

Hardware Info

This diagram shows a Wireless Ethernet network (WLAN) using the 802.11B/G industry standards, with the **Spectrum WiBox** Ethernet-RS-232 units connected to each CNC Machine in the shop. The "wireless" part of this system is the multiple Ethernet connections back to the company LAN. Short RS-232 cables are still required to connect to each CNC Machine.

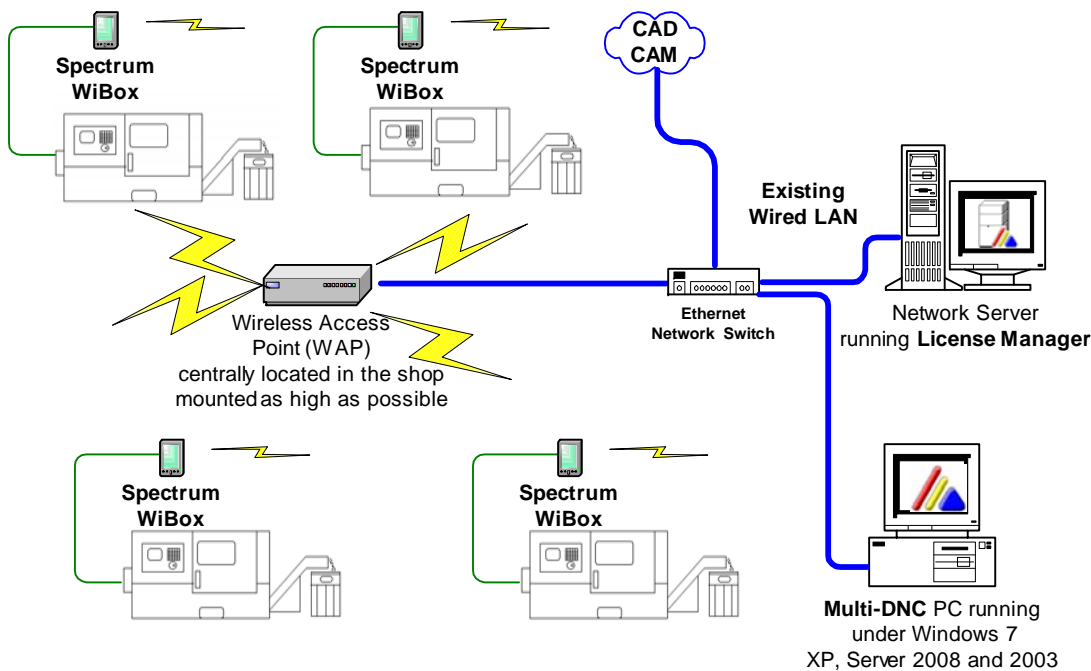
The primary advantage to using a single **WiBox** device on each CNC Machine is to eliminate the expense of physical RS-232 wiring **AND** Ethernet cabling within the shop. CNC Machines can be moved around and still remain connected to the **Multi-DNC** system.

A device called a WAP (Wireless Access Point) must also be used to implement a wireless solution. The WAP connects to the existing wired network (LAN) and extends it with radio signals that connect to wireless devices. A single WAP is usually sufficient to connect up to 10 **Spectrum WiBox** units within a 150 foot radius - but that can vary depending on the shop layout - multiple WAP devices **may** be required.

The maximum distance for Wireless Ethernet signals in a manufacturing environment is approximately 300 feet, depending on obstructions. The WAP devices should be **centrally located** over your Machines and mounted as **high as possible** in the shop. The maximum distance for the wired Ethernet connections from the existing LAN to the WAP device is 100m (328 ft).

The **Spectrum WiBox** hardware devices are mounted inside of each CNC cabinet and have a 5" external antenna that ensures a stronger signal in a shop environment. The **WiBox** units are connected internally to the CNC Control and require a 9v to 30v DC power source.

The **Spectrum WiBox** units can be used in a Wired Ethernet configuration **AND** can also be used as a wireless network "bridge" for Ethernet based CNC Machine Controllers!



Legend

- RS-232 Cables —
- Wired Ethernet cables —
- Wireless Ethernet signals ⚡

Software Info

Spectrum WiBox devices support industry standard encryption WEP, WPA, and the newest WPA2 security methods. Windows 7, Windows XP, and Windows Server 2008 and 2003 operating systems are supported.

Spectrum WiBox devices are fully integrated with **Multi-DNC**. The **WiBox** software drivers are automatically installed when **Multi-DNC** is installed. The **Multi-DNC WiBox Device Manager** interface enables your **Multi-DNC** system to acquire and manage multiple **WiBox** units that are on your Wireless LAN.