

Advanced OEM 4-Axis Hybrid IC Motion Controller for Custom Solutions

Features

- Bridges the gap between off-the-shelf motion controllers and design-from-scratch controllers
- Faster path to market
- Fits a large range of applications
- Easily scalable from prototype to production with no software changes required
- Simple to use
- Cost-effective
- Based on Nippon Pulse's PCL6045BL motion control LSI, and an ARM Core processor

Motion Control:

- Linear interpolation (two to four axes)
- Arc/circular interpolation (any two axes)
- Helix/tangential interpolation (XYZ axes)
- Coordinated motion
- Continuous buffered motion (100 buffer registers)
- Trapezoidal or S-curve acceleration/deceleration
- Absolute or incremental positioning
- On-the-fly speed and target position change
- Closed-loop algorithm (StepNLoop)

Motor Interface:

- Max. pulse output rate 6.55Mpps
- Stepper motor interface (pulse, direction, enable outputs for XYZU axes)
- Servo motor interface (pulse, direction, enable, in-position, servo alarm and error clear outputs for XYZU axes)

Digital I/O:

- 4 designated high-speed inputs
- 4 designated high-speed outputs
- End limits and home inputs for each axis
- Simultaneous start input
- Emergency stop input
- 32 configurable I/O
- Latching inputs
- Synchronization pulse output



Analog I/O:

- Two 10-bit analog inputs
- Two PWM outputs
- Joystick operation with analog input (X-axis, Y-axis)

Communication:

- USB 2.0, HID compatible
- RS-485, ASCII commands
- Ethernet
- I²C bus for external IC interface (1 channel)
- SPI bus for external IC interface (2 channels)
- Can run in both PC-based and standalone modes

Programming:

- BASIC-like programming language (A-SCRIPT)
- Multi-threading program support
- Compile, read and write standalone programs
- IF/ELSE/WHILE loop control
- Subroutine support

Power

- +3.3VDC power input
- 5V tolerant