

OVERVIEW

The UCCNC is a machine control software. It uses and external hardware to generate signals to produce coordinated motion on up to 6 machine axes. The external hardware is a motion controller device which is currently UC100 or UC300 or UC400ETH motion controller. UCCNC software is licensed per motion controller. One license key works with one motion controller only. The license keys are tied to the serial numbers of the motion controllers and are not tied to the computer in any ways which means that the license keys can be installed on any number of computers.

UCCNC software.

- Supports the UC100, UC300 and UC400ETH, motion controllers.
- Control machines with up to 6-axis.
- RS274 G and M codes execution.
- Unlimited number of user text macros with flexible script engine.
- Up to 400kHz operation. (selectable 25kHz, 50kHz, 100kHz, 200kHz, 400kHz with 20us, 10us, 5us, 2.5us and 1.25us pulse widths.) Note: The maximum step frequency depends on the motion controller device used.
- Exact stop and cont.velocity interpolations with highly configurable advanced look-ahead function.
- G54..G59 work offsets and G52/G92 temporary offset.
- 3D toolpath viewer.
- OpenGL screen optimized for fast screen update rates with low CPU/GPU usage.
- Built-in visual screen editor.
- 48 configurable hotkeys.
- 48 configurable inputs trigger to assign physical input pins to UCCNC function calls.
- 48 configurable outputs trigger to assign virtual LEDs to physical output pins.
- Parametric programming using internal variables and programming mathematical expressions.
- Controls THC control for plasma cutters. (M205 and M206 macros)
- M10/M11 macros for fast synchronous outputs for laser cutting applications.
- G33 and G76 synchronous thread cutting with free-running spindle and encoder feedback to the motion controller.
- G33.1 and G33.2 rigid tapping with Z-axis synchronized to the spindle motor.
- Supports wired MPGs and the UCR200 wireless via plugin.
- Built-in basic CAM module with DXF files import.
- Stopless smooth backlash compensation with adjustable backlash acceleration.

- Plugin interface with Visual C# example plugin template. Plugin works with C#, VB, C++ programming languages.
- Fast laser scan type engraving plugin, web camera plugin, Xbox360 controller plugin, 3D printer plugin, etc..
- Fast communication with optimized buffering technic producing low button press to event execution time.
- Extremely low jitter on the step and direction signals for smooth, high speed and precise motors operation.
- Runs in demo (simulation mode) without a software license key.
- Compatible OP systems: Windows XP, 7, 8, 8.1,10 on all both 32 and 64bit versions.