



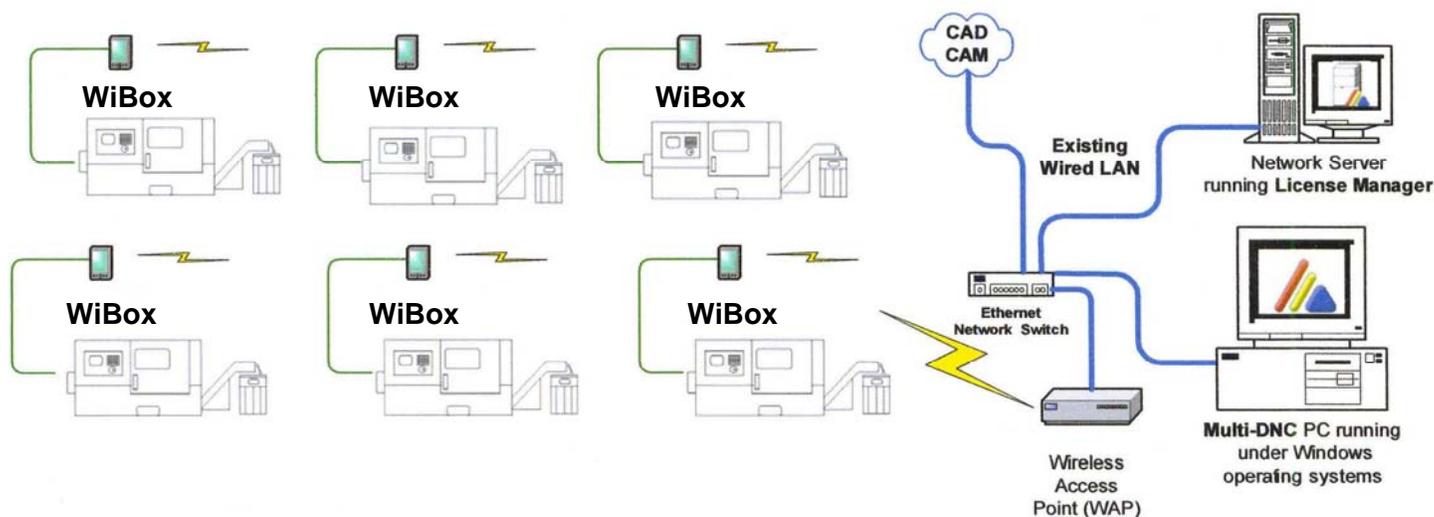
RICHMOND MACHINE & ENGINEERING, INC.
 CNC Machine Tool Sales & Service
 Shop floor DNC & Network Systems

Wireless DNC Communication and Networking

Want to go wireless but think that using a system created for your home in your machine shop makes as much sense as riding a bicycle on the expressway? Here's a system designed for & proven reliable in Machine Tool Shops.

Multi-DNC System using Wireless Ethernet to RS-232 Hardware

This diagram shows a Wireless Ethernet network, using the 802.11B industry standard, communicating to WiBoxes in a 1 port configuration connected to each CNC Machine in the shop. The "wireless" parts of this system are the multiple Ethernet connections back to the company LAN, not the RS-232 cables to each CNC Machine Controller.



One advantage to using a single WiBox on each CNC Machine is to eliminate physical RS-232 wiring within the shop. Machines can be moved and still remain connected to the Multi-DNC system.

The maximum distance for Wireless Ethernet signals in a manufacturing environment is approximately 300 feet, depending on obstructions. The WAP units should be 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).

Legend

RS-232 Cables



Wired Ethernet cables



Wireless Ethernet signals





HIGHLIGHTS

- No cable to purchase and run
- Move or add machines anytime anywhere without re-cabling
- Network 250+ machines
- True integration to the Multi-DNC communication software
- Combine wired and wireless DNC
- High data rates over long distance IEEE 802.11 b/g support
- Data Security WEP/WPA/WPA2/TKIP encryption

FEATURES

- Bi-directional wireless CNC machine communication and machine monitoring, eliminating costly cabling
- Assign each CNC machine it's own IP address
- Industry standard IEEE 802.11 b/g wireless interface
- Data Encryption 128-256 bit

Supports Wireless or Wired Ethernet

Powered off the CNC control – no need for 110v at every machine

Two standard DB-9 RS-232 ports – surge protected

Flow Control – software XON/XOFF and hardware RTS/CTS

Supports special protocols such as Mazatrol CMT and Fagor DNC

OVERVIEW

Wirelessly Connect, Monitor, Manage and Control CNC machines

Spectrum WiBox dual port device servers enable you to connect all of your shop floor CNC Machines using IEEE 802.11b/g networks quickly and easily. This simplifies connectivity when your shop floor layout is rearranged. The Spectrum WiBox becomes a wireless virtual cable between you and your CNC Machines over your network.

Spectrum WiBoxes use industry standard WEP/WPA/WPA2/TKIP advanced encryption methods to ensure that your data is secure. And their RS-232 ports have 4Kv of ESD surge protection per port.

Installations of Spectrum WiBox devices are easy because the Windows software drivers are automatically installed with Multi-DNC. The integrated Spectrum WiBox Device Manager allows you to acquire, manage and maintain each WiBox device for your Multi-DNC system from a single PC over your company network.

If you are looking for a transparent, cost effective, and scalable way to connect your CNC Machines to your DNC network, look no further than the Multi-DNC Wireless System.

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