

WIRELESS

DNC
iMax5

The Professional Choice for CNC COMMUNICATION

CIMCO Integration - Competence in DNC Systems

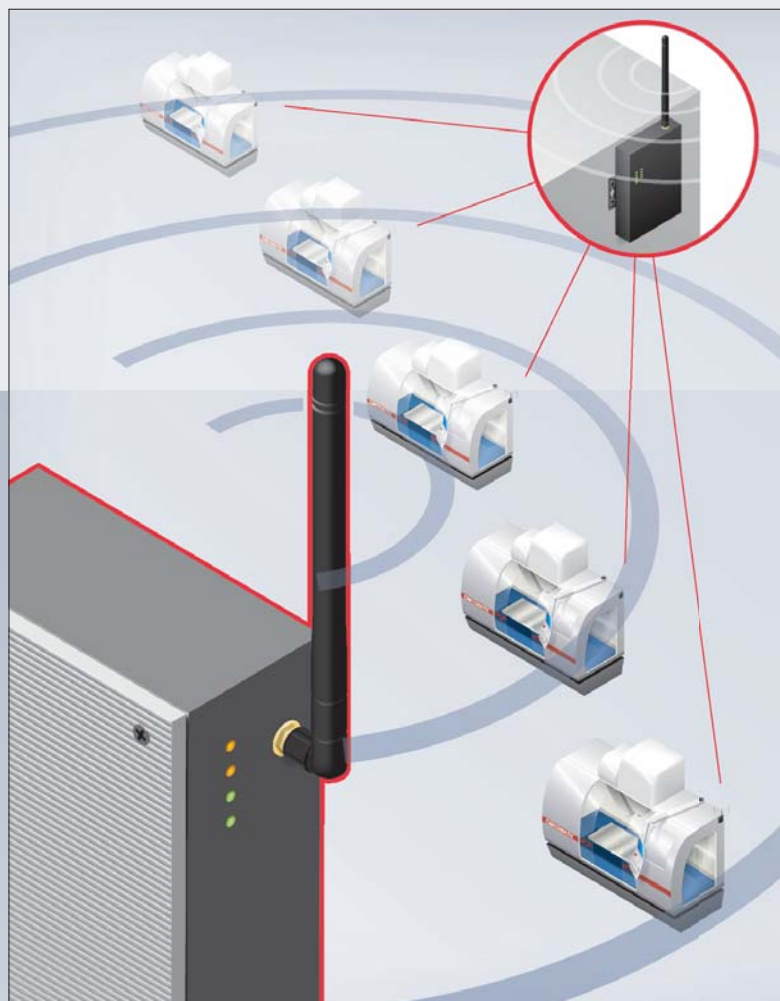
To make the right choice it is important to choose not only the best available DNC solution but also a manufacturer with many years of experience to ensure reliable implementation and after-sales support.

Since 1991 CIMCO Integration has sold more than 10,000 software licences for DNC Systems by experienced CAD/CAM/CNC partners and consultants all over the world.

To meet the demands of customers who wish to replace their legacy wired and trouble prone system - perhaps still set up with data switches - or to implement new solutions in workshops where CNCs are frequently relocated, CIMCO Integration offers DNC-Max Wireless as a turnkey wireless DNC system letting our well-known DNC-Max software connect to your CNC machines through a Wireless network.

A DNC-Max Wireless solution means:

1. No data cabling is necessary, except for the short distance from the wireless DNC Device Server to the physical RS-232 CNC port - here traditional cable and connectors are used.
2. CNC machine tools may be relocated frequently, but they need not be rewired and usually not even reconfigured: identification (e.g. machine no.) and transmission parameters remain unchanged in the current DNC software set-up (.mch-files).



Wireless shopfloor connectivity

DNC-Max provides detailed status information

Port	Status
Lathe Group	
↳ Okuma Latha	Send manual file co
Mill Group	Idle
Haas	Idle
Mori 1	Idle
Tool Room	Idle
Agie Evolution	Receive auto file co

```
[12:48:02] Port started successfully.  
[12:49:05] Receiving program: LEFT-R44  
[12:50:46] Existing file backed up: C:\TRAINING\CUSTOMER1\Haas Tool  
[12:50:46] Received file: C:\TRAINING\CUSTOMER1\Haas Tool  
[12:54:39] Sending file: C:\TRAINING\CUSTOMER1\Haas Tool  
[12:56:16] Transfer completed: C:\TRAINING\CUSTOMER1\Haas Tool  
[12:56:22] Receiving program: TRAY-P22  
[12:57:07] Received file: C:\TRAINING\CUSTOMER1\Haas Tool  
[12:57:13] Receiving program: TRAY-P22  
[12:57:41] Reception error. [Reception had 3 errors]
```

<input checked="" type="checkbox"/> RX	File name:
<input checked="" type="checkbox"/> TX	D:\CNC-Data\Lathe Group\8 IN STD
<input checked="" type="checkbox"/> RTS	Current Line:
<input checked="" type="checkbox"/> CTS	Bytes Sent:
<input checked="" type="checkbox"/> DTR	Lines Received:
<input checked="" type="checkbox"/> DSR	Bytes Received:
<input checked="" type="checkbox"/> XOFF	CPS/LPS:

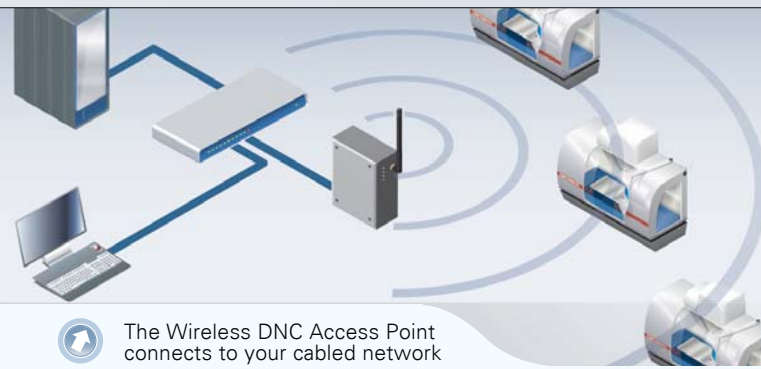


For more information visit us at
www.cimco-software.com



Here is how the system works:

A patch cable between the Wireless DNC Access Point and an Ethernet switch connects your cabled and your wireless networks. At the other end, a Wireless DNC Device Server mounted on the CNC converts the received radio signals to RS-232. Line-of-sight distances of up to 100m are safely bridged, and the high data transfer rate of 22 Mbps guarantees serial data transmission with the highest baud rate for COM ports - 115,200 Bd.



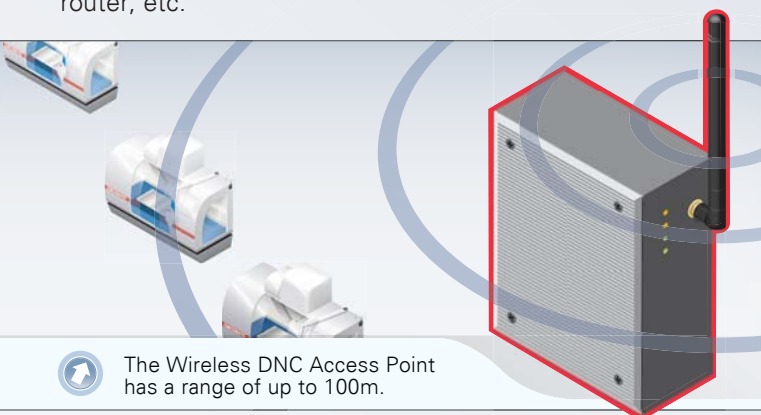
The Wireless DNC Access Point connects to your cabled network

Even in workshops with strong electromagnetic interference wireless data transmission provides a high operational reliability thanks to the multiple checksum verification performed by the Ethernet TCP protocol. Data packets are simply re-transmitted until checksums match.

To prevent unauthorized access to the NC data transmission WPA, Wi-Fi Protected Access, is integrated providing encryption with key lengths of up to 256 bits.

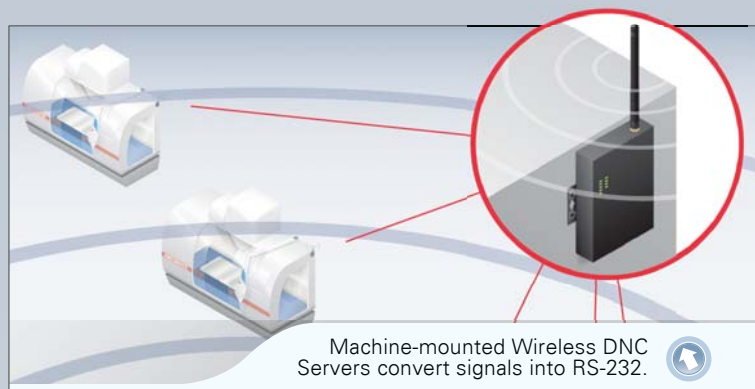
Wireless DNC Access Points

Wireless DNC Access Points are Ethernet hubs that convert the DNC Ethernet communications to wireless IEEE 802.11b(+) signals and vice versa, and are mounted to the network like any other wired Ethernet device (PC, hub, switch, router, etc).



The Wireless DNC Access Point has a range of up to 100m.

Wireless DNC Access Points transmit the NC data via a directional or an omni-directional antenna from/to a wired network to/from the Wireless DNC Device Server mounted on or near the CNC machine tools in the workshop.

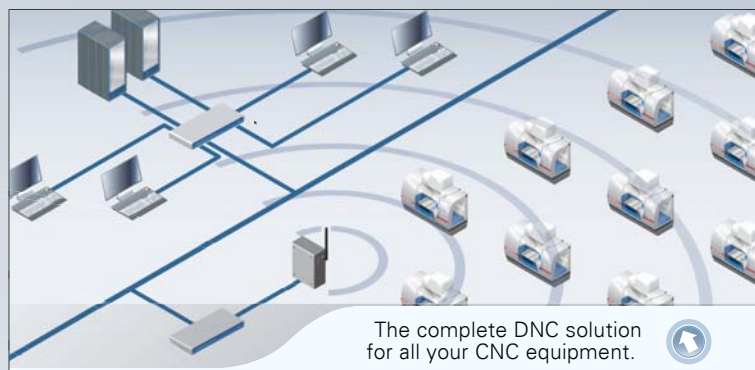


Machine-mounted Wireless DNC Servers convert signals into RS-232.

Wireless DNC Device Server

Wireless DNC Device Servers each connect to 1, 2 or 4 CNCs and receive/send the NC data from/to the nearest Wireless DNC Access Point via attached antennae. Received radio signals are converted into the RS-232 format, which is understood by the connected CNCs.

On the hardware side the adaptor output port will be connected to the CNC interface (DB-25/f, DB-9/m, DB-25/m) by a short, shielded data cable or, also possible, using fibre optics ensuring perfect galvanic insulation and insensibility to electrical noise. NC data sent from a CNC to be stored on the DNC server pass through the same connection.



The complete DNC solution for all your CNC equipment.

The hardware used for DNC-Max Wireless features:

- Enhanced data transfer rate up to 22 Mbps
- 10/100 Mbps auto-sensing Fast Ethernet port between Wireless LAN and cabled Ethernet LAN
- Smooth accessibility from cell to cell and to other APs
- Stronger network security with 64/128/256-bit WPA encryption
- Fully 802.11b compatible
- Built-in DHCP server
- Additional operation modes:
AP-to-AP Networking (Bridging), AP-to-Multipoint (Bridging), wireless client, wireless repeater
- Detachable external antennae with reverse SMA connectors
- Certified Wi-Fi compatibility

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