NCdrive XT basic

Universal 5-axis-CNC-control for step/direction operation

NCdrive XT basic is the powerful replacement product for the well-known cnc-control NCdrive.

NCdrive XT basic uses consequently the performance of modern pc hardware and the efficiency of windows operating systems. A technical capability was realised that can be compared with the upscale controls of the high-end machine tools.

Just like them NCdrive XT basic works with NC-programs according to DIN 66025, supports a large number of additional NC commands and geometry cycles and allows to run the machine in manual or automatic operation. A further, innovative feature is the capability to mill directy contours or pockets by a simple input of parameters without the need to develop nc programs by hand or an addtional CAD/CAM system.
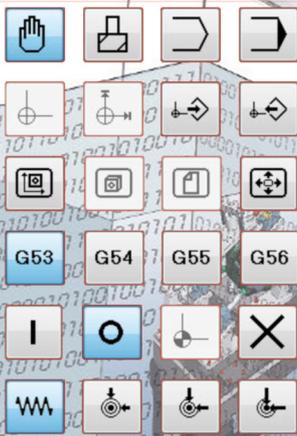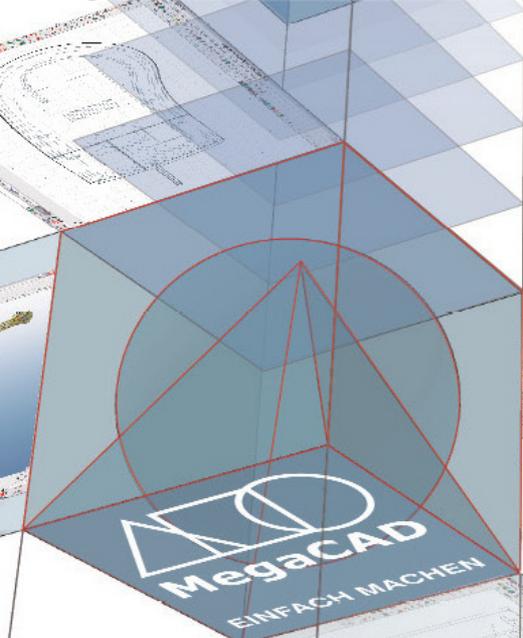
NCdrive XT basic uses for the user interface and all intensive calculations the cpu of the personal computer. The high dynamic triggering of the cnc motion components is driven by one microcontroller per axis. The interface between personal computer and cnc controller is USB bus or LAN. .

It's possible to integrate switches or controls for additional equipment (spindle, dust exhaust, vaccum table, liquid coolant) by in– and output signals.

Depending on a modular construction of the NCdrive software various possibilities of running the machine are available. The user gets the flexibility using a big number of hand cycles, ISO code import and interpretation up to the application of a complete 2D/3D—CAD/CAM suite (optinal MegaNC).

NCdrive XT basic is compatible with stepper motor power amplifiers that use signals for step and direction (PCNC compatible). In this mode also servo systems are supported.

Enormous high frequencies can be driven by the modern architecture of hardware and powerful components. This means a calm and harmonic motion of your machine. Use NCdrive XT basic to lift your equipment (Optimum, Wabeco, Haase, Step four, BZT, Kosy, …) to an up to date technical status.

■ **moderne Technologie**   ■ **praxisorientiert**   ■ **leistungsfähig**   ■ **flexible Konfiguration**

Overview of functions

NCdrive XT basic -Controller

- moderne RISC-Prozessor architecture
- Stepping frequence up to 4 Mhz
- External box with additionsl in– and outputs
- DIN rail model for switch board integration
- Optional integration in safety concepts
- USB– or LAN-interface
- Spindle control by analog signal (0-10 V)
- Encoder interface for controlled spindle
- Basic SPS functions by PLC programming of the machine functions
- Status overview by LED
- Optional I/O-box for futher in-/output signals, including another auxiliary axis

NCdrive-Software

- Manual and automatic mode
- Control of up to 5 linear or turning axes
- Import of G-code according to CIN 66025
- Free configuration of feed, gear, ramps… for each axis
- Unlimited look ahead
- Override for spindle speed and feed
- Comfortable routines for zero points
- Cycle generator for the manual work on contours and pockets
- Administration of zero points
- Control of tool changer and coolant
- Integrated job control for switches and functions
- Grafical administration of tools (NCtools)
- Radius correction
- Driving of the machine by keyboard or mouse, override adjustable by potis (optional electronic hand wheel)
- Direct input of commands
- Restart after program stop
- Ergonomical interface
- Comfortable handling by hotkeys, adjustable for keyboard or external switches
- Touchscreen handling possible
- Survey of emergancy stop

Simulation with NClyzer light

- OpenGL-Simulation for control and toolpaths with viewing of material removal
- 3D-viewing of tool and workpiece
- Error indication and preview of G-code
- Integrated viewing of tool position

---

max. number of axes
5 (simultanous interpolation)

Stepping frequency
max. 4 MHz

Interfaces for stepping motors
5 x step/direction,

Add. outputs
4 x Reed-Relais
(max. 1 A, 48 V, 15 W)

Analog output
0 - 10 V DC,

Add. inputs
4 x Optokoppler
(5 V AC/DC, bidirectional)

PC-interface
USB or LAN

Power supply
12 VDC (wall plug transformer min. 800 mA)

Software interface
Programs acc. DIN 66025, MegaNC

Ausführungen
NCdrive XT basic in metall case
NCdrive XT basic as DIN rail model

System requirements
Intel oder AMD-CPU ab ca. 2000 MHz
Windows 7 / 8 / 10
USB-Port or LAN

Delivery contents
NCdrive XT basic -Controller with wall plug transfomer
NCdrive-Software (Manual mode, DIN import)
USB-wire 1,8m

MegaCAD Competence Center
4CAM GmbH
Hauptstr. 18 - 86756 Reimlingen

Tel: 09081-8050670
Fax: 09081-80506767
megacad@4cam.de
www.4cam.de