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Expanding the ACR7000 Family: New Multi-Axis Servo Controller



Rohnert Park, CA, July 2020— Parker's Electromechanical & Drives Division North America is pleased to announce an expansion of the ACR7000 series controllers. The ACR7000 series combines performance, value and scalability that exceeds OEM expectations. With the power and flexibility of the AcroBasic language, the ACR7000 series is the perfect building block for customer-specific motion system solutions.

The new release of ACR7000 adds multi-axis servo drive/controller variants supported by an update of the Parker Motion Manager software development tool. Up to eight digital servo drives are integrated with a multi-axis motion controller into a single package, saving space, eliminating cabling and reducing installation complexity.

Hardware features include:

- Four and eight axis models
- 800MHz ARM Cortex A8 processor
- Ethernet communications, RJ-45 Connection
- 24 to 48VDC motor input power
- Separate 24VDC control power
- Digital servo drives with up to 5A continuous and 16A peak current
- Encoder inputs supporting quadrature and BiSS-C absolute encoders
- Onboard I/O including analog inputs, high-speed digital inputs and encoder-based outputs

The ACR7000 has been in production for over two years, serving customers first in a beta program and then in volume manufacturing. With over 900 units shipped, the ACR7000 series has already established a strong track record for performance and quality.

For more information on Parker's new ACR7000 series and to download the new **Parker Motion Manager** software, please visit <http://www.parkermotion.com>

Note: All information in this bulletin is considered proprietary and not intended for unauthorized distribution

Part Numbering, Availability, Pricing and Ordering

The stepper version of the ACR7000 was released in October 2019 and is well on its way to establishing its place in the market. The ACR7000 servo is now also available with 1- week lead times. Pricing for the two new models is available on the Extranet.

ACR74V-A5V4C1 4 Axis Servo Drive/Controller

ACR78V-A5V4C1 8 Axis Servo Drive/Controller

Software Development Tool – Parker Motion Manager 2.0

Parker Motion Manager 2.0 introduces support for the ACR7000 Servo and continues to add important tools for application development.

New features in 2.0 include:

- Parker Actuators and Parker Gearheads added to Scaling for easy setup
- New Servo Tuner with profile generation tool
- Auto Scaling and a Smart Cursor added to the Oscilloscopes
- New Strip Chart Tool with roll mode, history and zoom
- New Servo Drive and EtherNet/IP status panels

Communications

The Ethernet implementation in the ACR7000 was developed from the IPA and provides outstanding performance in HMI, PC and PLC-based applications. The ComACRServer communication library currently used with the ACR9000 and IPA is also used for the 7000, giving existing customers with PC-based applications a head-start. The ACR7000 includes EtherNet/IP communication with both scanner and adapter functions, enabling connections from PLCs or to extended I/O modules. The ACR7000 also uses EtherNet/IP for peer-to-peer communications, allowing multiple ACR7000s and IPAs to talk to each other while exchanging deterministic data.

Programming

The ACR7000 builds on the AcroBasic programming language used in the ACR9000 and IPA. The entire AcroBasic command set is available on the ACR7000 including:

- Multi-tasking with up to 16 programs
- Linear and circular interpolation
- Gearing and camming
- Hardware and software position captures
- Encoder-based position output (OOP)
- Math and logic functions and string handling

Motors and Feedback

The ACR7000 Servo continues the Parker tradition of supporting a wide range of rotary and linear servo motors. At 48VDC and rated current of 5A_{rms}, the best matches are BE16 and 23 motors with G windings and SM16 and 23 motor with B windings. Speed torque curves are available in the [Parker Electromechanical Knowledge-base](#). P Series motors with BiSS-C absolute feedback are also a good match.

For linear motor applications, mSR and MX80 stages are optimized for VDC operation, making the ACR7000 Servo the ideal controller for multi-axis applications.

The ACR7000 Servo uses the exact same connectors and pinouts as the IPA and will utilize the same cable sets.

Motor	Motor Cable	Feedback Cables
BE or SM with PS connectors	P-1A1-xx	F-1A1-xx
PM (P Series)	APCS-PNyyLS	71-032751-yy
mSR	006-2690-01 – Adapter cable for both motor and feedback	

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Pricing

A pricing guide for the ACR7000 can be found on the extranet version of the ACR7000 product page. The price guide includes details of the special OEM pricing program that makes the ACR7000 extremely competitive in high volume applications.

About Parker Electromechanical & Drives Division

A division of Parker Hannifin Corporation's Motion Systems Group, EM&D is a pioneer, developer, and manufacturer of full-spectrum computer-based motion controllers, servo/step motor drives, servo motors and human-machine interfaces, positioning systems, gearheads and gear motors. These products automate the manufacturing of a significant fraction of the world's goods and services. Electromechanical Automation products are sold via independent authorized Automation Technology Centers—a group of nearly 100 professional, highly trained organizations with more than 135 points-of-presence throughout the world.

About Parker Hannifin

Parker Hannifin is a Fortune 250 global leader in motion and control technologies. For more than a century the company has been enabling engineering breakthroughs that lead to a better tomorrow. Learn more at www.parker.com or @parkerhannifin.

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