

Overview

MK4FQ is our new high performance 4-axis G Code controller with tight Raspberry PI integration. The MK4FQ has an ARM7 processor running at 168MHz for G Code translation and communication control and a second STM32F051 for high speed precision step generation.

The MKFQ is compatible with our existing family of bipolar drivers and a new high current 6A 45V driver (MM222).

Features:

- Fast 168MHz 32bit ARM7 processor
STM32F405 with hardware FPU
- Step engine compressor based on STM32F051
- USB 2.0 interface with CDC COM serial
- Two wireless ports: RF24L01 and ESP8266 WiFi
- uSD adapter with support for up to 32G
- Supports MM160, MM166 or MM222 drivers
- 4 limit switch inputs plus eStop
- On chip DFU boot loader for software field upgrades
- Enable and reset set by software for each axis
- PWM fan control, digital IO
- Digital IO port
- UART interface port
- Two Power Mosfet outputs 35V, 2A
- Optical and analog spindle control outputs
- Raspberry PI direct connect providing uSD, Ethernet and/or WiFi connectivity
- Analog input port for joystick connection
- Speaker output for audio generation
- GStep support with integration to GStep Desktop
- Mach3 plug-in support
- GRBL and TinyG ports available
- Supports Quadrature inputs
- Parallel port interface for legacy configurations

The Raspberry PI 2 is a low cost (\$35.00) standalone 900MHz quad core computer running Linux that brings a rich set of connection options to the MK4FQ. By simplifying the software and hardware connection between the MK4FQ and PI a new realm of system applications become possible.

The MK4FQ runs an embedded G Code application called GStep. GStep accepts and executes G Code directly but also includes support for our Mach3 Plug-in. GStep handles linear and arc moves with full support for helical arc moves on any axis. Internally GStep is a 6-axis controller and will support two additional drivers by

MK4FQ Connector Pin Assignment



