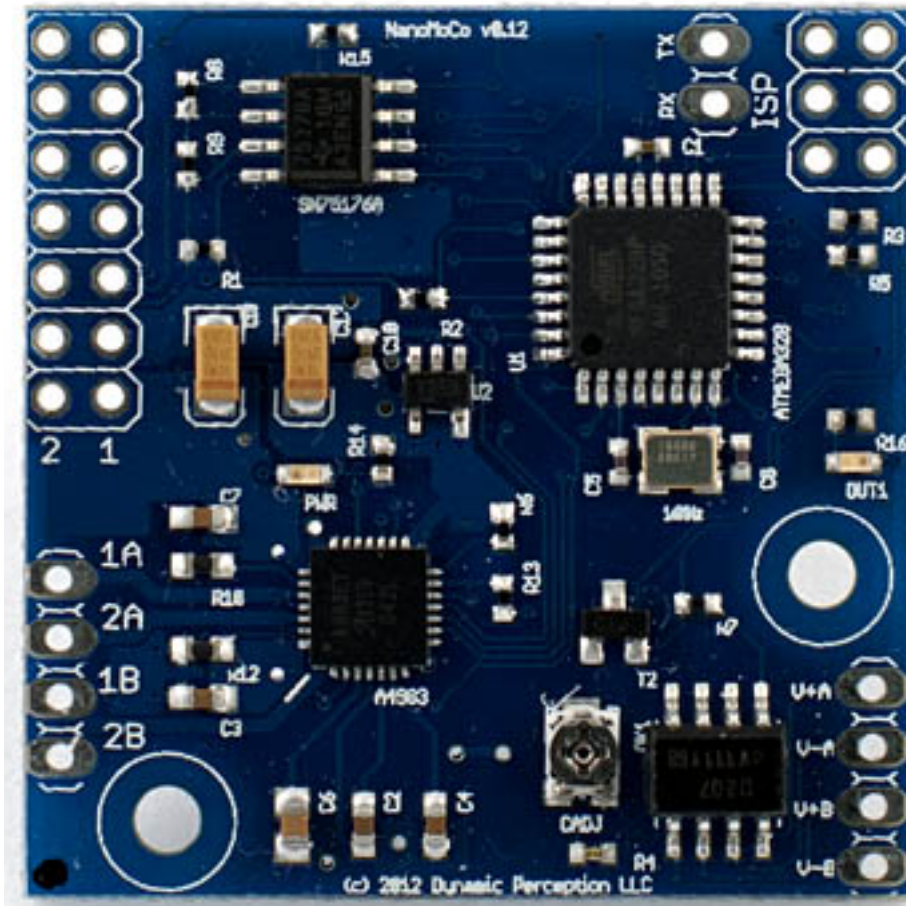# Dynamic Perception announced the nanoMoCo Stepper Driver/Controller

Submitted by andre on Wed, 07/04/2012 - 22:52

[1]

Dynamic Perception has announced their long awaited "nanoMoCo Stepper Driver/Controller" boards today. Dynamic Perception's mission is to provide low-cost and easy-to-use photographic motion-control systems. Our focus is to enable creativity and experimentation through open and unencumbered hardware, firmware, and software. Founded by the creators of the OpenMoCo open-source motion-control system we are striving to provide flexible and expandable kits for solving any motion-control need.

We have written about the fantastic board before in this blog. The nanoMoco board is just the beginning of an open source motion control revolution. The boards can be used to both control a stepper motor and a dSLR camera. 32 boards can be daisy chained and connected to a USB port of your computer. That way you can control 32 stepper motors from one central unit.

The boards communicate via the MoCoBus protocol. This is a 6-wire open source protocol. You cannot only connect nanoMoCo boards via the MoCoBus protocol, many other developments will follow. ElysiaVisuals is currently working on an advanced USB camera controller that you can wire to the MoCoBus. A MoCoBus DMX controller is also under development.

Key features of the nanoMoCo include:

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- Small 1.5"x1.5" footprint fits on the back of a NEMA-17 stepper
- Atmega328P processor running at 16MHz
- 8-16V DC Operation
- Integrated A4983/A4988 bi-polar chopping driver with up to 16x microstepping
  - Up to 800 mA/coil without active cooling
  - Up to 1.5 A/coil with active cooling
- Dual opto-coupled outputs for safe interaction with other devices
- Integrated RS485 bus for multi-node communication over long distances with only two wires
- Pre-installed bootloader to allow for uploading firmware over RS485 bus
  - Compatible with Arduino IDE and AVRDude
- Pre-installed Motion Engine [2] firmware for expressive motion control using MoCoBus
- Leverage the OpenMoCo AVR Libraries [3] and OpenMoCo Qt Libraries [4] to create new software and applications
- Complete scripting control with Dynamic Perception Graffik [5]

ElysiaVisuals has developed a connector board that you can use next to the nanoMoCo board. You can use this board to connect all the required cables like the RJ45 based MoCoBus cable, a power plug or your camera. You can find more about the connector board at "nanoMoCo connector board" [6].

Please read "Dynamic Perception nanoMoco hardware and software - a first impression" [7] to learn more about the nanoMoCo board.

The nanoMoCo boards and the ElysiaVisuals nanoMoCo connector boards will be available in our store very soon from now.

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open source [11]
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nanomoco [13]
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Source URL: http://www.elysiavisuals.com/content/dynamic-perception-announced-nanomoco-stepper-drivercontroller

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