



CNCnet DNC 11.02

By using Inventcom's CNCnet DNC you can connect your CNC machine controls which have a serial interface directly to your network, just the same way as known from the most modern types of controls. In contrast to "closed", isolated CNC networking solutions CNCnet DNC extends the functionality of the machine by adding the features needed to the control itself. Thus the machine is now able to communicate with different computers in your network or may, e.g. for support purposes, be directly connected to a notebook computer. Because of the fact that the network interface gets a component of the machine this also results in an increase in value of the machine, since the interface continues to work even if you move or sell the machine.

Nowadays the integration of „modern“ types of machines into a network is quite a simple task. The electrician installs a cable from a switch to the control, sets the appropriate network address at the control and the IT department creates a directory for the storage of the files, you're ready to transmit and receive NC-files from and to your machine. With "older" controls it's not that comfortable. A special combination consisting of manufacturer specific hardware and CNC network Software is required. Inventcom's CNCnet DNC follows a different, more modern concept. The network software adds the required functionality to the control itself, just the same way as known from the most modern CNC types. Practically this has the effect that, by simple drag and drop, you're able to create an own CNC network software instance for every single machine.

The NC file naming conventions follow your personal standards, not those of a software manufacturer. If, for example all NC files of new

controls are stored with the extension ".MPF" this can easily be taken over for the older controls. Also, the directories for reception and transmission of NC files can be determined by modern standards (e.g. mapped network drives, multiple subdirectories). The assignment of "Alias names" for NC file extensions and directories allows their simple input, even at controls that have very restricted input possibilities (backslash character, long directory names...)

Remote commands from the CNC

All functions, like transmission or reception of NC files can be directly initiated from the operator control panel of the machine. To load a new NC file from a network computer you just send out a small "control" NC file from the CNC. The machines driver analyses the file and sends back the requested NC file into the controls memory. By using this technique you're also able to request directory contents (formatted like an NC file) or start processors for NC file manipulation remotely.

Creation and editing of NC files

For creation and editing of NC files you can either set an external application for each control or use the powerful NC file Editor of CNCnet DNC. The Editor can be used independently of CNCnet DNC. You can launch the NC Editor from the command window's File menu, or by double-clicking on a file name in the CNCnet DNC file list box.

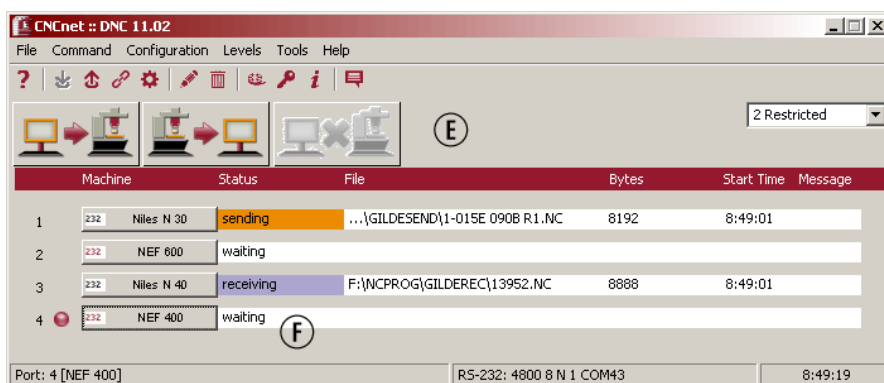
Pre- und Postprocessors

Pre and Postprocessors allow the automatic manipulation of NC files before they are sent to the control (Pre-) or after reception from the control (Post-). Processors are able to translate, replace, separate or format the contents of NC files. For example, your tool-preset data can automatically be formatted to fit into the specific control that is requesting the information.





By using a short serial (RS232) cable (B) the control (A) gets connected to the added network adapter (C) and the network (D). The machine directly supplies the power for the adapter.



Every instance of the CNC network software (E) is able to control up to 100 machines simultaneously. The total number of installable instances is just limited by your computer. Different machine specific protocols like Heidenhain or Mazatrol are optionally available. The CNC network software is waiting (F) for remote commands from the control.

NC file management by ERP

Instead of NC file maintenance by an own, separate program CNCnet DNC allows the management of NC files directly from within your ERP Solution. Whenever you send a NC file from the control to a computer CNCnet DNC automatically scans the content of the file for an article- (SAP material-) number, which is placed in the NC file as a comment line. This scan process generates or updates a shortcut from the NC file to the specific operation sequence in ERP. From within ERP's operations overview you can select and open the NC files associated to the selected sequence. You're also able to load the NC files for a specific production order by entering the material number and operation sequence at the control.

Useful tools

To support the DNC driver's installation CNCnet DNC contains a bunch of powerful tools. With the analysis monitor you're able to view and dump all information of the transmission process between CNC and computer. You can view, analyze and store the communication "character per character". You can also use this tool to manually send single characters or sequences to the control or the CNC network software. By using a special cable you can even wiretap communication between a control and another computer. Instructions for wiring and soldering, pin assignments and RS232 serial cable construction for various control types are included. Tutorials for setup of various controls and pre-built setting files for more than 500 types of machines, ready to run processors for various tasks and development templates in various programming languages are available on request from Inventcom.

Resources

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