



Ryzex offers a suite of Professional Services:

RF Technical Services: We can conduct an RF site survey and analyze signal propagation characteristics specific to your facility.

Onsite Technical Services: We'll help you go live with planning, monitoring and training for users on the new system.

Device Staging: We'll test your devices, load software and apply the correct settings so that your units are ready upon arrival.

Consulting Services: Take advantage of our expertise with ADC consulting, project management, training and troubleshooting.

Advanced Services: Remote device management, enhanced staging services and more.

Q: I'm not sure whether or not I need someone to configure my new barcode hardware. How do I know?

A: A good way of deciding whether or not to have someone else stage and configure your new devices is asking yourself a few questions:

- How many sites do you have?
- How many devices?
- Do you want all of the devices to have the same software installed?
- What are the skill levels of the end users?
- Is your IT department already slammed with other projects?
- Will you be ordering all devices at one time or sporadically?
- Do you want to use your devices as soon as they arrive at your facility?

If you have multiple sites with a large (100+) amount of devices spread across each of them, choosing someone to do the staging and configuration for you will save you valuable time and stress. If you were to take on this process internally, it could take hours a day to get the system up and running. How does opening the box, taking your device out and it working right away sound?

Q: Why do I need a wireless site survey?

A: A wireless site survey is your assurance that you will have adequate coverage, bandwidth and stability in your RF system to support the user's needs. Since we cannot "see" radio waves, we rely on our tools and methodologies to assure that your RF system will avoid interference from other sources of EMI (electro-magnetic interference) and be able to propagate most efficiently within your facility. A properly executed RF site survey will allow Ryzex to design a RF network that will meet your coverage, bandwidth and user count requirements.

Q: What are NEMA enclosures and why do I need them?

A: NEMA (National Electronics Manufacturers Association) enclosures are boxes built to protect electronic equipment i.e. RF access points. Some access points are in areas that are subject to excess moisture, extreme temperatures, or dust and need to be protected from these elements. Ryzex NEMA cases enclose and seal your valuable access points in a wide variety of situations.

Q: What if my facility is surrounded in metal?

A: Site surveys will take your facility's unique characteristics into account. Different environments affect RF signals differently. For example, in highly metallic environments the RF signal will bounce off the metal and create multi-path interference. In these instances the site surveyor will test with and without diversity to get the best signal. Q: My facility is more than one building, can I still have one RF system? A: Yes. Multi-building facilities require intermediate distribution frames

(IDF). They are like an extension cord to your main distribution frame (MDF). The IDF is a free-standing or wall-mounted rack for managing and interconnecting the telecommunications between the end user and the MDF. For example, your MDF will be located in your company's main building and all subsidiary buildings will have an IDF. Ryzex engineers will help you design the best RF network infrastructure to suit your specific needs.

Q: What are the advantages of RF vs. other data collection systems?

A: The main advantage of an RF system is the real-time aspect. Information is on demand and in the users hand at all times. For example, the user can receive direction from a warehouse management system that informs what product to pull next, if a wrong item was scanned or suggests replacements if inventory is out. This will greatly reduce human error and solve problems instantly rather than finding out something is wrong down the road. One common example of the use of RF real-time technology is in warehouse and distribution center systems. Real-time interaction with your WMS system will allow the system to make users most efficient by directing their picking process, suggesting alternative products (and location) at the spur of the moment, interleaving cycle counts with order picking, or even put-away with picking. With a RF network leveraging your investment, you can realize real-time labor savings and instant system updates to maintain inventory levels more accurately. Real-time interaction with your IT systems is the most logical choice for making your business more responsive and efficient.

Q: Does Ryzex do the work or do they contract it out?

A: The advantage of working with Ryzex is that we do the work. Unlike some of our competitors, we don't simply resell someone else's services, we take pride and full responsibility in the work we do. Our team of professionals and engineers has extensive experience in the industry. Due to the high demand for RF systems, Ryzex will occasionally supplement the services with a sub-vendor to assist on projects, but a Ryzex Professional Services representative will always be on site. This will ensure you a faster completion of your project.

Q: How much does it cost?

A: Site survey costs vary due to a number of circumstances and system requirements. Among these are: user count, facility size, bandwidth, speed, inventory contents, building construction, EMI presence, and other factors. On one hand, for example, a fairly open 40,000 ft² warehouse full of lumber with only 10 RF users may take less than a day to survey and write a report. On the other hand, a 200,000 ft² warehouse with low ceilings, walk-in sub-zero freezers, 50 users and 12 loading docks may take three days to survey and generate a report. As you can see, there are many factors to take into account to properly quote a price and perform a site survey for your facility.

Q: How soon can I get my RF system installed, up and running?

A: We appreciate you are anxious to start realizing your return on investment of RF equipment and will schedule your installation as soon as possible. Ryzex has engineers in many parts of the country to provide service coverage to all our customers. It is best to work with Ryzex to plan out and provide the most lead time as possible to assure that your system is installed and your users trained at the earliest time possible.

Q: How much coverage can I expect from one access point?

A: There is not one standard area that an access point will cover. It all depends on the environment of your facility. In an ideal area with no objects to obstruct the RF signal, the coverage could extend to 20,000 ft². On the other hand, a dense environment could only extend 5,000 ft². Microwaves, mobile phones, external RF signals and Bluetooth wireless devices are

all things that can affect your RF signal. In other words, the signal from each access point will be different from location to location. Other factors that are also considered are the number of concurrent users anticipated and desired data rates.

Q: How do I know if I need to utilize the diversity antenna feature of my RF access point?

A: In most cases, it is not necessary to use diversity antennas. In fact, it can potentially introduce more problems that it solves if not installed properly. If your Ryzex site survey engineer suspects a situation that may cause multi-path distortion (highly metallic environments) he will test for this situation and recommend diversity as it is needed. He will only specify what you need and take into consideration performance, requirements and cost when making a recommendation.

Q: What is the expected data rate on the RF network?

A: The answer to this question depends on a few factors. There are three main WiFi RF standards that are generally used: 802.11a, 802.11b, 802.11g, and an emerging 802.11n.

With the exception of 802.11a, these are all 2.4Ghz technologies and use different algorithms to achieve data rates from 2Mbps to 54 Mbps. Another factor to consider is how many users you have on your network. Each user impacts another in terms of how fast and how much data they can get. Two equal users on a network will get half the data rate of a single lone user. Yet another factor is the distance a RF user is from the access point. The closer the user is to the access point, the faster the data rate will be.

Q: What equipment can be a source of RF interference?

A: Many things can interfere with the RF signal.

- Microwave ovens
- Remote controls
- Bluetooth
- Commercial radios
- Motion sensors
- Radar systems
- Wireless and cellular phone
- Large equipment
- AM, FM and TV broadcast transmitters
- CB transmitters A thorough site survey will address all these interferences and ensure proper coverage.

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