

# TOFRA, Inc. (Tools for Research Automation)

microscope automation ♦ filter wheels ♦ focus drives and limits ♦ scanning stages ♦ RGB LED light sources

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## Motor Controller Units



004-2x



004-4x

- Designed to control devices with stepping motors, such as X-Y stages, focus drives, filter wheels, etc. Control of these devices is performed from computer or directly through switchsticks.
- Designed as a family of units for different numbers of axes.
- Based on IM4831 microstepping controllers from Intelligent Motion Systems, Marlborough, CT. Each microstepping controller, which includes indexer and driver, controls one axis and allows from full to 1/128 microstepping.
- Uses external 12V power supply. Optionally can use 48V power supply for faster motion.
- Small footprint (5.5" \* 7") saves valuable desk space.
- Has three digital inputs and three digital outputs for each controller.
- All motion axes use the same [internal and external wiring](#) allowing on-the-fly reconfiguration and easy servicing and troubleshooting.

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## **Ordering information for motor controller units**

<i><b>Part number</b></i>	<i><b>Description</b></i>	<i><b>2008 Price (USD)</b></i>
004-21 (small box)	1 controller (e.g.: focus or filter wheel)	1,100.
004-22 (small box)	2 controllers (e.g.: X-Y stage or focus and filter wheel)	1,500.
004-42 (large box)	2 controllers (e.g.: X-Y stage or focus and filter wheel)	2,200.
004-43 (large box)	3 controllers (e.g.: X-Y stage and focus)	2,600.
004-44 (large box)	4 controllers (e.g.: X-Y stage, focus, and filter wheel)	3,000.
004-01	Additional IM483I controller and PCB assembly for installation in 004-2x or in 004-4x	450.
004-98	12V Power supply	100.
004-99	Serial computer cable	10.

Cables for 3-rd party stages can be ordered.

Specifications and prices are subject to change without notice. Delivery 4-6 weeks ARO.