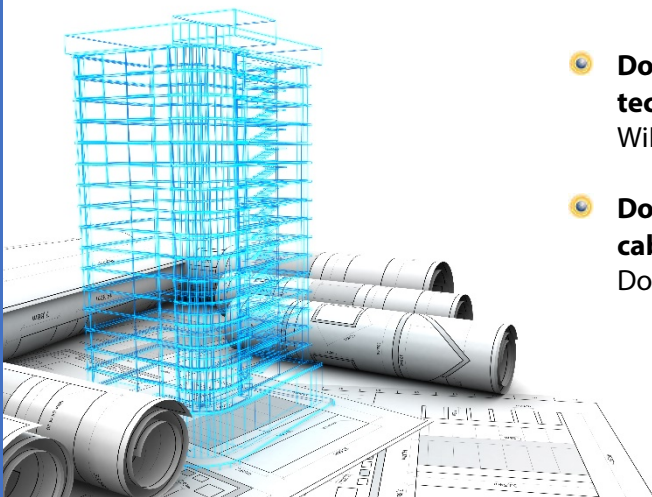
Installation Considerations

In most venues, the ideal place to mount WiFi and DAS access points and antennas is in the ceiling, both to achieve the best wireless signal coverage and to conceal cabling above the ceiling. However, there is great variety in the shapes, sizes, and weights of antennas and APs. Also, there are many different interconnect requirements and ceiling constructions and materials.

Additionally, an aesthetic installation is paramount as the ceiling location is a very visible from all points of view. In many cases, installation aesthetics are subject to approval of architects, building owners, or aesthetics committees. Often, access points are clipped to a suspended ceiling grid, but clipping to the ceiling grid may be unacceptable from an aesthetics or security standpoint. Installers may be tempted to place access points above the ceiling, but leading access point vendors recommend not installing above the ceiling for wireless performance reasons and for maintainability.

When installing WiFi and DAS access points and antennas, consider the following:

- **Is the access point mounted in the location specified by the wireless design?**
Moving the AP even a few feet (just to find a convenient mounting location) may impact the overall wireless performance.
- **Is the access point oriented properly?**
Flush to the ceiling, and not above, is preferred. And, the access point should be mounted in the horizontal orientation for best wireless coverage.
- **Is the access point suitably physically secured for the venue?**
In some locations, locking the AP is required.
- **Is the installation professionally aesthetic for the venue?**
In many venues, the appearance of the installation is subject to approval.
- **Is the installation "code compliant?"**
National Electric Code, burn rated ceiling, seismic, and Infection Control codes and procedures may apply, depending on the venue.
- **Does the installation provide for service and frequent technology migrations?**
WiFi access points are often upgraded every 3 to 5 years.
- **Does the installation provide for standards compliant cabling and termination?**
Does the installation also protect the cabling?



Solutions

Oberon offers the widest variety of AP and antenna mounting solutions, providing the ideal combination of wireless performance, ease of installation, and maintenance, as well as installed aesthetics. Oberon has taken cues from recessed lighting products, creating mounting solutions for many types of ceiling constructions.

Rick Conklin, Product manager for the ceiling mounting solutions, explained Oberon's commitment to compatibility and testing. *"Oberon's engineers are very familiar with the requirements for wireless design and installation. We have designed and tested our products with Cisco, Aruba, Meraki, Extreme Networks, Ruckus, and other leading WiFi access points, as well as DAS antenna vendors' equipment. In each case, primary considerations are wireless performance, installation ease, and aesthetics."*

WiFi and DAS access point and antenna mounting solutions:

Series 1040:

Cloud and panel ceilings

Series 1042:

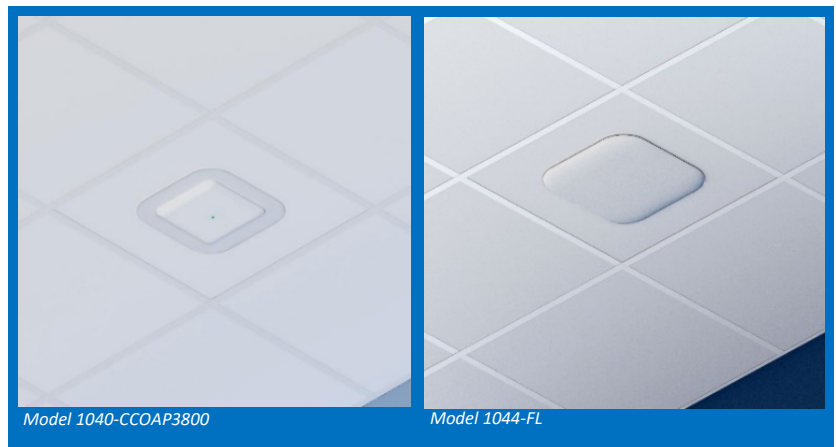
Existing gyp board, sheet rock, drywall, plaster and lathe hard ceilings

Series 1043:

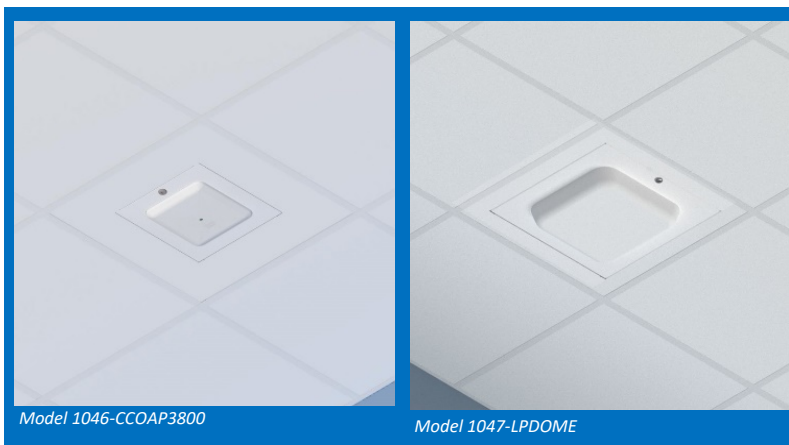
New construction gyp board, sheet rock, drywall, plaster and lathe hard ceilings

Series 1044:

Standard 2' x 2' suspended ceilings



WiFi access point locking enclosures:



Series 1046 and 1047:

Standard 2' x 2' suspended ceilings

For more information, visit www.oberoninc.com.