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Find the *Advanced Motion Controls DPRALTE-060B080A* at our website: *Click HERE*






ADVANCED MOTION CONTROLS



Everything's possible.

www.a-m-c.com

ADVANCED Motion Controls Servo Drive Overview

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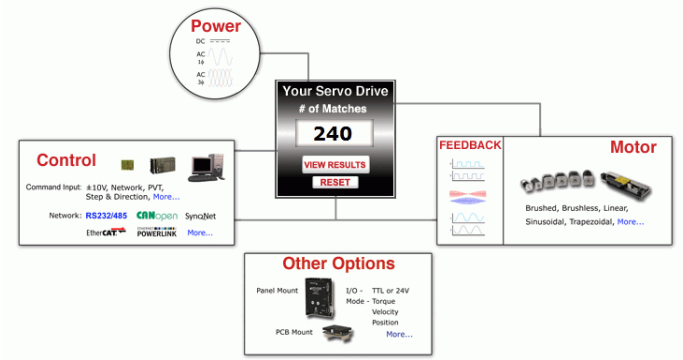


About *ADVANCED* Motion Controls

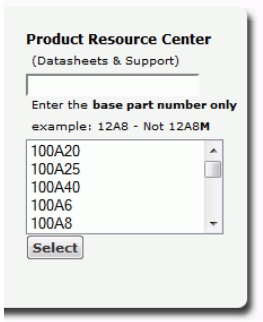
ADVANCED Motion Controls has earned a reputation for being a flexible and affordable manufacturer of quality high performance and high power density servo drives. Camarillo California is home to our state of the art 80,000 square foot facility that integrates Engineering, Manufacturing, Testing and Support in a single location. Using our standard product line as a starting point our customers know they can specify modifications and custom solutions to solve their specific problems. This frees our customers to design systems without the constraints imposed by other servo drive manufacturers.

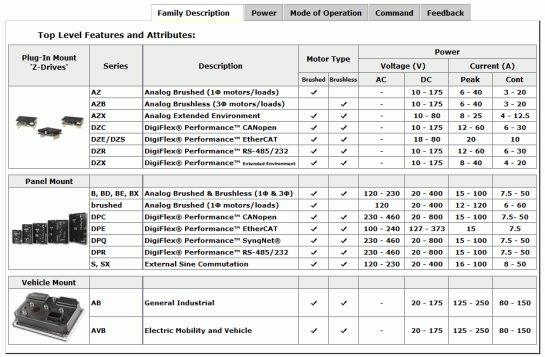
Any Motor, Any Controller, Any Feedback!

Our core business is servo drives. We offer over 250 standard models, and if we don't have what you need we can work with you to create a custom solution that does. Our servo drives can be found all over the world in the highest performance applications, the harshest environments as well as working reliably in day to day operations throughout the world.



Finding the right *ADVANCED* Motion Controls' servo drive for your application is easy. Enter key parameters into the Automated Servo Drive Selection Tool at www.a-m-c.com, and automatically receive a list of servo drives that meet your requirements. You can also browse through our Servo Drive Family Product Tables, or if you already know the model number, simply enter it into the Product Resource Center to find the appropriate datasheet, installation manual, and product drawing.




Family Description | Power | Mode of Operation | Command | Feedback

Top Level Features and Attributes:

Plug-In Mount '2-Drives'	Series	Description	Motor Type		Power			
					Voltage (V)		Current (A)	
			Brushed	Brushless	AC	DC	Peak	Cont
	AZ	Analog Brushed (1Φ motors/loads)	✓		-	10 - 175	6 - 40	3 - 20
	AZB	Analog Brushless (3Φ motors/loads)		✓	-	10 - 175	6 - 40	3 - 20
	AZX	Analog Extended Environment	✓	✓	-	10 - 80	8 - 25	4 - 12.5
	DZC	DigiFlex® Performance™ CANopen	✓	✓	-	10 - 175	12 - 60	6 - 30
	DZE/DZS	DigiFlex® Performance™ EtherCAT	✓	✓	-	18 - 80	20	10
	DZR	DigiFlex® Performance™ RS-485/232	✓	✓	-	10 - 175	12 - 60	6 - 30
	DZX	DigiFlex® Performance™ Extended Environment	✓	✓	-	10 - 175	8 - 40	4 - 20
Panel Mount								
	B, BD, BE, BX	Analog Brushed & Brushless (1Φ & 3Φ)	✓	✓	120 - 230	20 - 400	15 - 100	7.5 - 50
	brushed	Analog Brushed (1Φ motors/loads)	✓		120	20 - 400	12 - 120	6 - 60
	DPC	DigiFlex® Performance™ CANopen	✓	✓	230 - 460	20 - 800	15 - 100	7.5- 50
	DPE	DigiFlex® Performance™ EtherCAT	✓	✓	100 - 240	127 - 373	15	7.5
	DPQ	DigiFlex® Performance™ SynqNet®	✓	✓	230 - 460	20 - 800	15 - 100	7.5 - 50
	DPR	DigiFlex® Performance™ RS-485/232	✓	✓	230 - 460	20 - 800	15 - 100	7.5 - 50
	S, SX	External Sine Commutation	✓	✓	120 - 230	20 - 400	16 - 100	8 - 50
Vehicle Mount								
	AB	General Industrial	✓	✓	-	20 - 175	125 - 250	80 - 150
	AVB	Electric Mobility and Vehicle	✓	✓	-	20 - 175	125 - 250	80 - 150

25 Years of Excellence

In our 25th year of servo drive manufacturing, with over 2 million servo axes built and shipped worldwide!



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ADVANCED Motion Controls Servo Drive Overview



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- DPE series - EtherCAT® panel mount 9
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For Company Information, Product Datasheets, Installation Manuals and Downloads visit www.a-m-c.com

Designed & Built in USA

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Product Capabilities



Networks

ADVANCED Motion Controls offers a variety of network options for connecting servo drives in a multi-axis configuration. Choosing the right network depends on a variety of factors such as required bandwidth, update rate, performance, and cost. Currently supported network options are: CANopen, EtherCAT®, RS232, RS485 and SynqNet®.

EtherCAT® - EtherCAT is a registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany. The *ADVANCED* Motion Controls EtherCAT interface follows the ETG.1000.6 EtherCAT Application Layer protocol specification and the ETG.6010 Implementation guideline for CiA402 drive profile.

CANopen - An open standard embedded machine control protocol developed for the CAN physical layer, following the CiA (CAN in Automation) DS301 communications profile and the CiA DSP402 device profile

RS485/232 - *ADVANCED* Motion Controls' proprietary serial protocol, a byte-based, binary, master-slave standard to access drive commands

SynqNet® - An all digital motion control interface built on IEEE 802.3 standards for 100BT, the physical layer of Ethernet.

We also have the ability to quickly produce custom DigiFlex® drives utilizing Ethernet TCP/IP, Ethernet Powerlink, or many other common types of network communication.

Motors

As a company whose core business is servo drives we have to be compatible with as many motors and motor technologies as possible. We have servo drives that work with: Brushed DC, Brushless: AC & DC, Linear & Rotary, AC Induction, Voice Coil, Trapezoidal & Sinusoidal commutation. Many of our drives can work with all of the above with only a few minor configuration settings.

Feedback

To give our customers the greatest flexibility we offer a wide variety of motor feedback options. Standard feedback options include: Halls, Incremental Encoder, Resolver, 1Vp-p Sine/Cosine Encoder, Stegmann Hiperface®, Heidenhain EnDat® and Tachometer. On our DigiFlex® Performance™ drives we also have the option for auxiliary feedback for dual loop control.

Accessories

As a convenience to our customers we offer power supplies, filter cards, shunt regulators and mounting cards to complement our servo drives.



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Technology and Solutions to Problems

Combining cutting-edge technology and creative engineering, *ADVANCED* Motion Controls is able to design and manufacture high quality servo drives capable of delivering high power at a low cost. As the demands of the motion control industry have increasingly asked for better performance, more features, and simplified integration, *ADVANCED* Motion Controls has responded by finding resourceful solutions to the problems faced by OEMs and servo system designers. Whether by implementing innovative design techniques throughout our line of standard products, or by directly solving a specific customer's application with a brand-new custom product, *ADVANCED* Motion Controls has the drive expertise to take on your servo system challenge.

Applications and Industries

ADVANCED Motion Controls is able to utilize our extensive experience in providing high performance servo drives to support motion control applications in numerous industries. With an ever-expanding customer base across new and emerging fields, and having been established as a top supplier for traditional servo solutions, *ADVANCED* Motion Controls brings our wealth of diverse motion control knowledge to a wide variety of industries, including but not limited to:


Assembly Automation and General Factory Machinery


Communications Control


Electric Mobility and Mobile Robotics


Entertainment


Homeland Security and Defense


Inspection Testing and Rapid Prototyping


Lab Automation


Medical


Packaging


Power Generation and Alternative Energy Sources


Robotics (fixed)


Semiconductor


Simulators

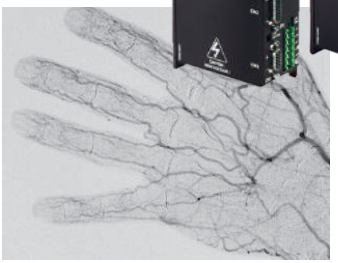












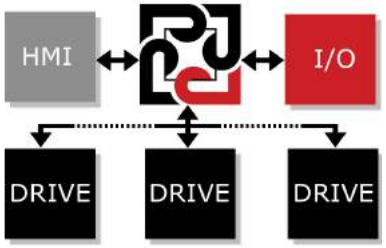




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Click&Move® (C&M®) Software

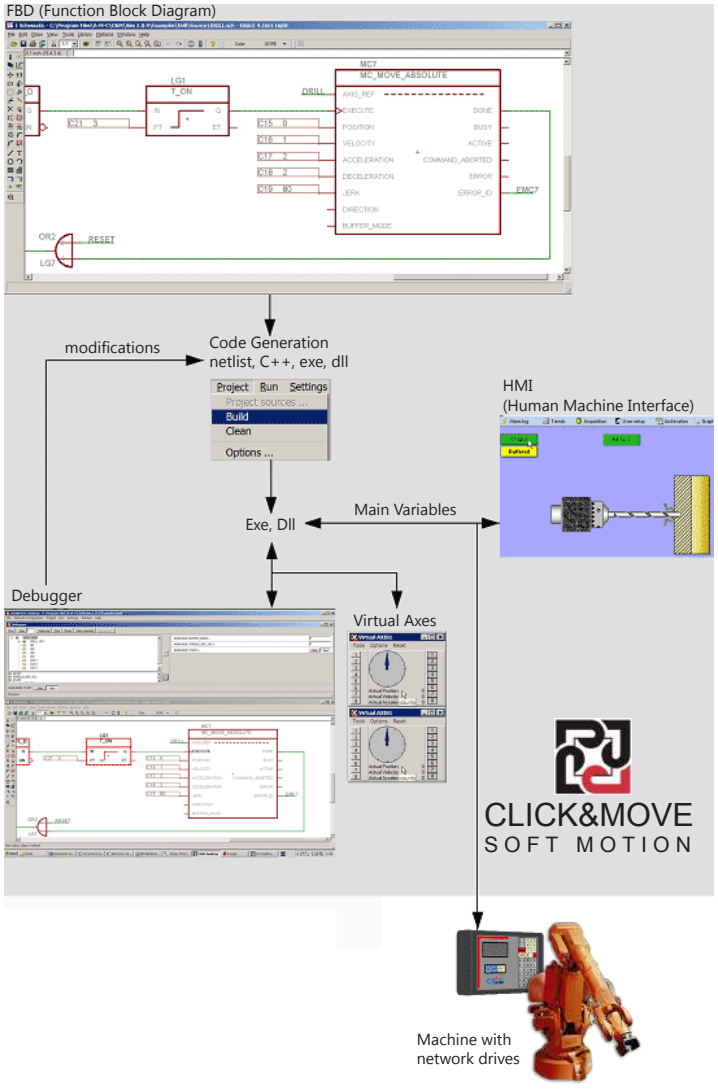
Click&Move® is a Windows-based soft motion and automation solution that uses function blocks described under IEC 61131-3 as the programming method. Function block programming allows non-programmers to fully develop and implement motion control and automation programs in a GUI environment. Click&Move also includes a built in graphical HMI that displays the machine operation on screen.



- Standard PLCopen Function Blocks library for Motion Control is included
- New Function Blocks can also be created with an encapsulated user C++ program.

Click&Move® programs can run on Windows based PC's, Motion Automation Control Cards (MACC), or on embedded *ADVANCED* Motion Controls' servo drives, all at low cost to solve a variety of applications. Using the PC based approach provides for servo drive and I/O command update rates in the millisecond range.

Visit the Click&Move® Product Website

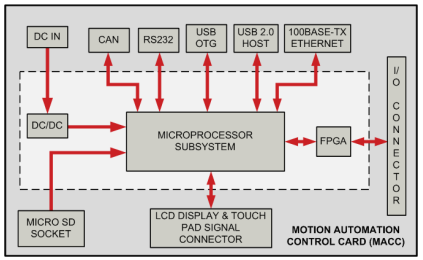


Motion Automation Control Card (MACC)

ADVANCED Motion Controls has designed a dedicated MACC with embedded Click&Move® programming capability. Key highlights are:

- Based on an ARM microprocessor operating with real-time Linux
- Stand-alone card with network connections, and can be optionally packaged in a standard DIN rail plastic case
- External I/O module connectivity





The MACC serves as a general purpose motion/automation controller:

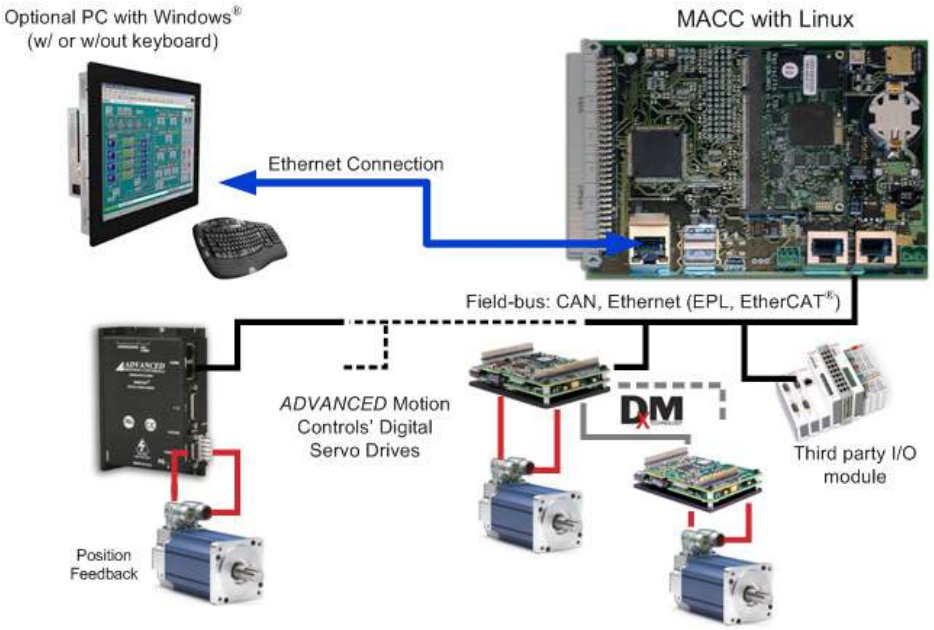
- Controlling a network of digital drives and I/Os
- Controlling servo drives with +/-10V torque or velocity command inputs for lower cost/higher update rate solution
- Fully functional PLC utilizing C&M programmability and I/O modules

The C&M user program can be developed, compiled and tested on a PC and simply recompiled for the MACC platform. Once downloaded into the MACC, it can also be debugged via Ethernet UDP/IP. The program may also be controlled/monitored in real time via the UDP/IP connection by a PC with a client C&M application.

C&M user programs can also be distributed between the PC and the MACC; the fast, time critical portion of the application can run in the MACC while C&M's HMI and slower portions run in the PC. Connections made via Ethernet.

The number of motion axes is only limited by the axis update rate. This axis update rate is influenced by the size and complexity of the C&M application program.

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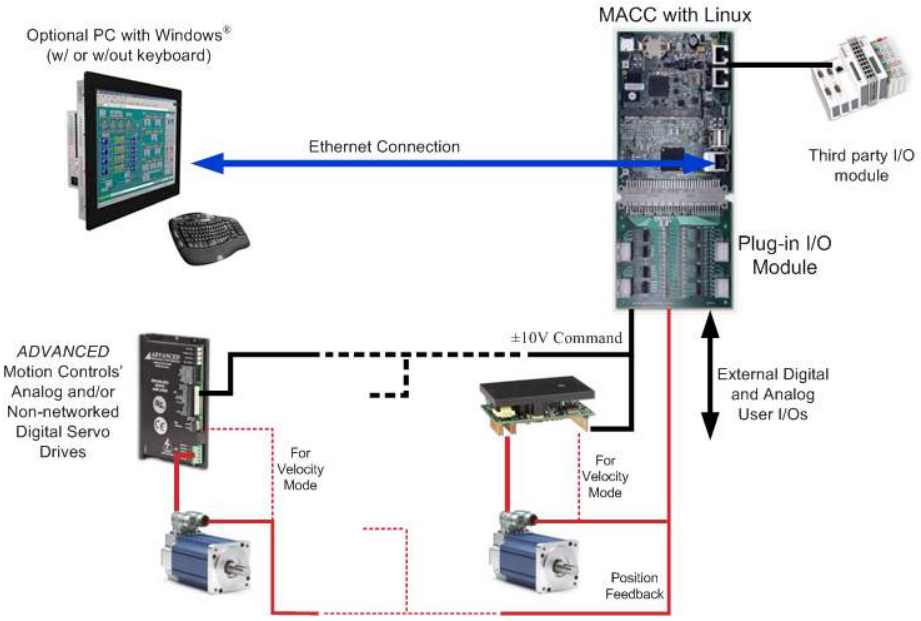
MACC with Network Drives and I/O Modules

This solution can meet demands for drive and I/O command update rates in the few hundred microseconds range. The MACC integrates field bus masters, such as EtherCAT® or Ethernet Powerlink (EPL), directly or they can be installed into an external PC.

To lower drive system costs, *ADVANCED* Motion Controls' exclusive 'DxM' Technology can be utilized. Using only one EtherCAT® drive, other sub-nodes could be readily connected.

&MOVE®
SOLUTION

CLICK
AUTOMATION



MACC with Torque or Velocity Mode Drives

The analog outputs of the plug-in I/O module of the MACC are connected to the +/-10V input of torque or velocity mode drives. Non-networked servo drives, combined with the MACC, provide a system with the lowest overall cost.

This solution can meet demands for drive and I/O command update rates in the 50 microsecond range. However, due to noise and wiring considerations, cable length between the drives/motors and the controller is limited to within a few meters. In this case, motor feedback connections are made to the external I/O module's dedicated inputs.

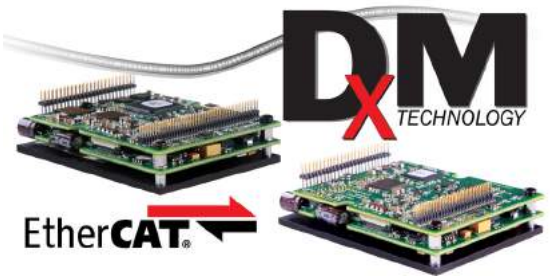
To provide additional I/Os, pins of the MACC's FPGA are buffered and brought out to an optional connector which can be used by a plug-in I/O expansion card with an SSI (synchronous serial interface).

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DigiFlex® Performance™ Digital Servo Drives



The family of DigiFlex® Performance™ digital servo drives provide a wide range of options for servo system solutions. DigiFlex® Performance™ (DP) drives deliver peak power output from 1.5 to 27.4kW, and support an array of feedback options. Driving single phase, three phase, and closed loop vector motors with the ability to interface with both digital network commands and traditional +/-10V analog commands, DP drives offer a versatile blend of cutting edge technology and proven results.



ADVANCED Motion Controls' exclusive 'DxM' Technology allows control of up to 4 axes of servo motion from a single EtherCAT® node.

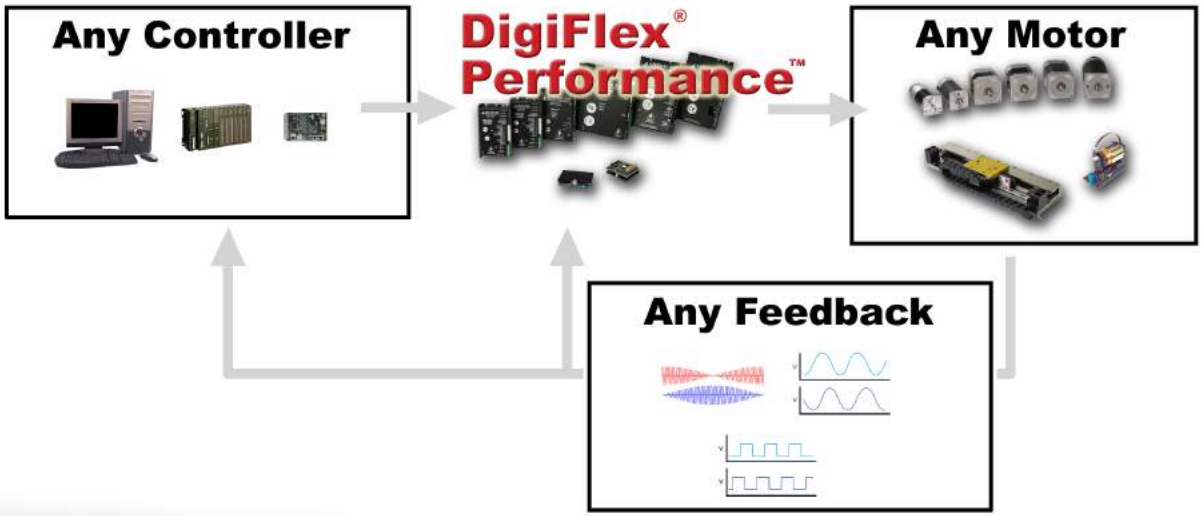
- **Universal servo motor capability by means of automatic commutation adjustment**
- **Variety of feedback options - Absolute Encoder, Sin/Cos Encoder, Incremental Encoder, Hall Sensors, Resolver, Tachometer**
- **Full tuning control of Position, Velocity, and Torque Loops**
- **Real-time oscilloscope for high-performance tuning**
- **Status panel for drive and system diagnostics**
- **I/O configuration for over 60 events and signals**
- **Dual loop feedback and control - increases stability and accuracy**
- **Stand-alone or network configuration**
- **Standard models in both Panel Mount and PCB Mount (Z-Drives) form factor**
- **Employs Space Vector Modulation, resulting in higher bus voltage utilization and reduced heat dissipation**
- **Extended Environment versions available (DZX series Z-Drives)**



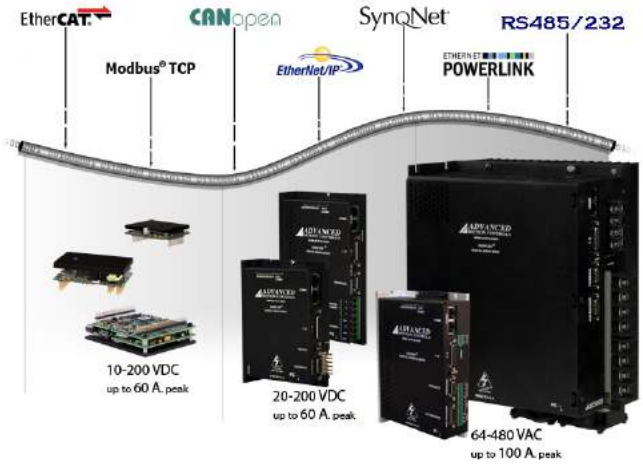




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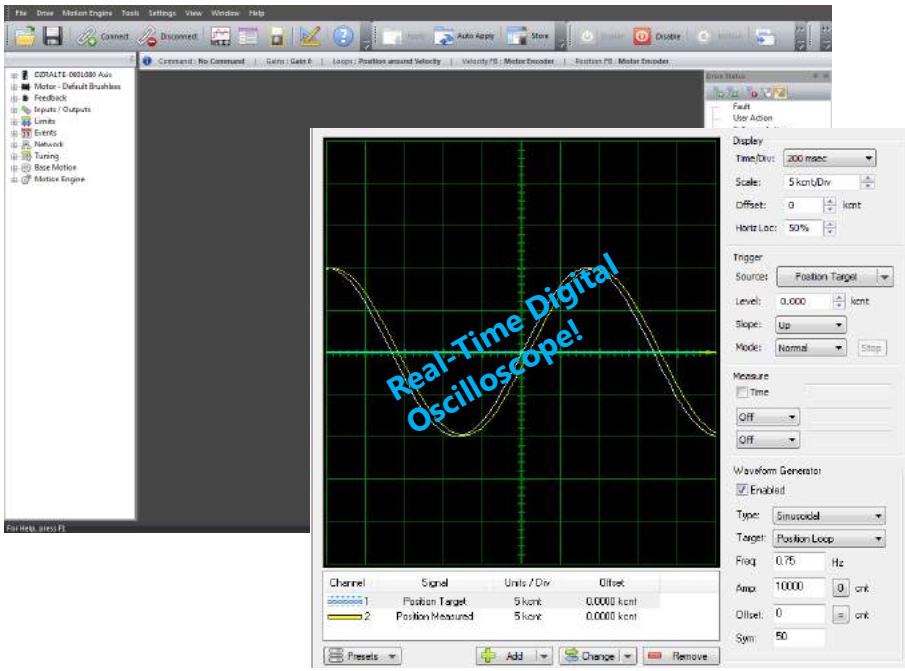
DigiFlex® Performance™ servo drives can be controlled over the network using the following standard communication protocols: EtherCAT®, CANopen, SynqNet®, and RS485/232.





DriveWare®

DriveWare® is the powerful servo drive tuning and configuration software used to commission and troubleshoot all *ADVANCED* Motion Controls DigiFlex® Performance™ digital servo drives. All drive limits, control loops (current, velocity, and position), and event handling can be configured in DriveWare. Notable features include a fully functional multi-channel oscilloscope, function generator and user friendly layout and interface.



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DPC series - CANopen panel mount



Panel Mount Drives
DPC drives are enclosed by a metal cover and can be mounted on their spine or flat against the base.

Communication
- CANopen Networking
- RS485/232 Drive Commissioning

Command Types
- Over the Network
- +/-10V Analog
- PWM and Direction
- Encoder Following

Power Range
- 1.5 - 27.4 kW Peak Power Output
- 0.8 - 13.7 kW Cont. Power Output

Primary Feedback
- Absolute Sin/Cos Encoder (Heidenhain EnDat® or Stegmann Hiperface®)
- 1Vp-p Sin/Cos Encoder
- Incremental Encoder
- Resolver

Auxiliary Feedback
- Hall Sensors
- Aux. Incremental Encoder
- Tachometer



CANopen



DIGITAL PANEL MOUNT

Datasheets and Additional Product Info











To build a model number, select a control module by feedback type, then combine with a power module that suits your system's requirements. 24 VDC I/O Control Modules combine with AC Power Modules, and 5VTTL I/O Control Modules combine with DC Power Modules.

Combine to form model number

24 VDC I/O Control Modules

Feedback	DPCANIA- Absolute Encoder	DPCANIE- Incremental Encoder	DPCANIR- Resolver	DPCANIS- Sin/Cos Encoder

Combine to form model number

AC Power Modules

Example: DPCANIS-060A400

	015S400	015A400	030A400	060A400	100A400	030A800	060A800
Supply (VAC)	100-240*	100-240	100-240	100-240	200-240	200-480	200-480
Peak Current (A)	15	15	30	60	100	30	60
Cont. Current (A)	7.5	7.5	15	30	50	15	30
Dimensions (mm)	177 x 123 x 44	177 x 140 x 56	202 x 157 x 70	235 x 162 x 151	273 x 230 x 149	301 x 232 x 92	301 x 232 x 139

*Single Phase AC Only

Combine to form model number

5VTTL I/O Control Modules

Feedback	DPCANTE- Incremental Encoder	DPCANTR- Resolver

Combine to form model number

DC Power Modules

Example: DPCANTR-015B200

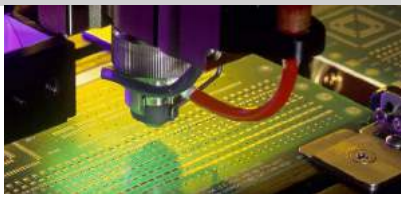
	020B080	040B080	060B080	015B200	025B200
Supply (VDC)	20-80	20-80	20-80	40-190	20-190
Peak Current (A)	20	40	60	15	25
Cont. Current (A)	10	20	30	7.5	12.5
Dimensions (mm)	133 x 90 x 36	191 x 112 x 36	191 x 112 x 36	133 x 90 x 36	191 x 112 x 36

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DZC series - CANopen pcb mount



Z-Drives Plug-In Integration

DZC drives are packaged in a lightweight and compact form factor designed to be embedded directly into a PCB - no wires required! Inverted baseplate mounting also allows for direct wired connector access. A common footprint is used for the different power modules in the series to simplify prototyping.

Communication

- CANopen Networking
- RS485/232 Drive Commissioning

Command Types

- Over the Network
- +/-10V Analog
- PWM and Direction
- Encoder Following

Power Range

- 0.9 - 4.6 kW Peak Power Output
- 0.5 - 2.3 kW Cont. Power Output

Primary Feedback

- Incremental Encoder

Auxiliary Feedback

- Hall Sensors
- Aux. Incremental Encoder
- Tachometer







CANopen





Datasheets and Additional Product Info

Combine to form model number

Control Module

DZCANTE-

Feedback	
	Incremental Encoder

DC Power Modules

Example: **DZCANTE-040L080**

	012L080	020L080	040L080	060L080	010L200	025L200
Supply (VDC)	20-80	10-80	10-80	10-80	40-175	40-175
Peak Current (A)	12	20	40	60	10	25
Cont. Current (A)	6	12	20	30	5	12.5
Dimensions (mm)	64 x 51 x 18	64 x 51 x 23	76 x 51 x 23	76 x 51 x 23	64 x 51 x 23	76 x 51 x 23







ADVANCED Motion Controls offers mounting cards and mating connector kits to simplify the connections between DZC drives and external system hardware (motors, feedback devices, controllers). These mounting cards are ideal for the prototyping and development stages as well as implementation into the final system design.

Mounting Cards

	Axes	Motor/Power Connector	Max Voltage	Max Peak Current
MC1XDZC02	1	Side-entry screw terminal	175	40
MC1XDZC02-QD	1	Vertical-entry quick-disconnect	175	25
MC1XDZC02-HP1	1	Side-entry screw terminal	80	60

Mating Connector Kit

Mating connector housing and socket contacts can be ordered as a kit using *ADVANCED* Motion Controls part number **KC-MC1XDZ02**.



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Panel Mount Drives
DPE drives are enclosed by a metal cover and can be mounted on their spine or flat against the base.

Communication
- EtherCAT® Networking
- USB Drive Commissioning

Command Types
- Over the Network
- +/-10V Analog
- Encoder Following

Power Range
- 3.4 kW Peak Power Output
- 1.7 kW Cont. Power Output

Firmware Selectable Primary Feedback
- Absolute Sin/Cos Encoder (Heidenhain EnDat® or Stegmann Hiperface®)
- 1Vp-p Sin/Cos Encoder
- Incremental Encoder

Auxiliary Feedback
- Hall Sensors
- Aux. Incremental Encoder
- Tachometer

EtherCAT®

DIGITAL PANEL MOUNT

Datasheets and Additional Product Info



To build a model number, combine the DPEANIU control module with the 015S400 power module.

Combine to form model number

24 VDC I/O Control Modules

	DPEANIU-
Feedback	Absolute Encoder Incremental Encoder Sin/Cos Encoder

AC Power Modules

	015S400
Supply (VAC)	100-240*
Peak Current (A)	15
Cont. Current (A)	7.5
Dimensions (mm)	177 x 123 x 44

*Single Phase AC Only

Model Number:
DPEANIU-015S400

Universal Feedback
DPE drives support all the listed feedback devices simply by changing the drive firmware. The appropriate firmware can be uploaded to the drive through DriveWare® and is included with the software download.

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Z-Drives Plug-In Integration

DZE/DZS drives are packaged in a lightweight and compact form factor designed to be embedded directly into a PCB - no wires required! Inverted baseplate mounting also allows for direct wired connector access. A common footprint is used for the different power modules in the series to simplify prototyping.

Communication

- EtherCAT® Networking
- 'DxM' Technology
- USB Drive Commissioning

Command Types

- Over the Network
- +/-10V Analog
- Encoder Following

Power Range

- 1.5 - 3.3kW Peak Power Output
- 0.8 - 1.6kW Cont. Power Output

Firmware Selectable Feedback

- Absolute Sin/Cos Encoder (Heidenhain EnDat® or Stegmann Hiperface®)
- 1Vp-p Sin/Cos Encoder
- Incremental Encoder

Auxiliary Feedback

- Hall Sensors
- Aux. Incremental Encoder
- Tachometer

To build a model number, select a control module based on the EtherCAT® node type and combine with the 020B080 power module.



EtherCAT®



Combine to form model number

Control Modules

	DZEANTU-	DZSANTU-
Node Type	Node	Sub-Node
Feedback	Absolute Encoder Incremental Encoder Sin/Cos Encoder	Absolute Encoder Incremental Encoder Sin/Cos Encoder

DC Power Module

	020B080	040B080	020B200
Supply (VDC)	20-80	20-80	40-175
Peak Current (A)	20	40	20
Cont. Current (A)	12	20	10
Dimensions (mm)	90 x 64 x 20	90 x 64 x 20	90 x 64 x 20

Model Numbers:
DZEANTU-020B080
DZSANTU-020B080

Universal Feedback

These drives support all the listed feedback devices simply by changing the drive firmware. The appropriate firmware can be uploaded to the drive through DriveWare® and is included with the software download.

DxM TECHNOLOGY

ADVANCED Motion Controls exclusive 'DxM' (Demultiplexed Motion) Technology allows connectivity of up to 3 DZS drives (sub-nodes) to a single DZE (node) on an EtherCAT® network, allowing control of up to 4 axes of servo motion at a reduced cost. DZE drives can also be used as a stand-alone EtherCAT® node in a single-axis setup or as part of a larger multi-axis EtherCAT® network. DZS drives must be used as sub-nodes in a 'DxM' configuration with a DZE node.



Datasheets and Additional Product Info





ADVANCED Motion Controls offers mounting cards to simplify the connections between DZE/DZS drives and external system hardware (motors, feedback devices, controllers). These mounting cards are ideal for the prototyping and development stages as well as implementation into the final system design. The MC1XDZPE01 is designed to mount a DZE drive, while the MC4XDZP01 mounts one DZE drive and three DZS drives in a 'DxM' configuration.

Mounting Cards

	Axes	Motor/Power Connector	Max Voltage	Max Peak Current*
MC1XDZPE01	1	Side-entry screw terminal	175	40
MC4XDZP01	4	Side-entry screw terminal	175	40

*Per Axis

Mating Connector Kit

Mating connector housing and socket contacts can be ordered as a kit using *ADVANCED* Motion Controls part numbers **KC-MC1XDZP01** for the MC1XDZPE01 and **KC-MC4XDZP01** for the MC4XDZP01.





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Panel Mount Drives

DPR drives are enclosed by a metal cover and can be mounted on their spine or flat against the base.

Communication

- RS485/232 Networking and Drive Commissioning

Command Types

- Over the Network (All)
- +/-10V Analog (DPRAxIx)
- 24V Step and Direction (DPRAHIx)
- 5V Step and Direction (DPRxLxx)
- PWM and Direction (All)
- Encoder Following (All)

Power Range

- 1.5 - 27.4 kW Peak Power Output
- 0.8 - 13.7 kW Cont. Power Output

Primary Feedback

- Absolute Sin/Cos Encoder (Heidenhain EnDat® or Stegmann Hiperface®)
- 1Vp-p Sin/Cos Encoder
- Incremental Encoder
- Resolver

Auxiliary Feedback

- Hall Sensors
- Aux. Incremental Encoder
- Tachometer



RS-485/232
SERIAL







Datasheets and Additional Product Info













To build a model number, select a control module by command (see Command Types above) and feedback type, then combine with a power module that suits your system's requirements. 24 VDC I/O Control Modules combine with AC Power Modules, and 5VTTL Control Modules combine with DC Power Modules.

Combine to form model number

24 VDC I/O Control Modules

	DPRAHIA-	DPRAHIE-	DPRAHIR-	DPRAHIS-	DPRANIE-	DPRANIR-	DPRNLIE-
Feedback	Absolute Encoder	Incremental Encoder	Resolver	Sin/Cos Encoder	Incremental Encoder	Resolver	Incremental Encoder

Combine to form model number

AC Power Modules

Example: DPRAHIE-060A400

	015S400	015A400	030A400	060A400	100A400	030A800	060A800
Supply (VAC)	100-240*	100-240	100-240	100-240	200-240	200-480	200-480
Peak Current (A)	15	15	30	60	100	30	60
Cont. Current (A)	7.5	7.5	15	30	50	15	30
Dimensions (mm)	177 x 123 x 44	177 x 140 x 56	202 x 157 x 70	235 x 162 x 151	273 x 230 x 149	301 x 232 x 92	301 x 232 x 139

*Single Phase AC Only

Combine to form model number

5VTTL I/O Control Modules

	DPRALTE-	DPRALTR-
Feedback	Incremental Encoder	Resolver

Combine to form model number

DC Power Modules

Example: DPRALTR-040B080

	020B080	040B080	060B080	015B200	025B200
Supply (VDC)	20-80	20-80	20-80	40-190	20-190
Peak Current (A)	20	40	60	15	25
Cont. Current (A)	10	20	30	7.5	12.5
Dimensions (mm)	133 x 90 x 36	191 x 112 x 36	191 x 112 x 36	133 x 90 x 36	191 x 112 x 36

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Z-Drives Plug-In Integration

DZR drives are packaged in a lightweight and compact form factor designed to be embedded directly into a PCB - no wires required! Inverted baseplate mounting also allows for direct wired connector access. A common footprint is used for the different power modules in the series to simplify prototyping.

Communication

- RS485/232 Networking and Drive Commissioning

Command Types

- Over the Network
- +/-10V Analog
- 5V Step and Direction
- PWM and Direction
- Encoder Following

Power Range

- 0.9 - 4.6 kW Peak Power Output
- 0.5 - 2.3 kW Cont. Power Output

Primary Feedback

- Incremental Encoder

Auxiliary Feedback

- Hall Sensors
- Aux. Incremental Encoder
- Tachometer







To build a model number, combine a power module to meet your system's requirements with the DZRALTE control module.



RS-485/232
SERIAL





Datasheets and Additional Product Info

Combine to form model number

Control Module

DZRALTE-

Feedback	
	Incremental Encoder

DC Power Modules

Example: DZRALTE-040L080

	012L080	020L080	040L080	060L080	010L200	025L200
Supply (VDC)	20-80	10-80	10-80	10-80	40-175	40-175
Peak Current (A)	12	20	40	60	10	25
Cont. Current (A)	6	12	20	30	5	12.5
Dimensions (mm)	64 x 51 x 18	64 x 51 x 23	76 x 51 x 23	76 x 51 x 23	64 x 51 x 23	76 x 51 x 23







ADVANCED Motion Controls offers mounting cards and mating connector kits to simplify the connections between DZR drives and external system hardware (motors, feedback devices, controllers). These mounting cards are ideal for the prototyping and development stages as well as implementation into the final system design.

Mounting Cards

	Axes	Motor/Power Connector	Max Voltage	Max Peak Current
MC1XDZR02	1	Side-entry screw terminal	175	40
MC1XDZR02-QD	1	Vertical-entry quick-disconnect	175	25
MC1XDZR02-HP1	1	Side-entry screw terminal	80	60

Mating Connector Kit

Mating connector housing and socket contacts can be ordered as a kit using *ADVANCED* Motion Controls part number **KC-MC1XDZ02**.





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Panel Mount Drives

DPQ drives are enclosed by a metal cover and can be mounted on their spine or flat against the base.

Communication

- SynqNet® Networking
- RS485/232 Drive Commissioning

Command Types

- Over the Network

Power Range

- 1.5 - 27.4 kW Peak Power Output
- 0.8 - 13.7 kW Cont. Power Output

Primary Feedback

- Incremental Encoder

Auxiliary Feedback

- Hall Sensors
- Aux. Incremental Encoder
- Tachometer



SynqNet



DIGITAL PANEL MOUNT

Datasheets and Additional Product Info









To build a model number, combine a power module to meet your system's requirements with the DPQNNIE control module.

Combine to form model number

24 VDC I/O Control Module

DPQNNIE-

Feedback	
	Incremental Encoder

AC Power Modules

	015S400	015A400	030A400	060A400	100A400	030A800	060A800
Supply (VAC)	100-240*	100-240	100-240	100-240	200-240	200-480	200-480
Peak Current (A)	15	15	30	60	100	30	60
Cont. Current (A)	7.5	7.5	15	30	50	15	30
Dimensions (mm)	177 x 123 x 44	177 x 140 x 56	202 x 157 x 70	235 x 162 x 151	273 x 230 x 149	301 x 232 x 92	301 x 232 x 139

*Single Phase AC Only

or

DC Power Modules

	020B080	040B080	060B080	015B200	025B200
Supply (VDC)	20-80	20-80	20-80	40-190	20-190
Peak Current (A)	20	40	60	15	25
Cont. Current (A)	10	20	30	7.5	12.5
Dimensions (mm)	133 x 90 x 36	191 x 112 x 36	191 x 112 x 36	133 x 90 x 36	191 x 112 x 36

Examples:
DPQNNIE-030A800
DPQNNIE-040B080

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ADVANCED Motion Controls family of Analog Servo Drives provide unparalleled benefits in both simplicity and performance. Drive setup and operation is more straightforward than digital drives, while acheiving higher bandwidth and faster response times at a lower cost. Analog drive technology has been a staple of servo system solutions since day one, and our years of experience in building the highest quality products has created a solid and continuously improving selection of analog drives. A variety of command options, including +/- 10V analog, PWM and Direction, dual Sine wave, and specialized electric vehicle commands make the *ADVANCED* Motion Controls family of analog drives your best choice for proven servo solutions.

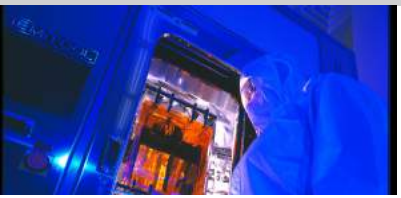




- **Built-in hardware protection - Over Current, Over Voltage, Over Temperature, Short Circuit**
- **DIP Switches and Potentiometers for loop tuning, current limit adjustments, and drive configuration**
- **Standard models for both brushed and brushless motor varieties**
- **Velocity feedback provided by incremental encoder, Hall Sensors, or tachometer**
- **Analog Position Loop control available**
- **Optical Isolation between high and low power signals standard on most models**
- **Current, Velocity, and Fault Monitor analog output signals**
- **Status LEDs for power and drive status**
- **Standard models in both Panel Mount, PCB Mount (Z-Drives), and Vehicle Mount (M/V™ Series Motor Controllers)**
- **Four quadrant regenerative operation**
- **Extended Environment versions available (AZX series Z-Drives)**



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Panel Mount Drives

These analog brushless drives are enclosed by a metal cover and can be mounted on their spine or flat against the base.

Command Types

- +/-10V Analog
- Direct PWM and Direction ('BD' Drives)
- Torque Mode PWM and Direction ('BDC' Drives)

Potentiometers

- Loop Gain
- Current Limit
- Reference Gain
- Offset/Test Signal

Primary Feedback

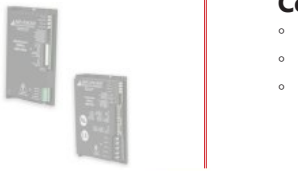
- Hall Sensors
- Incremental Encoder
- Tachometer

Modes of Operation

- 'B' Drives - Current, Hall Velocity, Encoder Velocity
- 'BE' Drives - Encoder Velocity
- 'BX' Drives - Current, Hall Velocity, Encoder Velocity
- 'BD' and 'BDC' Drives - Torque Mode PWM, Direct PWM

Power Range

- 1.1 - 15.2kW Peak Power Output
- 0.6 - 7.6kW Cont. Power Output







Datasheets and Additional Product Info

To select a model number, choose a series based on the mode of operation, then find a model that matches your system's power requirements. Note that not all listed modes of operation are included on every drive in the series. Consult the drive datasheet for specific modes.

'B' Series Models - Current, Hall Velocity, Encoder Velocity

	Supply (VAC)	Supply (VDC)	Peak Current (A)	Cont. Current (A)	Dimensions (mm)
B15A8	-	20-80	15	7.5	129 x 76 x 25
BE15A8-H	-	20-80	15	7.5	129 x 76 x 25
B30A8	-	20-80	30	15	187 x 112 x 25
B25A20AC	30-125	40-190	25	12.5	187 x 107 x 62
B25A20I	-	40-190	25	12.5	187 x 112 x 25
B40A20I	-	40-190	40	20	187 x 112 x 25
B30A40	-	60-400	30	15	203 x 143 x 41
B30A40AC	45-265	60-400	30	15	203 x 166 x 103
B40A40AC	45-265	60-400	40	20	235 x 164 x 114
B40A40	-	60-400	40	20	235 x 159 x 64

'BE' Series Models - Encoder Velocity

	Supply (VAC)	Supply (VDC)	Peak Current (A)	Cont. Current (A)	Dimensions (mm)
BE15A8	-	20-80	15	7.5	129 x 76 x 25
BE30A8	-	20-80	30	15	187 x 112 x 25
BE25A20AC	30-125	40-190	25	12.5	187 x 107 x 62
BE25A20I	-	40-190	25	12.5	187 x 112 x 25
BE40A20I	-	40-190	40	20	187 x 112 x 25

'BX' Series Models - Current, Hall Velocity, Encoder Velocity

	Supply (VAC)	Supply (VDC)	Peak Current (A)	Cont. Current (A)	Dimensions (mm)
BX30A8	-	20-80	30	15	187 x 112 x 37
BX25A20AC	45-125	60-200	25	12.5	187 x 107 x 62
BX25A20	-	60-200	25	12.5	187 x 112 x 37

'BD' Series Models - Direct PWM

	Supply (VAC)	Supply (VDC)	Peak Current (A)	Cont. Current (A)	Dimensions (mm)
BD15A8	-	20-80	15	7.5	129 x 76 x 25
BD30A8	-	20-80	30	15	187 x 112 x 25
BD25A20AC	30-125	40-190	25	12.5	187 x 107 x 62
BD25A20I	-	40-190	25	12.5	187 x 112 x 25

'BDC' Series Models - Torque Mode PWM

	Supply (VAC)	Supply (VDC)	Peak Current (A)	Cont. Current (A)	Dimensions (mm)
BDC30A8	-	20-80	30	15	187 x 112 x 37
BDC40A20	-	60-190	40	20	187 x 112 x 37

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Z-Drives Plug-In Integration
AZB drives are packaged in a lightweight and compact form factor designed to be embedded directly into a PCB - no wires required! Inverted baseplate mounting also allows for direct wired connector access. A common footprint is used for the different power modules in the series to simplify prototyping.

Command Types
- +/-10V Analog
- PWM and Direction (Torque Mode)

Modes of Operation
- Current
- Encoder Velocity
- Hall Velocity
- Duty Cycle (Open Loop)
- Torque Mode PWM

Power Range
- 0.5 - 4.5kW Peak Power Output
- 0.2 - 2.3kW Cont. Power Output

Primary Feedback
- Hall Sensors
- Incremental Encoder
- Tachometer

Potentiometers
- Loop Gain
- Offset









To build a model number, select a control module based on the desired mode of operation, then combine with a power module to meet your system's requirements.

Combine to form model number

AZB Control Modules

	AZB...	AZBE...	AZBH...	AZBDC...
Operating Mode	Current	Encoder Velocity Duty Cycle	Hall Velocity Duty Cycle	Torque Mode PWM

DC Power Modules

Examples:
AZB20A8
AZBE40A8
AZBDC6A8

	6A8	12A8	20A8	40A8	60A8	10A20	25A20
Supply (VDC)	20-80	20-80	10-80	10-80	10-80	40-175	40-175
Peak Current (A)	6	12	20	40	60	10	25
Cont. Current (A)	3	6	12	20	30	6	12.5
Dimensions (mm)	64 x 51 x 17	64 x 51 x 17	64 x 51 x 23	76 x 51 x 23	76 x 51 x 23	64 x 51 x 23	76 x 51 x 23





Datasheets and Additional Product Info





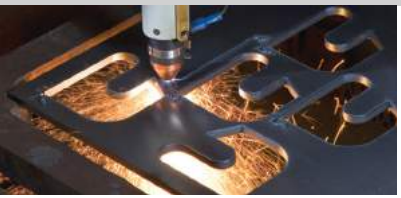
ADVANCED Motion Controls offers mounting cards to simplify the connections between AZB drives and external system hardware (motors, feedback devices, controllers). These mounting cards are ideal for the prototyping and development stages as well as implementation into the final system design.

Mounting Cards

	Axes	Motor/Power Connector	Max Voltage	Max Peak Current
MC1XAZ01	1	Vertical-entry quick-disconnect	175	25
MC1XAZ01-HR	1	Side-entry screw terminal	175	60

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Panel Mount Drives

These analog brushed drives are enclosed by a metal cover and can be mounted on their spine or flat against the base.

Command Types

- +/-10V Analog
- Direct PWM and Direction

Potentiometers

- Loop Gain
- Current Limit
- Reference Gain
- Offset/Test Signal

Power Range

- 0.6 - 1.9kW Peak Power Output
- 0.3 - 1.0kW Cont. Power Output

Primary Feedback

- Tachometer

Modes of Operation (+/-10V Analog)

- Current
- Voltage
- IR Compensation
- Velocity

Modes of Operation (PWM and Dir)

- Direct PWM Current Mode



ANALOG PANEL MOUNT

Datasheets and Additional Product Info









To select a model number, choose a series based on the command type, then find a model that matches your system's power requirements.

Brushed +/-10V Analog Command Models

	Supply (VAC)	Supply (VDC)	Peak Current (A)	Cont. Current (A)	Dimensions (mm)
12A8	-	20-80	12	6	129 x 76 x 25
25A8	-	20-80	25	12.5	129 x 76 x 25
30A8	-	20-80	30	15	187 x 112 x 25
50A8	-	20-80	50	25	187 x 112 x 25
120A10	-	20-80	120	60	254 x 130 x 49
16A20AC	30-125	40-190	16	8	187 x 107 x 62
20A20	-	40-190	20	10	129 x 76 x 25
25A20I	-	40-190	25	12.5	187 x 112 x 25
30A20AC	30-125	40-190	30	15	187 x 107 x 62
50A20I	-	40-190	50	25	187 x 112 x 25
100A40	-	80-400	100	50	235 x 183 x 92

Brushed PWM and Direction Command Models

	Supply (VAC)	Supply (VDC)	Peak Current (A)	Cont. Current (A)	Dimensions (mm)
30A8DD	-	20-80	30	15	187 x 112 x 25
50A8DD	-	20-80	50	25	187 x 112 x 25
25A20DD	-	40-190	25	12.5	187 x 112 x 25
50A20DD	-	40-190	50	25	187 x 112 x 25

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Z-Drives Plug-In Integration
AZ drives are packaged in a lightweight and compact form factor designed to be embedded directly into a PCB - no wires required! Inverted baseplate mounting also allows for direct wired connector access. A common footprint is used for the different power modules in the series to simplify prototyping.

Command Types
- +/-10V Analog
- PWM and Direction (Torque Mode)

Modes of Operation
- Current
- Torque Mode PWM

Power Range
- 0.5 - 4.5kW Peak Power Output
- 0.2 - 2.3kW Cont. Power Output





To build a model number, select a control module based on the desired mode of operation, then combine with a power module to meet your system's requirements.



Combine to form model number

Examples:
AZ20A8
AZ40A8DDC

AZB Control Modules	AZ...	AZ ... DDC
Operating Mode	Current	Torque Mode PWM

DC Power Modules	6A8	12A8	20A8	40A8	60A8	10A20	25A20
Supply (VDC)	20-80	20-80	10-80	10-80	10-80	40-175	40-175
Peak Current (A)	6	12	20	40	60	10	25
Cont. Current (A)	3	6	12	20	30	6	12.5
Dimensions (mm)	64 x 51 x 17	64 x 51 x 17	64 x 51 x 23	76 x 51 x 23	76 x 51 x 23	64 x 51 x 23	76 x 51 x 23





Datasheets and Additional Product Info



ADVANCED Motion Controls offers mounting cards to simplify the connections between AZ drives and external system hardware (motors, feedback devices, controllers). These mounting cards are ideal for the prototyping and development stages as well as implementation into the final system design.



Mounting Cards	Axes	Motor/Power Connector	Max Voltage	Max Peak Current
MC1XAZ01	1	Vertical-entry quick-disconnect	175	25
MC1XAZ01-HR	1	Side-entry screw terminal	175	60

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Panel Mount Drives

These sinusoidal drives are enclosed by a metal cover and can be mounted on their spine or flat against the base.

Power Range

- 1.2 - 38kW Peak Power Output
- 0.6 - 19kW Cont. Power Output

Mode of Operation

- Current

Command Types

- 120° Sine

S series drives are the only analog drives offered by *ADVANCED* Motion Controls with sinusoidal commutation (all digital DigiFlex® Performance™ models use sinusoidal commutation). S series drives require two specialized sinusoidal command signals from an external controller that correspond to the motor phase currents and control the commutation and torque to the motor.





To select a model number, choose a model that matches your system's power requirements.



Datasheets and Additional Product Info











'S' Series Models

	Supply (VAC)	Supply (VDC)	Peak Current (A)	Cont. Current (A)	Dimensions (mm)
S16A8	-	20-80	16	8	129 x 78 x 39
SX30A8	-	20-80	30	15	187 x 112 x 37
S60A8	-	20-80	60	30	235 x 160 x 89
S100A8	-	20-80	100	50	271 x 234 x 92
SX25A20	-	60-190	25	12.5	187 x 112 x 37
S30A40	-	60-400	30	15	203 x 143 x 41
S30A40AC	45-270	60-380	30	15	203 x 166 x 103
S60A40	-	60-400	60	30	235 x 160 x 89
S60A40AC	45-270	60-380	60	30	235 x 162 x 155
S100A40	-	60-400	100	50	271 x 234 x 92
S100A40AC	45-270	60-380	100	50	271 x 234 x 161

All motor feedback is returned to the controller, which tracks the motor rotor position and outputs the correct signals to the drive in order to maintain the proper phase angle.

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M/V™ series vehicle mount motor controllers

Vehicle Mount Drives
M/V™ drives are packaged in an IP65 ruggedized enclosure designed for mounting in electric vehicles.

Command Types
- +/-10V Analog
- 0-5kΩ Potentiometer
- 0-5V Analog

Power Range
- 12.8 - 20.8 kW Peak Power Output
- 7.7 - 16.6 kW Cont. Power Output

Potentiometers
- Loop Gain
- Current Limit
- Reference Gain
- Offset/Test Signal
- Ramp Time
- Deadband

Electric Mobility and Vehicle I/O
- Electromagnetic Holding Brake Output
- Forward and Reverse Inputs
- Push Brake Release Inputs
- Speed Limit Pot Input
- KeySwitch Master Input

Primary Feedback
- Hall Sensors
- Incremental Encoder
- Tachometer

Modes of Operation
- Current
- Voltage
- Duty Cycle (Open Loop)
- IR Compensation
- Velocity
- Hall Velocity



To build a model number, select a control module based on the application category, then combine with a power module to meet your system's requirements.



M/V™ series
Electric Vehicle Motor Controls

ANALOG | VEHICLE MOUNT | Ingress Protection IP65

Combine to form model number

M/V™ Control Modules

	AVB...	AB...
Applications	Electric Mobility and Vehicle	General Industrial

DC Power Modules

	250A060	200A100	125A200	100C200
Supply (VAC)	20-54	20-80	40-175	40-175
Peak Current (A)	250	200	125	100
Cont. Current (A)	150	125	80	100
Dimensions (mm)	203 x 140 x 60	203 x 140 x 60	203 x 140 x 60	203 x 140 x 60

Examples:
AVB250A060
AB125A200



Datasheets and Additional Product Info

Vehicle Commands
On AVB models, DIP switches are used to select the command input type:

- **Wigwag/Single-Ended Command Input**
- **3-Wire / 2-Wire External Potentiometer Command Source**
- **Standard / Inverted Inputs**
- **Half Speed Reverse**

Mating Connector Kit
Mating connector housing, socket contacts, and seal plugs can be ordered as a kit using *ADVANCED* Motion Controls part number **KC-23AMPSEAL01**.





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Extended Environment Servo Drives



ADVANCED Motion Controls' Extended Enviroment products are designed to operate under harsh thermal and mechanical extremes. An expanded thermal operating range allows these drives to function in both hot and cold ambient environments, and enhanced protection against shock and vibration provides additional system ruggedness. Extended Environment drives also afford benefits for applications in more docile conditions. The superior thermal capabilities reduce or eliminate the need for cooling systems such as external heat sinks and fans, enabling system designs to be more compact and to improve overall reliability.

HOT

-40°C / -40°F — Extended Environment — +85°C / +185°F

- **Ambient operating temperatures ranging from -40°C to 85°C (-45°F to 185°F)**
- **Over Temperature heat sink protection up to 105°C (221°F)**
- **Thermal rise cycling in about 2 minutes**
- **Shock up to 15g's at 11ms**
- **Vibration up to 30grms on all 3 axes**
- **Standard models in PCB Mount (Z-Drives) form factor - Panel Mount models available as custom designs**
- **Designed to assist system compliance toward:**
  - » **MIL-STD-810F: temperature, thermal shock, humidity, altitude, shock & vibration**
  - » **MIL-STD-1275D: characterization of 28VDC systems**
  - » **MIL-STD-461E: control of electromagnetic interference**
  - » **MIL-STD-704F: aircraft power characteristics**
  - » **MIL-HDBK-217: reliability predictions**
- **Tested to meet above standards upon customer request**

Shock & Vibration



DZX series





AZX series

COLD

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DZX series - Extended Environment Digital pcb mount

Z-Drives Plug-In Integration

DZX drives are packaged in a lightweight and compact form factor designed to be embedded directly into a PCB - no wires required! Inverted baseplate mounting also allows for direct wired connector access. A common footprint is used for the different power modules in the series to simplify prototyping.

Communication

- CANopen or RS485/232 Networking
- RS485/232 Drive Commissioning

Command Types

- Over the Network
- +/-10V Analog
- 5V Step and Direction
- PWM and Direction
- Encoder Following

Extended Environment

- -40ºC to +75ºC Ambient Operating Range
- Shock up to 15g's
- Designed to Environmental Engineering Considerations as defined in MIL-STD-810F

Primary Feedback

- Incremental Encoder

Auxiliary Feedback

- Hall Sensors
- Aux. Incremental Encoder
- Tachometer

Power Range

- 0.6 - 3kW Peak Power Output
- 0.3 - 1.5kW Cont. Power Output

To build a model number, select a control module based on network communication type, then combine with a power module to meet your system's requirements.



Combine to form model number

Example: DZXCANTE-040L080

DZX Control Modules

	DZXCANTE-	DZXRALTE-
Network	CANopen	RS485/232

DC Power Modules

	008L080	015L080	040L080
Supply (VDC)	10-80	10-80	10-80
Peak Current (A)	8	15	40
Cont. Current (A)	4	7.5	20
Dimensions (mm)	64 x 51 x 24	64 x 51 x 24	76 x 51 x 23

ADVANCED Motion Controls offers mounting cards to simplify the connections between DZX drives and external system hardware (motors, feedback devices, controllers). These mounting cards are ideal for the prototyping and development stages as well as implementation into the final system design.

Mounting Cards*

	Axes	Motor/Power Connector	Max Voltage	Max Peak Current
MC1XDZx02	1	Side-entry screw terminal	175	40
MC1XDZx02-QD	1	Vertical-entry quick-disconnect	175	25
MC1XDZx02-HP1	1	Side-entry screw terminal	80	60

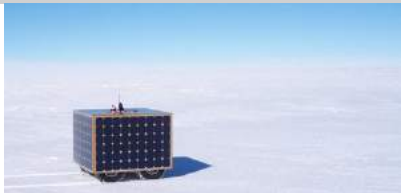
*Replace "x" in the model number with "C" for DZXCANTE drives or "R" for DZXRALTE drives

Mating Connector Kit

Mating connector housing and socket contacts can be ordered as a kit using *ADVANCED* Motion Controls part number **KC-MC1XDZ02**.









CANopen

RS-485/232 SERIAL

DIGITAL PCB MOUNT EXTENDED ENVIRONMENT



Datasheets and Additional Product Info







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RoHS CE cULus

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Z-Drives Plug-In Integration

AZX drives are packaged in a lightweight and compact form factor designed to be embedded directly into a PCB - no wires required! Inverted baseplate mounting also allows for direct wired connector access. A common footprint is used for the different power modules in the series to simplify prototyping.

Command Types

- +/-10V Analog
- PWM and Direction (Torque Mode)

Modes of Operation

- Current
- Encoder Velocity
- Hall Velocity
- Duty Cycle (Open Loop)
- Torque Mode PWM

Extended Environment

- -40ºC to +85ºC Ambient Operating Range
- Shock up to 15g's
- Designed to Environmental Engineering Considerations as defined in MIL-STD-810F

Primary Feedback

- Hall Sensors
- Incremental Encoder
- Tachometer

Potentiometers

- Loop Gain
- Offset

Power Range

- 0.6 - 1.9kW Peak Power Output
- 0.3 - 1.0kW Cont. Power Output

To build a model number, select a control module based on the desired mode of operation, then combine with a power module to meet your system's requirements.





Datasheets and Additional Product Info





Combine to form model number

AZX Control Modules

	AZXB...	AZXBE...	AZXBH...	AZXBDC...
Operating Mode	Current	Encoder Velocity Duty Cycle	Hall Velocity Duty Cycle	Torque Mode PWM

DC Power Modules

	8A8	15A8	25A8
Supply (VDC)	10-80	10-80	10-80
Peak Current (A)	8	15	25
Cont. Current (A)	4	7.5	12.5
Dimensions (mm)	64 x 51 x 23	64 x 51 x 23	76 x 51 x 23

Examples:
AZXB8A8
AZXBDC15A8

ADVANCED Motion Controls offers mounting cards to simplify the connections between AZX drives and external system hardware (motors, feedback devices, controllers). These mounting cards are ideal for the prototyping and development stages as well as implementation into the final system design.

Mounting Cards

	Axes	Motor/Power Connector	Max Voltage	Max Peak Current
MC1XAZ01	1	Vertical-entry quick-disconnect	175	25
MC1XAZ01-HR	1	Side-entry screw terminal	175	60

ISO9001 CERTIFIED

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Custom Servo Drive Capabilities



Two on-site full SMT production lines, and four on-site engineering labs will design and support OEM solutions as if they were standard products!

ADVANCED Motion Controls has the capability to promptly develop and deliver specified products for OEMs with volume requests. Our Applications and Engineering Departments will work closely with your design team through all stages of development in order to provide the best servo drive solution for your system.

Equipped with on-site engineering and manufacturing for quick-turn customs capabilities, *ADVANCED* Motion Controls utilizes our years of expertise to decrease your costs and time-to-market while increasing system quality and reliability.

Custom products are built on the same equipment and with the same people as if they were production units, enabling rapid development and fast delivery, as well as making it easy to make changes before the product is released to production.









An ISO 9001:2008 certified online documentation workflow insures accuracy and consistency throughout design, manufacturing, testing, and support of all products.

ISO9001 CERTIFIED



ADVANCED Motion Controls has extensive experience in designing affordable custom products optimized for OEM's specific needs. Whether a simple modification to a standard product or a completely custom design, we can support and sell custom solutions as if they were standard products.





Examples of Customized Products and Options

- Optimized Footprint
- Private Label Software
- OEM Specified Connectors
- No Outer Case
- Increased Current Resolution
- Increased Temperature Range
- Custom Control Interface
- Integrated System I/O
- Tailored Project File
- Silkscreen Branding
- Optimized Base Plate
- Increased Current Limits
- Increased Voltage Range
- Conformal Coating
- Multi-Axis Configurations
- Reduced Profile Size and Weight

Feel free to contact our Applications Engineering department for more information on custom solutions!



- **Reduce project development time and cost**
- **Simplify integration of motor, controller, power supply, feedback**
- **Precisely matched sizing requirements**



Custom Solutions Information

Designed & Built in USA







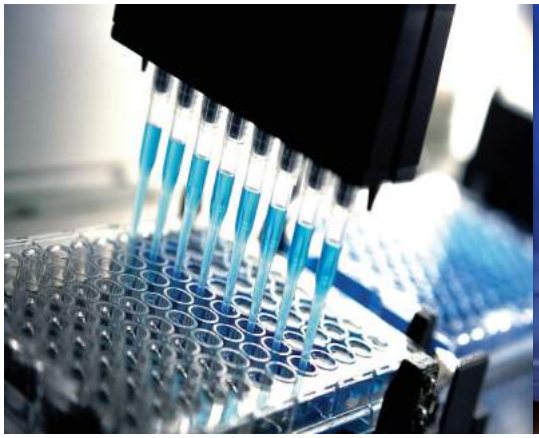
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- **Engineering support available to you on-site**
- **Close collaboration with, and an extension of, your engineering team**
- **Diverse industrial experiences and knowledge allows us to improve your systems**
- **Proud of providing you with the most optimized solutions**
- **Passionate about your success**

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