



Ultimate Simplicity

Ultra1500 Digital Servo Drive



Easy to Use. Compact. Cost-effective.

All too often, this combination of features is difficult to find. But now, Rockwell Automation has made your search for a simple, high performance servo drive an easy one – with the Allen-Bradley Ultra1500. Unlike ordinary drives, the Ultra1500 can truly save you time and money, while providing the performance and space-saving features you need.

Easy to Use

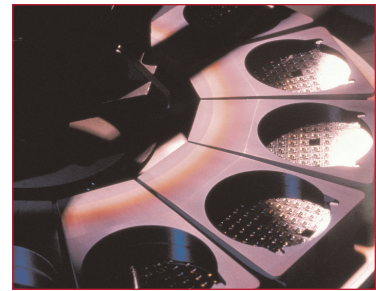
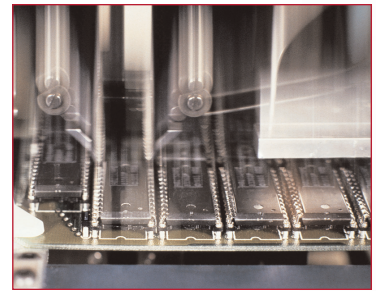
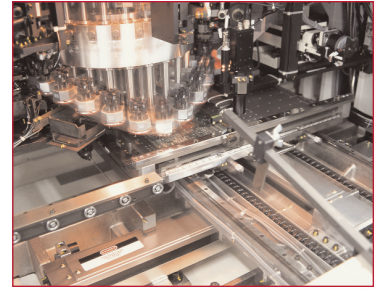
- Ultraware drive configuration wizards make drive setup a snap
- Ultraware software provides powerful commissioning and diagnostic tools
- Auto identification of motor type for plug and play operation
- Auto tuning saves time during set up
- Easy wiring: 5 wire serial encoder reduces wiring time
- Field programmable flash memory firmware storage for easy upgrades
- Built-in operator interface simplifies parameter setting and troubleshooting

Compact

- Smaller footprint than competitive drives, providing greater flexibility for machine design
- Motor flange sizes range from 46 mm to 115 mm

Cost-effective

- Advanced diagnostics save time and money on start-up and troubleshooting
- Because of the compact size, the Ultra1500 gives machine designers greater flexibility and allows a smaller machine footprint
- Wiring time and costs are reduced with a simplified feedback device
- Greater machine precision and throughput are achieved with system features including:
 - Excellent velocity bandwidth of 550 Hz
 - High resolution absolute feedback
- Built-in shunting capability on the three largest models, requiring no additional hardware
- Valuable time is saved on everything from system configuration and installation to maintenance
- Backed by Rockwell Automation’s global support



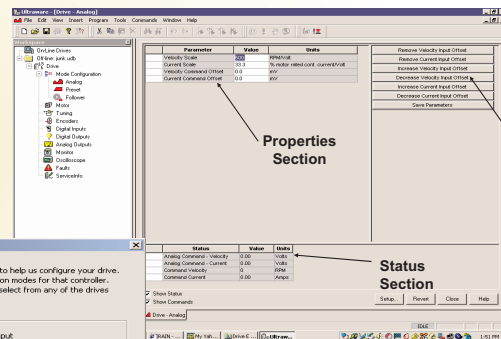
Ultraware makes programming fast and easy

Ultraware wizard and diagnostic tools reduce time spent on system configuration and troubleshooting.

The Ultra1500™ uses Ultraware™ software to provide a complete setup and programming environment. Ultraware provides:

- Ultra1500 setup wizards
- Powerful commissioning tools
- Sophisticated digital scope capability
- Comprehensive array of diagnostics

Intuitive Object-Oriented Tree Structure



Command (Services) Section

Setup wizard provides automatic configuration

Gaining a competitive advantage has never been so simple!

Integral Keypad/Display

Seven segment LED displays both error codes and text messages to facilitate troubleshooting.

Pluggable Power Connectors

provide fast easy wiring. Drives can be replaced quickly and simply.

Control Modes:

- Analog commands:
 - Velocity
 - Torque
- Preset Velocity
- Step and Direction
- Electronic Gearing (Follow a master encoder)



High Resolution Absolute Feedback capability via the controller eliminates the need for a homing routine, making startup faster and easier.

Excellent Velocity Bandwidth

- 550 Hz

Built-in Drive Features

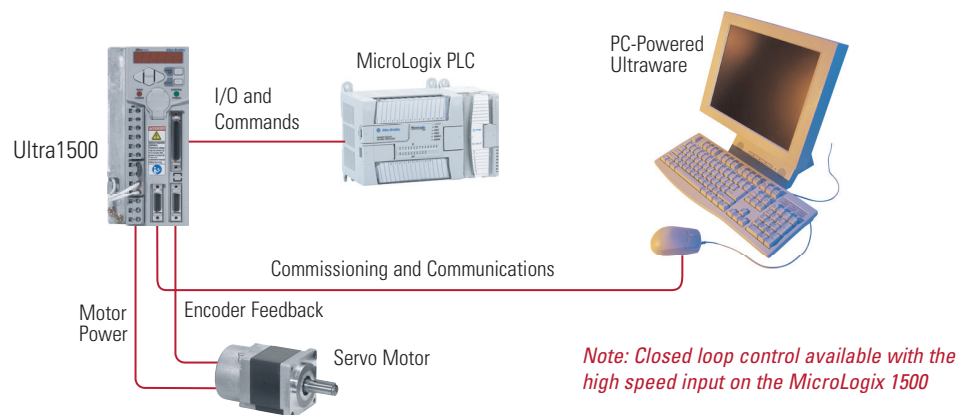
- Velocity speed observer reduces ripple at low speeds
- Mechanical vibration suppression algorithm
- Dynamic braking capability reduces stopping time
- Adaptive tuning algorithm

Compact size saves panel space

Actual Size of 2092-DA1 Drive
Just 153 mm deep.

Efficient Stepper Replacement Solution

The Ultra1500™ accepts step and direction signals, making it an excellent replacement for stepper drives and motors. Combined with a MicroLogix™ 1200 or 1500 PLC, the Ultra1500 can provide superior performance at a competitive price.



Note: Closed loop control available with the high speed input on the MicroLogix 1500

A Compact, Easy to Use Drive/Motor Combination

The Ultra1500 drives, teamed with the Allen-Bradley TL-Series Motors, provide a convenient, cost-effective solution for a wide range of single-axis motion control applications.



The TL-Series Motors provide continuous stall torque from 0.096 to 5.42 Nm (0.85 - 48 lb-in) and peak torque from 0.22 to 13 Nm (1.94 - 115 lb-in).

TL-Series Motors Feature:

- ✓ **High Resolution Feedback**
 - Tighter positioning control with 17-bit resolution
 - Higher inertia mismatch capabilities
 - Ability to control higher load-to-motor rotor inertia ratios while maintaining a stable system.
- ✓ **Absolute Encoder Capability**
 - Eliminates the need for a homing routine, making startup faster and easier
 - Single-turn high resolution feedback is standard. Multi-turn (+/- 32768 revolutions) high resolution absolute feedback with battery backup is available
- ✓ **Smart Motor Technology**
 - On-board memory retains motor identity
 - Serial communication automatically reports identity to the drive for reduced commissioning time
- ✓ **Superior Torque to Size Ratio**
 - More power in a smaller package
 - 46, 70, 90 and 115 mm frame sizes
- ✓ **Integral 24 volt brake option**
- ✓ **IP43 seal standard. Shaft seal kits** available to provide motor surface only IP65 rating

Ultra1500 Specifications

Drive	2092-DA1		2092-DA2		2092-DA3	2092-DA4		2092-DA5
TL-Series Motor (TL-)	A110P	A120P	A130P	A210P	A230P	A2530P	A2540P	A410M
2092 Continuous Output Power	400 W		650 W		1.0 kW	3.0 kW		4.0 kW
TL-Series Motor Shaft Output	40W	85W	140W	350W	440W	690W	860W	*
Main Power Input Voltage	200-240 V rms, Single-Phase, 50/60 Hz					200-240 V rms, 3-Phase, 50/60 Hz		
Main Power Input Current	3.3A rms		5.5A rms		8.0A rms	11.0A rms		15.0 A rms
Control Power Input Voltage	200-240V rms, Single-Phase, 50/60 Hz							
Continuous Output Current (0-peak)	1.4A PEAK		2.4A PEAK		4.7A PEAK	10.7A PEAK		16.4A PEAK
Intermittent Output Current (0-peak)	3.4A PEAK		7.2A PEAK		11.3A PEAK	24.8A PEAK		43.4A PEAK
Drive Height	155 mm (6.1")		155 mm (6.1")		155 mm (6.1")	155 mm (6.1")		155 mm (6.1")
Drive Width	55 mm (2.2")		55 mm (2.2")		70 mm (2.7")	90 mm (3.5")		90 mm (3.5")
Drive Depth	153 mm (6")		153 mm (6")		153 mm (6")	198 mm (7.8")		198 mm (7.8")
Drive Weight	0.9kg (1.98 lb)		0.9kg (1.98 lb)		1.2kg (2.6 lb)	2.1kg (4.6 lb)		2.1kg (4.6 lb)

* Available in July 2004

For additional product information, refer to the Motion Control Selection Guide, pub GMC-SG001x or our web site: www.ab.com/motion

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www.rockwellautomation.com

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