MAC 6000
Modular Automation Controller

The New Standard

The MAC 6000 controller is the fifth generation automation controller from Ludl Electronic Products. Effectively addressing critical requirements with state of the art electronics, the MAC 6000 offers all the commonly expected features plus much more powerful additional functionality. The MAC 6000 sets the standard for high performance microscope automation control.

The MAC 6000 features a fully compatible command set that permits simple migration from existing LEP controller systems. For advanced applications, the MAC 6000 introduces an additional event based command set that eliminates conventional software polling and boosts performance and throughput of applications and systems.

Digital ID

Every LEP automation component contains a digital ID. The digital ID is a small non-volatile memory device that contains information specific to the component. Information that describes the performance of the component as well as general information that can be used to uniquely identify it is programmed at the factory. The MAC 6000 controller system uses this information to configure itself for optimal performance. There are no configuration switches or jumpers. Each module auto configures without the need for user intervention.

Designed for Science

Can a controller influence precision and performance? Yes. The MAC 6000 controller is designed to provide high performance, run cooler and minimize electrical interference. The microstepping motor drives feature a unique DC linear technology that eliminates radiated electrical energy and temperature rise of the motor. The result is more accurate data, more accurate position and less uncertainty. Better science.

Beyond Simple Control

While the MAC 6000 can perform as a simple controller system that processes host commands, it also has functionality that goes far beyond a simple controller.
The built-in programmable scripting language allows the MAC 6000 to execute scripts for sequencing actions. In utilizing the scripting language the user can create new commands to add functionality and program sequences. For example, scripts can be easily created to synchronize functions, time operations, perform safety interlock and more.
The MAC 6000 is the first controller from LEP that provides an Ethernet port. With this functionality, the MAC 6000 can become a web host and provide telnet communication. The MAC 6000 can be accessed via the internet from anywhere in the world!
Expanded communication ports include dual RS-232 ports up to 115k baud, Ethernet and USB. A robust multi-protocol communication language ensures compatibility with legacy LEP MAC 5000 and MAC 2000/2002 controller systems. New protocols expand the power to interface better with contemporary host processing architectures.
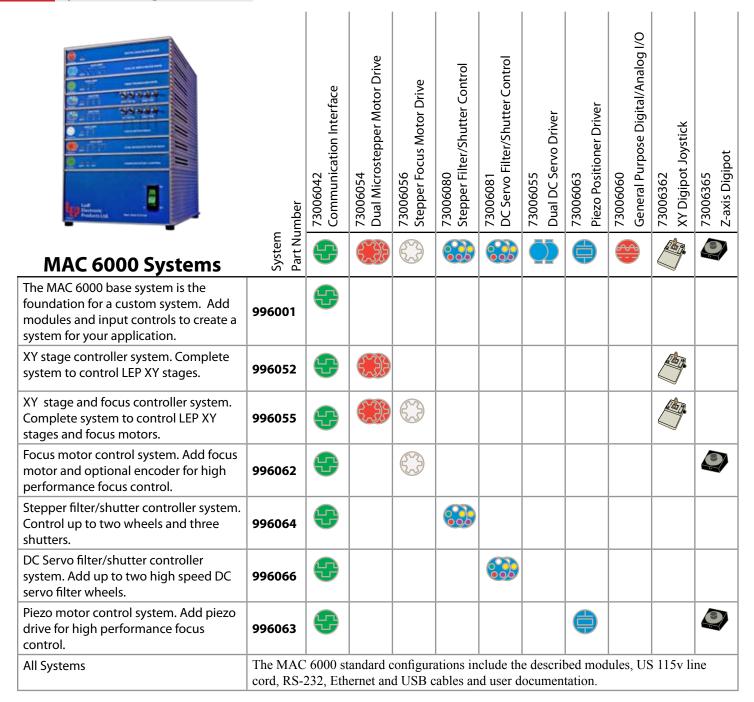
- Modular architecture
- RS-232 / USB
- Ethernet
- Embedded script programming
- 100% software configurable
- RoHS compliant
- Automatic device tuning

LEP Ludl Electronic Products Ltd.

www.ludl.com

MAC 6000

Operating Requirements

Power	90-250VAC 50/60Hz 150w	Operating Temperature	10-50°C non-condensing
Base Dimension	150mm x 203mm x 62mm	Approximate Weight (base)	1.3 kg
Module Height	20mm	Compliance	UL 61010A-1, CE, CSA, RoHS

System Configuration

MAC 6000 Systems

MAC 6000 Systems	System Part Number	73006042 Communication Interface	73006054 Dual Microstepper Motor Drive	73006056 Stepper Focus Motor Drive	73006080 Stepper Filter/Shutter Control	73006081 DC Servo Filter/Shutter Control	73006055 Dual DC Servo Driver	73006063 Piezo Positioner Driver	73006060 General Purpose Digital/Analog I/O	73006362 XY Digipot Joystick	73006365 Z-axis Digipot
The MAC 6000 base system is the foundation for a custom system. Add modules and input controls to create a system for your application.	996001	●									
XY stage controller system. Complete system to control LEP XY stages.	996052	●	●							●	
XY stage and focus controller system. Complete system to control LEP XY stages and focus motors.	996055	●	●	●						●	
Focus motor control system. Add focus motor and optional encoder for high performance focus control.	996062	●		●							●
Stepper filter/shutter controller system. Control up to two wheels and three shutters.	996064	●			●						
DC Servo filter/shutter controller system. Add up to two high speed DC servo filter wheels.	996066	●				●					
Piezo motor control system. Add piezo drive for high performance focus control.	996063	●						●			●
All Systems	The MAC 6000 standard configurations include the described modules, US 115v line cord, RS-232, Ethernet and USB cables and user documentation.										