

***New* Ultra High Speed, Full-Featured DMC-40x0 Accelera Controller Takes Off**



DMC-4080 8-axis controller and drive unit operates eight motors.

Galil's recently released DMC-40x0 Ethernet motion controller is already creating quite a buzz in the motion control industry because of its supercharged performance.

This new product extends the sporty Accelera controller family, which represents Galil's 5th generation motion controllers. Based on a RISC processor, Accelera controllers provide ultra high-speed with 40 microsecond command processing, 32 kHz servo update rates, and acceptance of encoder inputs up to 22MHz.

In addition to its high speed capabilities, the new DMC-40x0 controller is a full-featured, self-contained, packaged controller that includes all the bells and whistles. These features include: optically isolated inputs and outputs for interface to external sensors, high power outputs

for driving brakes and relays, analog inputs, dual encoder inputs for each axis, and plenty of program memory for storing application programs. Plus, the DMC-40x0 handles virtually any mode of motion with ease and can operate stand-alone or interface with a computer via Ethernet 10/100Base-T or RS232.

The DMC-40x0 also provides precise control of a variety of motors including brush servos, brushless servos, steppers, and piezo ceramic motors. It can be easily connected to external motor drives of any size and power range or, Galil offers a range of multi-axis drives which are contained within the controller package. By packaging Galil drives with the controller, users can realize a dramatic reduction in space, cost and wiring.

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As a combined controller and drive unit, the DMC-40x0 comes in an extremely compact package that measures just 8.1" x 7.25" x 1.72" for the 4-axis unit and 11.5" x 7.25" x 1.72" for the 8-axis unit. Galil's current offering of multi-axis drives includes: AMP-43040 4-axis 500 W servo drives, AMP-43140 4-axis 20W servo drives, SDM-44040 4-axis 1.4A stepper drives, and SDM-44140 4-axis 3A microstepping drives. *Table 1* shows the current drive options for the DMC-40x0.

Since the new DMC-40x0 uses the same easy-to-use programming language as prior generation Galil controllers, conversion to the new generation is quick and easy. Plus, Galil's WSDK servo design software further simplifies system set-up with "one-button" servo tuning and display of actual position and velocity information.

Additionally, the DMC-40x0 accepts power from a single DC power source between 20-80 VDC and features D-type connectors for easy interface to controller inputs

and outputs. It is also available in one through eight axis configurations, which enables the user to purchase only the number of axes required for the application.

Galil's DMC-40x0 controller and drives are now in full release and available for immediate shipment. Please call Galil at 916-626-0101 to speak to an application engineer or download complete specifications at <http://www.galilmc.com/products/accelera/dmc40x0.html>

Table 1. Plug-in Drive Options for DMC-40x0

Model Number	Motor Type	# of Axes	Current	Voltage
AMP-43020	Servo	2	7A cont, 10A peak	20-80 VDC
AMP-43040	Servo	4	7A cont, 10A peak	20-80 VDC
AMP-43140	Servo	4	1A max	+/-12-30 VDC
SDM-44040	Stepper	4	1.4A/phase	12-30 VDC
SDM-44140	Microstep	4	3A/phase	12-60 VDC

Galil's Updated Product Catalog for 2007 is Now Available

Galil's product catalog has been updated for 2007 with comprehensive technical specifications and pricing on all their motion controllers and drives, including the new Accelera Series. To receive a free 2007 catalog, call Galil at 800-377-6329 or go to <http://www.galilmc.com/products/catalog.html>.

The 96-page catalog features Galil's popular Ethernet and PCI motion controllers, which are available in both Econo and Accelera versions. The Accelera Series represents Galil's newest generation of motion controllers, which is designed to provide the highest speed and performance while processing commands 10 times faster than prior generation controllers. In addition to the new DMC-40x0 Ethernet Accelera box-level controller, the 2007 catalog covers the DMC-18x6 PCI Accelera card-level controller. Complete details can be found on Galil's very cost-effective Econo series, which includes the DMC-21x3 Ethernet Controllers and the DMC-18x2 Econo PCI controllers.

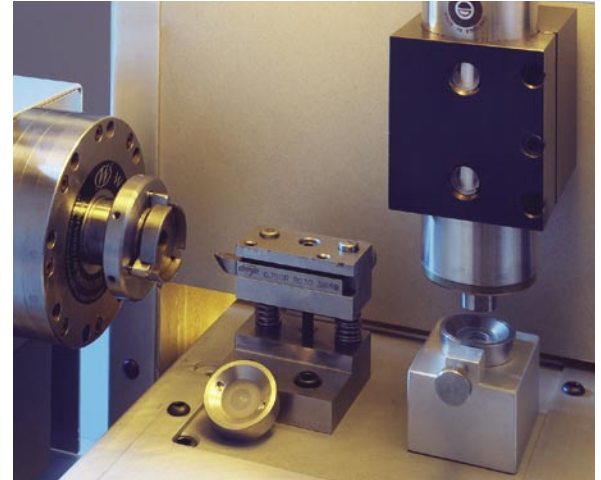
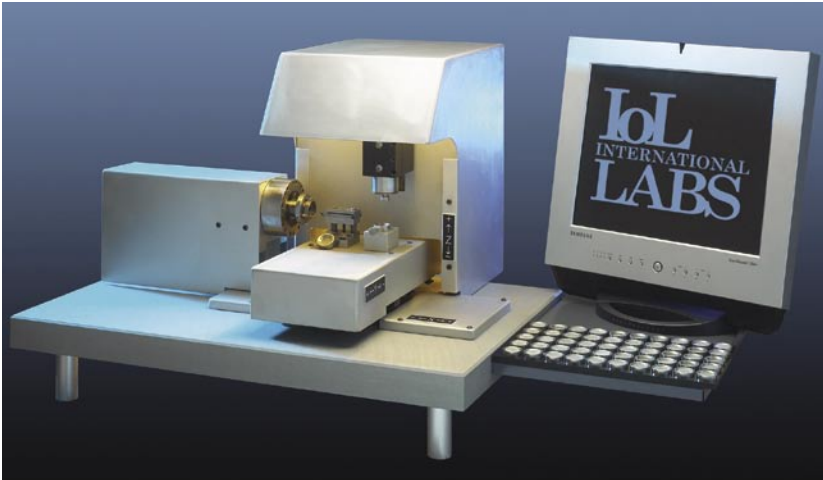


Galil's family of multi-axis drives for stepper and servo motors are also featured in the 2007 catalog. The DMC-21x3 and DMC-40x0 series combine an Ethernet motion controller with a multi-axis drive to form a compact unit. The drives attach directly to the controller without the need for additional wiring or cables, providing a solution that minimizes wiring, cost and space.

Galil's 2007 catalog also includes a technical overview about motion control. This overview provides many programming examples for various modes of motion, including point-to-point positioning, jogging, linear and circular interpolation, contouring and electronic gearing. Details are also provided on Galil's WSDK servo tuning software for "one-button" PID tuning and ActiveX Tool kit for developing operator interfaces for Galil controllers.

Get your free 2007 Galil Product Catalog today by calling 800-377-6329 or visiting <http://www.galilmc.com/products/catalog.html>.

Galil's Precise Controller Helps IOL Restore Eyesight



Galil controller enables Optical Generator to precisely manufacture any make of intraocular lens.

It's no small issue when one's vision becomes radically impaired due to a cataract. While cataracts affect all ages, they are the leading cause of vision loss among adults 55 and up.

When ophthalmologists' prescriptions for stronger glasses or medication don't work, then surgically replacing the afflicted natural lens with an artificial one made from plastic has become the most viable and successful option. Helping to create these eye savers is IOL International of Largo, FL, developer of the Optical Generator for making intraocular lenses of all styles—from foldable to multifocal.

Gary Goins, president of IOL, designed the Optical Generator to incorporate his patented carrier for holding the initial blank lens, and to combine lathing and milling capabilities in the same machine. Priced from \$80,000 to \$90,000 with options, it costs far less than conventional operations that spend 2-3 times as much for separate lathes and milling systems.

With cost reduction a major issue, and because of the pinpoint, repeatable accuracy required in a small 2" x 2" area of travel, Goins turned to Galil's DMC-1832 3-axis PCI bus controller to handle the motion coordination. In addition to replacing the other controller he had been using, it cut his costs by half, saved space and significantly improved the accuracy.

Goins explained, "The x-y table that the DMC-1832 controls is located under the machine to give us a short, tight work space, which is most effective in consistently producing high quality optics. The controller provides repeatability, very precise 0.1 micron resolution, and smoothness of the slides which allows us to cut optics in less than 45 seconds per side. The same is true for the milling operation." If required, Goins says he can incorporate a different slide and encoder and get the resolution

down to 0.01 microns.

Ease of use is a key driver why Goins specified the DMC-1832. "I prefer to design things that are simpler, straightforward and have fewer problems." That's why the Optic Generator incorporates AutoCAD technology to draw the lens, and uses the controller's CAD-to-DMC translator to convert DXF files to a DMC program. The controller also provides linear and circular interpolation for precise x-y motion, easy and accurate PID tuning of the high-resolution linear encoders, and a user-friendly software interface and programming.

The Optical Generator also increases production rates by being able to automatically cut both sides without a changeover, and have it milled within 30 minutes to get a completed lens. Before, research labs, universities and surgical centers would have to cut and mill one side, then have to take the time to turn it over to do the other side.

Essentially, the compact Optical Generator is comprised of a tray device which holds the carriers of the initial blank; a lathe with a 30,000 rpm, air-bearing spindle for putting the optics into the blank; and a profile milling station in which the haptics (used for securing the lens to the center of the eyeball) are left attached to the optic portion of the lens.

"Due to the extreme accuracy of the Galil controller, along with the slides and air bearing spindles, this machine produces virtually any type or style of intraocular lens, ophthalmic implant, or other medical device that requires small, high precision parts," adds Goins.

Goins also says other lathe and milling machines typically have too many bells and whistles and that when one goes down, the whole machine goes down. "With Galil's ease-of-operation, we've eliminated that. The Optical Generator is so simple to run, it's unbelievable."

Galil. We Move the World.

With over 500,000 controllers installed worldwide, Galil is the #1 leading supplier of motion controllers. Galil's legacy of innovation began in 1983 when they introduced the first microprocessor-based servo motion controller. Today, Galil continues its leadership by offering the most powerful, cost-effective and easy-to-use motion controllers to accommodate all your motion needs.

Galil provides you with the widest choice of single or multi-axis, bus-based or stand-alone, and box-level or card-level controllers. Interface options include PCI, ISA, PC/104, cPCI, USB, RS232 and Ethernet. Select from 1-, 2-, 3-, 4-, 5-, 6-, 7- and 8-axis controllers, and configure them to run stepper or servo motors on any combination of axes.

Additionally, Galil provides various accessories that enable you to complete your project quickly. These include servo motors, amplifiers and software tools for quick set-up and "one-button" servo tuning.

Motion Controllers - PCI

- DMC-18x6.** PCI, 1-8 axes. Accelera
- DMC-18x0.** PCI, 1-8 axes. Optima
- DMC-18x2.** PCI, 1-4 axes. Econo
- DMC-1417.** PCI, 1 axis

Motion Controllers - Ethernet/RS232

- DMC-40x0.** Ethernet/RS232, 1-8 axes
- DMC-20x0.** USB/RS232, 1-8 axes
- DMC-22x0.** Ethernet/RS232, 1-8 axes
- DMC-21x3.** Ethernet/RS232, 1-8 axes
- CDS-3310.** Ethernet/RS232, 1 axis controller and servo drive unit
- DMC-14x5.** Ethernet/RS232, 1-2 axes
- IOC-7007.** Ethernet I/O controller

Motion Controllers - Other

- DMC-12x0.** PC-104, 1-8 axes
- DMC-16x0.** cPCI, 1-4 axes
- DMC-17x0.** ISA, 1-8 axes
- DMC-1410.** ISA, 1 axis
- DMC-1411.** PC/104, 1 axis
- DMC-1412.** RS232, 1 axis

Plug-In, Multi-axis Drives (21x3)

- AMP-20341.** 4 axis, 20W servo drives
- AMP-204x0.** 2 & 4 axis, 200W servo drives
- AMP-205x0.** 2 & 4 axis, 500W servo drives
- SDM-20242.** 4 axis, full/half stepper drives
- SDM-206x0.** 2 & 4 axis, microstep drives

Plug-In, Multi-axis Drives (40x0)

- AMP-430x0.** 2 & 4 axis, 500W servo drives
- AMP-43140.** 4 axis, 20W servo drives
- SDM-44040.** 4 axis, full/half stepper drives
- SDM-44140.** 4 axis, microstep drives

Software Tools

Communication Drivers. For DOS, QNX, Linux and all current versions of Windows

SmartTerm. Provides a friendly interface to all Galil controllers

WSDK. Servo Tuning and analysis software

ActiveX Toolkit. Custom controls for Visual Basic or other ActiveX software

CAD-to-DMC. Translates AutoCAD DXF files into DMC controller files

Request a free catalog at <http://www.galilmc.com/products/catalog.html>

Rely on Galil for Unmatched Support and Service

With every Galil controller you own, you also get the industry's most skilled team of motion specialists as well as an impressive array of online support tools.

Galil's motion specialists have over 100 man-years of experience, and they stand ready to specifically address your application. You can reach them today at 800-377-6329.

Galil's free online support tools include:

FREE	ONLINE SUPPORT TOOLS
✓	Application notes, white papers and industry articles http://www.galilmc.com/literature/technotes.html
✓	Over 20 tutorials about servo tuning, motion programming, & motors and drives http://www.galilmc.com/training/webconf.html
✓	MotionCode™ Toolkit, step-by-step solutions with downloadable code http://www.galilmc.com/support/motioncode/index.html
✓	MotorSizer™ Tool for quick sizing of stepper and servo motion systems http://www.galilmc.com/support/motorsizer/index.html
✓	Interactive bulletin board with knowledge base for fast answers to your questions http://www.galilmc.com/cgi-bin/ubb/ultimatebb.cgi
✓	Extensive motion controller and drive product catalog with specs and prices http://www.galilmc.com/products/catalog.html



"The mission of Galil's experienced Applications Department is to provide prompt and accurate technical assistance to help OEMs successfully deliver their products to market"