

OptiScan™ II

Motorized Stage Systems



OptiScan II is in a long line of automated microscopy systems designed and manufactured by Prior Scientific. OptiScan II is ideally suited to routine applications requiring an affordable combination of quality and reliability. Motorized stages, focusing mechanisms, filter wheels and shutters can be combined to match your specific needs, providing unmatched flexibility and a simple path to future upgrades.

OptiScan II Advanced Controller

At the heart of the OptiScan II system is the compact powerful ES10 controller. OptiScan II is compatible with many of the world's leading image analysis packages ensuring simple and seamless integration between software and hardware. OptiScan II controllers are supplied with a software development toolkit that includes comprehensive DLL, VB demo program and a full complement of ASCII commands. The software developer can utilize either the USB or the RS232 serial port for software communications. The OptiScan II controller can be used to drive a motorized stage, a focus motor, up to 2 filter wheels and 3 shutters while motor drive technology ensures significantly quieter and smoother motion. The 'plug & play' facility provides automatic configuration of system components making system set up very easy. The onboard flash memory enables simple firmware upgrades from your own PC.

Motorized Stage Systems

OptiScan II stages are ideally suited to routine imaging applications. Using anti-backlash precision lead screws and accurate stepper motors, OptiScan II combines reliability with the highest performance in its class. Limit switches are provided as standard and stages are available to fit most upright and inverted microscopes. OptiScan II stages are compatible with the full range of Prior specimen holders allowing examination of the widest variety of sample types such as glass slides, multiwell plates, petri dishes and mounted metallurgical specimens. OptiScan II stages provide fast, smooth positioning without vibration thanks to a unique S-curve acceleration algorithm.



Motorized Focus Control

OptiScan II is ideal for applications where motorized focus control is needed. Step sizes as small as 0.1µm give excellent resolution for precise focusing and repeatable positioning in the Z-axis. For large movements when speed is required, the OptiScan II focus motor can be driven at speeds of up to 16 revs/s. An optional encoder feedback system provides the highest accuracy and repeatability available.





Filter Wheels

The Filter Wheel system delivers smooth, high speed operation and changes filters in as little as 120ms. The system can be supplied to accept ten 25mm or eight 32mm diameter filters. The filter wheel can be fitted to the excitation and emission ports of your microscope. Up to 2 filter wheels and 3 shutters can be operated from a single controller via your PC or a filter wheel keypad. The unique design of this filter wheel allows filters to be changed with ease and an optional support stand is available to reduce vibration effects. An optional sliding filter holder can be used for neutral density or infrared filters.

High Speed Shutters

Up to 3 shutters can be mounted directly to a microscope illuminator, a camera port or used in conjunction with a filter wheel. Control is via the USB/RS232 serial port or filter wheel keypad.

Ergonomic Joysticks

A 3-axis joystick is recommended with all stage systems to provide fast, responsive control of the stage. Two Hot Keys are provided to quickly change stage and focus motor speeds.

Digipot Focus Only Control

The digipot is standard on all focus only systems. It provides a tactile feel for fine focus adjustments while separate buttons offer immediate control of focus speed and fast movements up and down, for coarse focusing. The large digipot mimics the fine focus of your microscope.

Filter Wheel Keypad

The Filter Wheel Keypad (CS100K) provides control of up to 2 filter wheels and 3 shutters, all at the simple press of a button. Shutters can be opened and closed while filter wheels can be moved to specific positions including next and previous.

OptiScan II Flexibility

Applications involving microscope automation are many and varied. OptiScan II was designed with this in mind and the result is the most flexible system commercially available. OptiScan II components can be configured in many different ways meaning that systems can be tailored to match your exact requirements. If your needs change you can rest assured that OptiScan II offers a simple path to future upgrades.

1 Axis system



2 Axis system

For both upright and inverted microscopes



3 Axis system

For both upright and inverted microscopes



OptiScan II Specifications

Power	Universal external power supply. Input 100-240V, 50/60Hz max 1.6A	Step Size (Resolution)	1µm
Communications Protocol	RS232C at 9600, 19200 or 38400 baud, 8 bit word, 1 stop bit, no parity, no handshake or USB 2.0	Linear Slides	3mm ball bearings
Travel Range	Upright; 125mm x 75mm Inverted; 115mm x 77mm	Drive Mechanism	Anti-backlash precision lead screw
Repeatability	±5µm	Limit Switches	X and Y standard, semi-adjustable
		Filter Wheels	10 position, 25mm filters 8 position, 32mm filters
		Filter Wheel Speed	120ms between adjacent positions

PRIOR
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Certificate No: FM 61600
Standard: BS EN ISO 9001:2000



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