

Creating a Virtual Ceiling for Data Center Protection



The Site

The project took place within the interior perimeter of temperature-controlled IT communication rooms at a secure data center. These rooms contain sensitive servers and networking gear, often featuring suspended ceilings and raised floors that create unique security vulnerabilities.

The Challenge

Hot-zones of heated air and large volume transfer disrupt typical motion and IR sensors. In addition, some data communication rooms are built in a way where intruders could potentially access the protected space from above or below, either from a suspended ceiling or raised floor space. Attempting to create a full-area protection zone for such areas will be very expensive in installation and design time, and yields only marginal coverage.

The Solution

To protect against intrusions from above the data communication equipment, we deployed multiple REDSCAN advanced laser detectors to create a virtual false ceiling. Each unit was mounted a few inches below the physical ceiling in a horizontal position while set to vertical detection mode, allowing the 100-foot laser field to span a 180-degree arc. This strategic placement ensures seamless wall-to-wall coverage, detecting any movement through ceiling panels. For raised floor spaces, the detectors are installed similarly but operate in horizontal detection mode to guard against intrusions from below.

REDFSCAN LiDAR Series

REDFSCAN is an award-winning LiDAR detector that reliably detects object size, speed, and distance, creating an invisible wall for security indoors or out. Ideal for protecting assets, perimeters, and enhancing safety in public spaces.

