



**RF SITE SURVEY CONSIDERATIONS:**

- System requirements
- Wall and ceiling construction
- Product density and type
- RF interference
- RF network expected data rate
- Typical facility traffic patterns
- Antenna types/usage
- Power and data cabling recommendations
- RF network users analysis
- Coverage overlap analysis
- Antenna diversity analysis

**RF SITE SURVEYS: INSURANCE FOR PROPER COVERAGE**

The ultimate goal of an RF site survey is ensuring adequate and proper RF coverage and performance. There are obvious issues if a space does not have enough coverage, but too much coverage can also be problematic, leading to session disconnects and RF device roaming problems.

A professional site survey helps provide the necessary information for determining the quantity and locations for access points and antenna use. A high-quality site survey should also identify and locate sources of interference that can degrade wireless performance. Identifying obstacles and mitigating their effects often translates to fewer access points and greater cost savings.

The Ryzex Professional Services team is comprised of engineering professionals who have performed thousands of site surveys for operations of all sizes. Our RF engineers gained experience from industry leaders like Cisco and Motorola, and are trained and kept current by multiple manufacturers.

**THE PROCESS**

When we arrive, we will meet with your site coordinator and tour your site. We will review desired areas of coverage and potential operational impacts. We'll conduct a spectrum analysis to search for RF interference sources like microwave ovens, Bluetooth devices, heavy machinery, cordless phones, neighboring wireless networks or rogue access points.

As part of the survey process, we'll position an access point in a strategic location and perform a walk-around with a portable survey tool. We'll measure signal strength, signal quality, and noise strength, among other parameters. Our team will also perform data transfer tests, as well as check coverage inside trailers and in all the nooks and crannies of your facilities to ensure adequate coverage.

Highly metallic environments may require the use of diversity antennas (two antennas vs. one) to compensate for multi-path interference. We've found that most surveyors specify diversity antennas regardless of the situation. Based on our experience, diversity antennas are only needed in about 25 percent of the sites we survey. For this reason, the Ryzex team will test your environment with and without diversity enabled to determine if there is any benefit of using diversity antennas. This will potentially save you money if extra equipment is not needed. We believe that, if your facility does not have a problem with multi-path interference, there's no need for two antennas per access point.



Ryzex site survey reports are highly comprehensive, and unlike many of our competitors, they are not automatically generated forms. Each report is customized to your facility and includes:

- 100% warranty coverage
- Detailed survey results with “heat” and coverage maps
- Product summaries
- Pre-installation information
- AP and antenna mounting examples
- Specification sheets for each access point
- Installation details for each location
- Signal strengths and data rates from access points
- Spectrum analysis results identifying RF interference
- Complete bill of materials
- An explanation of proper channelization
- Diversity antennas recommendation and separation calculations (if applicable)
- Access point location strategies
- Connection diagrams
- Examples of what not to do

After the site survey is accepted, Ryzex will come in and install cabling, IDF, backboards, antennas and controllers.

If you are having issues with an existing system, our Professional Services team will come in and troubleshoot. They will produce an as-built document that lays out your current situation. Many times, we can fix your problem on the spot.

Save time and resources on your next data collection venture with Ryzex’s line of Professional Services. Contact us at 800.729.6867 for more information.

**FullUse LifeCycle Support**<sup>SM</sup>

Learn more at [www.ryzex.com/fulluse](http://www.ryzex.com/fulluse)

**RYZEX**

4600 Ryzex Way  
Bellingham, WA 98226  
800.729.6867  
[www.ryzex.com](http://www.ryzex.com)

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