

Technical Bulletin CS-16-05

Spectralink DECT System Performance Metrics

This technical bulletin explains the expected performance metrics customers can expect when utilizing Spectralink DECT systems.

System Affected

All Spectralink DECT 70-Series products

Description

A question many customers have about any wireless technology is how reliable it will be or what sort of performance they might expect to receive. As with all wireless technologies there are some limitations that must be considered. In particular, it is important to remember that RF is a shared medium. This means that all devices must share the radio frequencies they are using with every other device using that same frequency. Due to this fact, there can be contention between clients and even between clients and the base stations that provide the services to the clients which can result in poor performance. Contention is typically visible in the metrics reported in the system logs. Let's take a look at one particular metric that Spectralink focuses on.

One of the key performance metrics Spectralink considers for any RF technology is the likelihood of a call being lost or dropped. There are some mechanisms in the various technologies that utilize RF to help prevent dropped calls but it's not always possible to prevent it from occurring. With that in mind, it is possible to experience up to 2% dropped calls on any wireless system. Consider for a moment your own experiences with your cellular telephone. Your cellular telephone uses RF technology to communicate with the cellular network and calls do occasionally drop, often for the same reasons your DECT calls may drop. As technology improves the likelihood of dropped calls occurring tend to decrease but it's impossible to prevent them completely.

One consideration with any RF technology is the design of the environment it needs to operate in. Without a properly designed wireless network that accounts for cell overlap, channel layout, building material attenuation and much more, there is a significantly higher likelihood of performance issues occurring. It's important to understand the physics of RF propagation in an environment and how placement of an antenna will affect system performance. All of this must be considered when designing any wireless system, not just DECT systems.

In summary, the key metric that Spectralink considers for a successful DECT system is the dropped call percentage. As long as the dropped calls remain below 2% you can be assured that your system is performing within specification. If you're concerned that your system may not be designed properly to achieve such a metric, you may want to consider purchasing a site survey from Spectralink Professional Services.

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