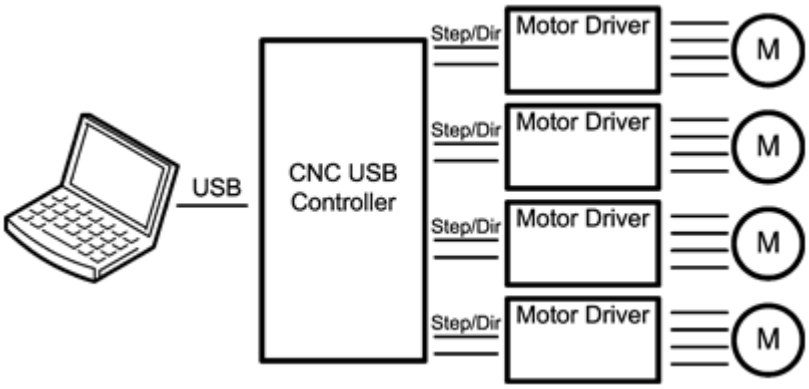
USB CNC



System Requirements

Minimum system requirements:

•1 GHz or faster processor
•512MB RAM
•500 MB available hard disk space
•DirectX 9 graphics device with WDDM 1.0 or higher driver
•USB 2.0 port
•.NET Framework 3.5 SP1

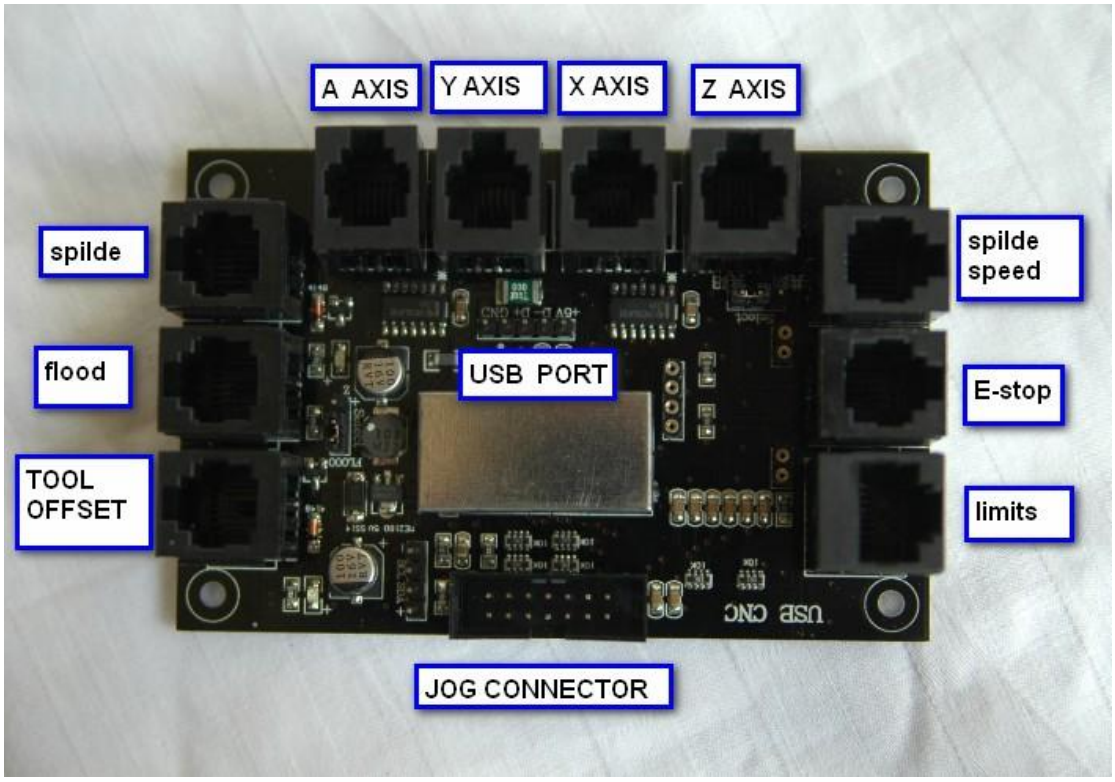
Features:

•25 kHz maximum step frequency
•3 digital outputs (flood, mist, spindle)
•12 us minimum pulse width
•manual jog input keys for all axes
•limit keys for all axes
•control external devices with I2C protocol

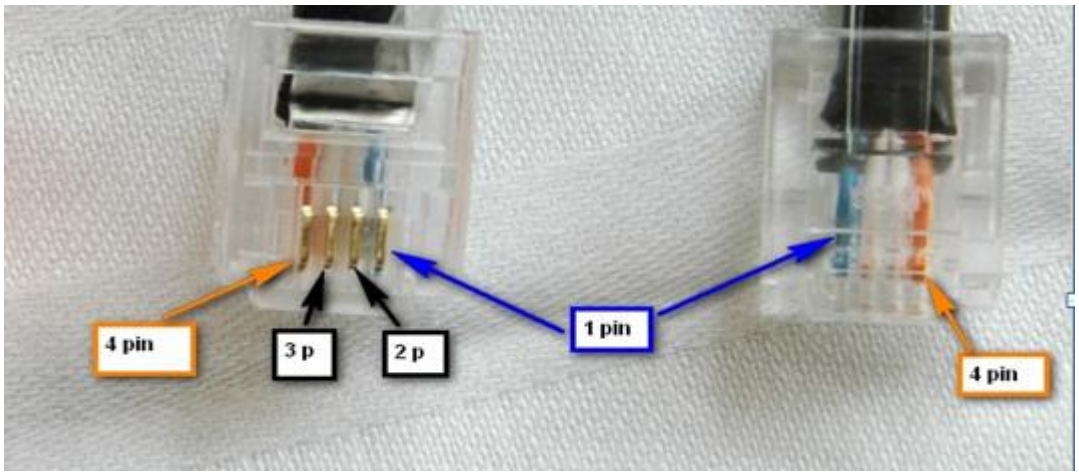
USB (V2.x) from PC/Laptop running Windows XP, Vista or Windows 7 (32 bit or 64bit)
motor driver connector pin-out is compatible with 10 pin open source interface
controller works with most step/dir motor drivers available on the market
buffered IO for maximum performance
advanced interpolation algorithms
start, stop, pause and resume execution of program on your machine
standard RS274/NGC G-code (EMC2 compatible)
advanced G-codes - G40, G41, G42 (Cutter Radius Compensation) supported
advanced G-codes - G43, G49 (Tool Length Offsets) supported
advanced G-codes - G54, G59.3 (Coordinate System Origins) supported
tested with SolidCAM, MasterCAM, ArtCAM, Vectric, ... generated G-code
Profili 4-axes and 3-axes G-code supported
importtoolpath from DXF files
importtoolpath from PLT/HPGL files
importtoolpath from image files
importtoolpath from NC-Drill (Excellon) files

importtoolpath from Gerber (RS-274X) files
toolpath simulation
automatic homing procedure
automatic tool length measuring
advancedtoolchange procedures
exporttoolpath to G-code
exporttoolpath to DXF
SDK (software developers kit) is available

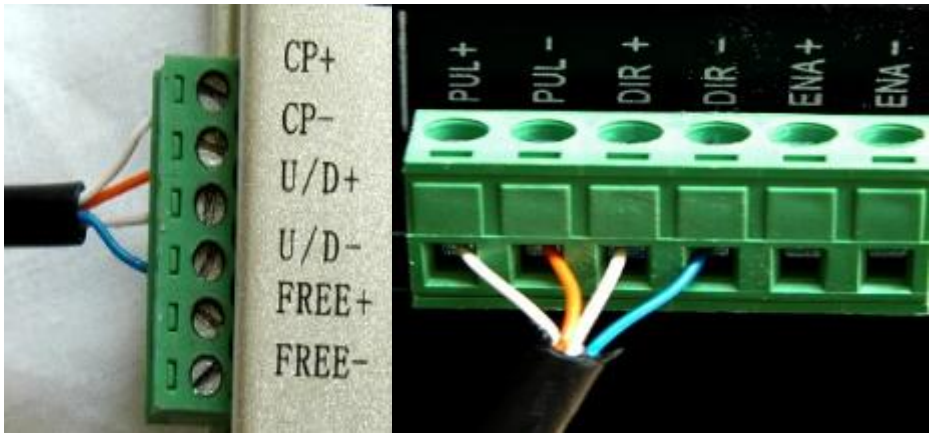
Mk1 - 4 axis CNC USB controller description



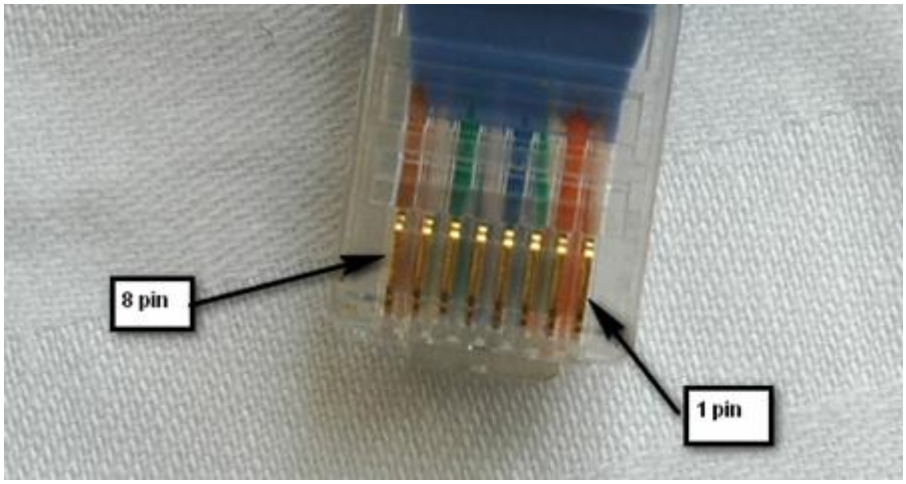
4 AXIS Mk1 MOTOR connector



1 pin DIR –Provides DIR or DIRECTION signal to the motor driver
2 PIN DIR +Motor drivers can be powered from the USB controller. 5V
3 PIN PUL +Motor drivers can be powered from the USB controller. 5V
4 PIN PUL –Provides a STEP signal of minimum 12 us pulse width to the motor driver



Mk1 LIMIT connector:



LIMIT 1-6 connects limit switches. It's recommended that a 100nF capacitor is connected directly
across switch terminals.

Pin 7 are 'Ground' or common connections.

PIN	LIMIT
1	X axis positive limit.
2	X axis negative limit
3	Y axis negative limit
4	Z axis positive limit.
5	Z axis negative limit
6	Y axis positive limit.
7	GND
8	vcc 5v

Limits can use one of two possible configurations. The preferred configuration will determine limit switchconnections.

NORMAL: Each switch is connected to its own pin with positive and negative limits determined by designated switches.

SINGLE INPUT: Both axis limit switches are connected to one pin. Direction of travel determines ifpositive or negative switch is triggered.