ZipLink

Wireless Phone Line & Ethernet Extender

Application Note:

How to Wirelessly Extend Nortel PBX Extensions with the ZipLink:

Higgins International
405 E Pennsylvania Ave
Urbana, IL 61801

Sales and Tech Support: 866.337.0965

www.faxswitch,com

Application Note – Nortel Phone extensions with the ***ZipLink*** Copyright © 2013

Background

Many customers have inquired about using the ZipLink with Nortel PBX systems. The typical scenario involves an existing Nortel PBX system in one building and the need to install extension phones in another building without trenching through the terrain separating the two. An Ethernet and POTS line can be wirelessly extended to quickly and affordably provide this connection with Higgins International's ZipLink 5.8GHz Wireless Phone line/Ethernet Extender.

This application note provides multiple options in order to establish this wireless connection.

Technical Discussion

First, a basic description of the ZipLink is in order.
The ZipLink extends one or two POTS lines AND an Ethernet connection between two locations up to a mile apart via a 5.8GHz direct sequence radio signal with a secure WPA-PSK 256-bit AES encryption. It is a "ready to go, out of the box" system that almost anyone with basic skills and tools can install.

ZipLink System includes:

Line & Phone End Radios
2 power adapters
2 x 100 ft outdoor CAT 3 cable
2 Wall pole mount and brackets w/nuts, screws, washers

Required tools:

Drill/ Phillips head screwdriver, Fishline, RJ11 crimper, 10mm nut driver

Next, a basic understanding of how an office desk phone's call features are implemented is required.

PBXs, such as the **Nortel "*Norstar*" or "*Meridian*"**, use feature codes from each desk set to direct the PBX to access voicemail, transfer calls, and so on. For example, if you have a Norstar at the office, when you push the VOICEMAIL key on your phone, what is actually happening is the phone is dialing a special extension, which is "Feature 981". The PBX understands this command, answers the call, and prompts for the voicemail password, and so on. The "Feature" button is actually the * button on the keypad.

Assuming one has a Norstar, this can be tested by dialing *981 on a desk phone; this should activate the voicemail password prompt. (Note: The Meridian may have different feature codes.)

Even though Nortel no longer manufactures phones, Nortel compatible phones are abundant.

One example successfully tested with the ZipLink is the **Aastra Telecom 8009**. These can be found on Aastra's website: http://www.aastra.ca in the analog phones section.

Lastly, to implement the ZipLink with a Nortel PBX, the PBXs "digital connection" needs to be converted to a regular POTS connection. The Norstar Analog Terminal Adapter-2 (ATA-2) is the most recent model of analog terminal adapter introduced for the Norstar system. The ATA-2 converts the Norstar digital interface to analog for communication with such analog devices as single line telephones, FAX machines, modems and answering machines. Even a basic, no frills phone will behave like any other phone on a Nortel system. By using the appropriate feature codes (like *981 for voicemail), any phone will function identically to the Nortel-branded phone sets.

Nortel ATAs are widely available from Nortel dealers. These ATAs can provide two POTS lines into a Nortel PBX that can then be extended by the ZipLink to the next building. This is the most economical solution for customers who need only one or two phone lines from their Nortel PBX to be extended wirelessly up to a mile.

Here is what a complete system would look like:

Providing more than 2 Nortel phones at the second location – 2 Options

If more than two phone lines are needed from the Nortel PBX, there are a couple more options.

Option 1

Citel www.citel.com manufactures a product called the EXTender that converts Nortel's "Digital" lines to Ethernet, and vice versa, so the ZipLink can establish a wireless Ethernet connection between the buildings.

The Extender 6000 series has been tested with the ZipLink. It will successfully extend eight Nortel “Digital” lines from one building to the other, up to a mile. This equipment plugs in and behaves just like eight Nortel lines, and it even has similar connectors to the Nortel system.

Although this solution works well, a downside can be cost. The Extender 6000 is a rather expensive device. It usually sells in the thousands of dollars, and one at each end is required.
1 if ZipLink - 1 - 2 if ZipLink - 2

Here is how this system is connected:

Option 2

Newer Nortel PBXs (as well as PBXs from other manufacturers) often have an option to allow support of the newer VoIP phones, the Nortel BCM and CS series being two examples.

Once this option is installed, an almost unlimited number of phones can be installed in the second building via a ZipLink, or ZipLink-X Ethernet Extreme.

VoIP phones simply use an Ethernet connection back to the PBX. Since the second location will typically require an internet connection anyway, the Ethernet connection provided by any ZipLink product will generally serve both purposes.

Many customers find that for up to 16 phones, a standard ZipLink works fine. For customers with heavy internet users in the second building, or for those using more than 16 phones in the second building, the ZipLink-X Ethernet Extreme, with 80Mbps of bandwidth, is the optimal choice.

Summary

The ZipLink-1 and ZipLink-2 provide a very economical way to extend one or two phone lines and internet to a second building, even with legacy Nortel PBX systems.

Three or more lines becomes more complicated, but can certainly be accomplished. When doing this, one should carefully consider the investment being made in the legacy phone system in comparison to adopting newer standards, like VoIP.

In either situation, Higgins International can provide a secure, affordable wireless connection between two points.

Technical support is available as always before and after the sale.

For more information, please contact Higgins International @ 866-337-0965.
info@faxswitch.com