



### Client > Spectrum CNC Technologies

#### The Challenge:

Help Spectrum CNC Technologies develop a wireless networking solution to more effectively manage industrial equipment and eliminate the need for extensive wiring throughout the production floor.

#### The Solution:

Combine Spectrum's proprietary software with the Lantronix MatchPort® b/g to create the "Spectrum WiBox," which wirelessly connects computer numerical controlled (CNC) machines using IEEE 802.11b/g networks.

#### The Result:

Spectrum's Multi-DNC Wireless System sets the standard for wirelessly networking 250 or more CNC machines with a high degree of reliability.

“Through true software and hardware integration, Lantronix helped us customize an off the shelf wireless unit specifically for the machine tool industry”

**Toni Novak,**  
President  
Spectrum CNC Technologies

#### The Challenge: Revolutionize the Industrial Automation Industry with Wireless

For nearly two decades, Spectrum CNC Technologies has been revolutionizing the computer numerical controlled (CNC) machine tool industry. Its software-based machine tool communications system, Multi-DNC, was the first product on the market to enable simultaneous uploads, downloads and dripfeeding of data to multiple CNC controls. Over the years, Spectrum has continued the revolution with innovative products, services and unbeatable support for the best overall value available in the industry.

Two years ago, Spectrum began development on a wireless solution for its Multi-DNC system, something its customers had been asking for. Spectrum knew that a wireless industrial automation solution could bring many new and compelling benefits, including simplified and less costly installation, increased reliability and enhanced flexibility for machine movement.

Spectrum CNC also knew that a wireless solution for Multi-DNC would position the company for strong growth. However, company executives did not want to rush to market with an unreliable system. Having worked with Lantronix in the past, Spectrum was confident that Lantronix could recommend the best product to embed wireless networking capabilities into its Multi-DNC system.

### The Solution: Lantronix Plays “Match”maker for Spectrum’s Proprietary Software

While the Multi-DNC Wireless System™ was in development, Lantronix sent a design engineer to work with Spectrum on several occasions. According to Spectrum’s president, Toni Novak, “To make this solution truly work, we needed to marry our software solution to their hardware solution, which meant working closely together. [Lantronix] technical staff was with us every step of the way — even visiting customers with us — to truly understand what they needed.”

Taking into consideration Spectrum’s desired capabilities and technological requirements, Lantronix recommended the MatchPort b/g, which enables companies to build wireless networking into virtually any electronic device with a serial interface. With this full-featured, turnkey embedded networking module, new products can be wirelessly accessed and controlled over the Internet. And since the MatchPort b/g already meets FCC wireless certification standards, the new system could skip the certification process, which reduced cost and helped shorten time to market.

Combining Spectrum’s proprietary Multi-DNC software with the Lantronix MatchPort b/g enabled Spectrum to create the WiBox, which wirelessly connects CNC machines using IEEE 802.11b/g networks and brings incredible benefits to the industrial shop floor. With no cabling requirements, installation is quicker and less costly, and companies are able to move or add machines anytime, anywhere without re-cabling. On a day-to-day basis, the WiBox allows users to monitor machines through a centralized operations console using notifications like cycle time and spindle time. The WiBox Device Manager also provides an at-a-glance overview of the shop floor’s wireless network, making sure every machine is online and running smoothly.

### The Results: Spectrum’s Wireless Solution Proves Two Heads Are Better Than One

Spectrum’s Multi-DNC Wireless System sets the standard for networking 250 or more CNC machines wirelessly with a high degree of reliability, something its competitors’ solutions lacked. While Spectrum was not the first to market with a wireless solution, its competitors used off-the-shelf wireless hardware that couldn’t support the demanding CNC environment. Says Novak, “We’ve gotten several calls from customers who’ve gone with a competitor and found that their solution wasn’t reliable enough. We’ve already replaced two systems.” Looking to the future, Spectrum CNC Technologies intends to continue working with Lantronix as it develops new products.

#### About Spectrum CNC Technologies

Established in 1989, Spectrum CNC Technologies revolutionized the CNC machine tool industry with Multi-DNC, the first completely software-based machine tool communications system. For over sixteen years, Spectrum has continued the revolution with innovative products, services and unbeatable support for the best overall value available in the industry.

Visit [www.multi-dnc.com](http://www.multi-dnc.com) for more information.

For more information on the MatchPort b/g, visit [www.lantronix.com/matchportbg](http://www.lantronix.com/matchportbg)

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