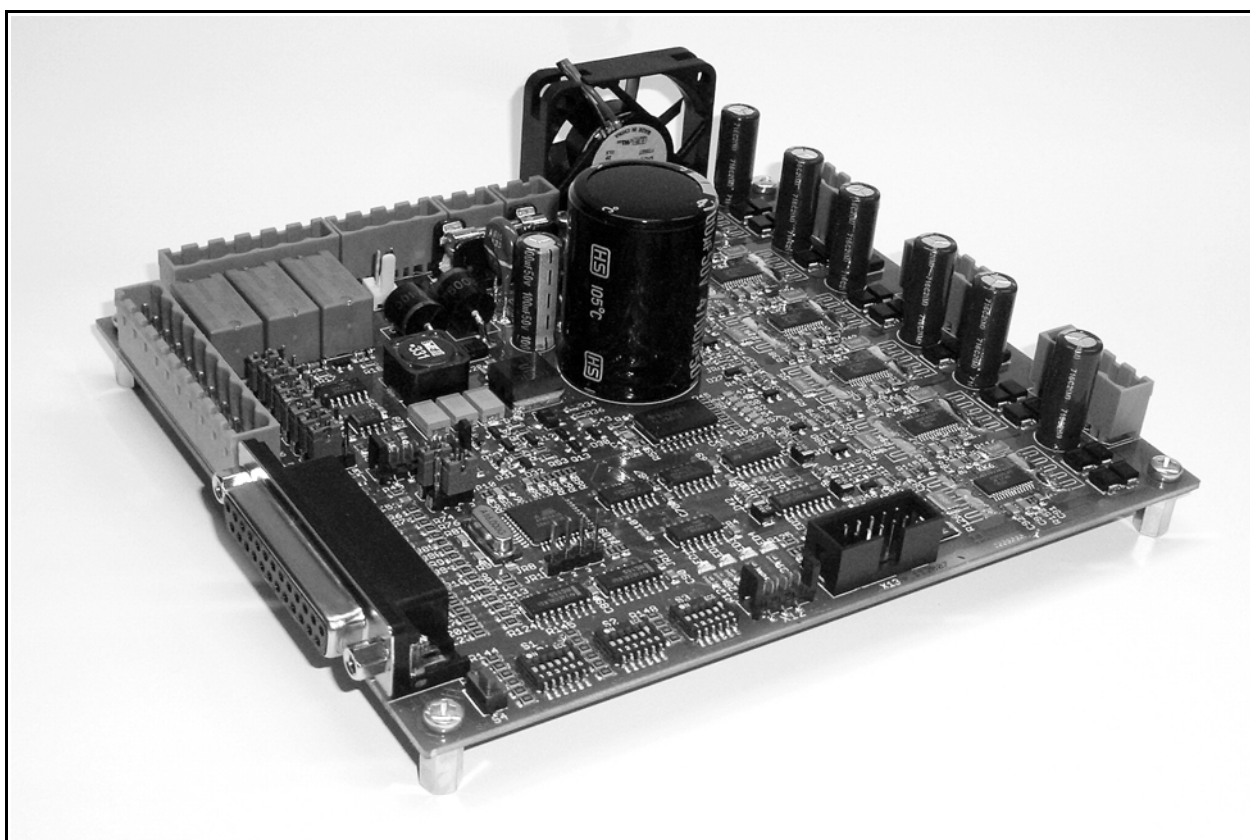


3-4 axes stepper motor driver board

Step3S

The stepper motor driver *Step3S* is a sophisticated circuit, which includes power drivers for three or four 2-phase stepping motors and some other useful components. The signals to drive the board are connected to a 25-pin D-Sub type female connector, which can be driven by appropriate controls or directly by a LPT printer port of a personal computer with special control software. *Step3S* can be used ideally with the software products *WinPC-NC* or other popular CNC control programs. The signals are fully compatible to these control programs.



The stepper card *Step3S* is the ideal AllinOne solution and beside the reliable driving of motors it offers all typical peripheral functions and components. There is no need for a outbreak board or a specific power supply and all connections can be made by easy plugin connectors and the enclosed control cable.

A three or four axes mechanic can be used for a wide range of applications. Examples are....

Engraving signs

Milling negative matrices and casting moulds

Milling and drilling prototype PCBs

Cut and machine front plates

Gas and Plasma cutting

Milling 3D reliefs

Cutting sticky foils

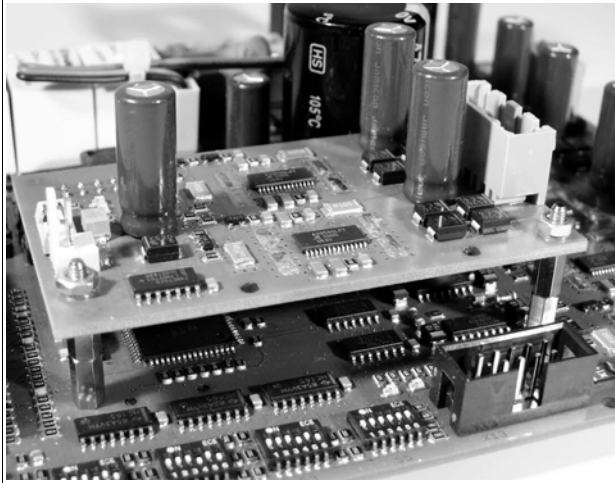
Apply and dispense glues

Turning and shaping

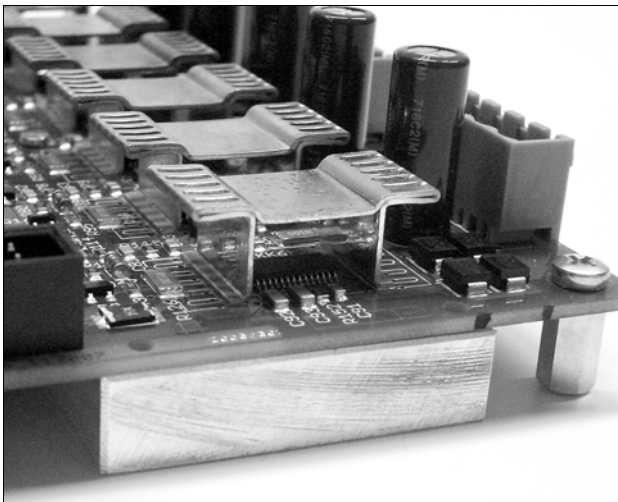
Pick&Place or robot applications

Technical specifications...

- Connection of three 2-phase stepping motors directly at the board
- Optional drivers card for 4th axis as plugin module



- Single supply with AC or DC voltage without external stabilisation, meaning easy supply with a transformer
- Power supply with 12VAC to 30VAC or 15VDC to 42VDC
- Control signals via 25-pin D-Sub type connector (female), e.g. directly from a PC printer port (LPT)
- Full-, half-, quarter, 8th- to 16th-step, 2.5th to 10th-step also possible (sinusoidal micro step)
- Phase current up to 3.0A. Individual setup of phase current for each axis with DIP switches, additional current reduction input (reducing current to 50%)



- Software controlled current reduction
- Protected against short windings and shorts to ground

- Ready switch acts as enable signal directly to power stages and relays, can be used e.g. on a protection hood
- Standard version for ambient temperatures up to 50°C, special HT version for ambient temperatures of up to 70°C
- Two selectable dwell times at power up to wait for defined signal levels at interface
- Three relays for switching outputs, e.g. main spindle, coolant pump, chuck etc.
- LEDs to signal supply voltage and other states, additional connector makes it possible to integrate LEDs into front plate of housing etc.
- 5 free assignable inputs (N.O. or N.C. contacts), e.g. for limit or reference switches
- Protection circuit with toggle or ready signal to disable motors and relays (charge pump)
- Analogue output 0-5V or 0-10V to drive speed controlled milling/drilling spindles, interpretation of a PWM signal
- Automatic switching of relay 2 depending on PWM signal, switch on >10%, switch off <5%
- Relay switching invertable by jumper setting
- Emergency signal, N.C. Contact
- In order to grant simplified assembling and servicing, combined connectors (plug-in and screw-on) are available
- Highly integrated and modern circuit design
- Optimized layout which results in considerable reduction of heat generation during operation
- In size, connections and functions compatible to our existing and established stepper motor driver **Step3N**
- Compact size of 150 x 130 x 52 mm
- The start-up process is simple to perform by fixed pre-settings on delivery
- Special kind of connectors, plugs or OEM versions can be delivered on request
- External LPT cable and detailed operation manual are enclosed

