

Understand + Innovate + Solve

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**Working for you worldwide**

**Axiomatic Technologies Corporation**  
1445 Courtneypark Drive E.  
Mississauga, ON, CANADA  
L5T 2E3  
TEL: 1 905-602-9270  
FAX: 1 905-602-9279

**Axiomatic Technologies Corporation**  
Unit 1632, 3 Lakeview Rise  
Noosa Heads, QLD 4567  
AUSTRALIA  
+61 (0) 423 600 664

**Axiomatic Technologies Oy**  
Höytämöntie 6  
33880 Lempäälä  
FINLAND  
TEL: +358 103 375 750  
FAX: +358 3 3595 660

**Help us understand your controls challenge.**  
**We innovate with engineered and off-the shelf products.**  
**[www.axiomatic.com](http://www.axiomatic.com)**

Our products are designed to be customized by our customers and can be thought of as product foundations. Find the foundational product(s) that you need in our catalog, add them to your quote cart, then explain your requirements for your project on the quote cart submission form. If you cannot find the **foundational product**, please **tell us your requirements**.

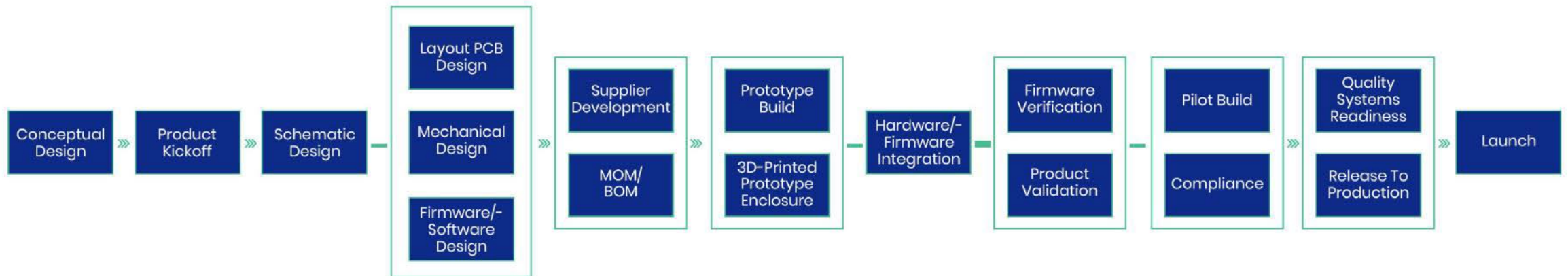


Understand + Innovate + Solve.

## Collaboration



## Innovation in Controls Design



Agile and rigorous New Product Introduction



# SOLVE – using off-the-shelf or custom control solutions

## Design Collaboration

New design to meet your needs (hardware and firmware) ([sales@axiomatic.com](mailto:sales@axiomatic.com))

## Firmware or Setpoints from Factory

Firmware adaptation or setpoint files for specific applications ([sales@axiomatic.com](mailto:sales@axiomatic.com))

## Technical Support for Prototype

Technical support for prototype bench tests ([support@axiomatic.com](mailto:support@axiomatic.com))

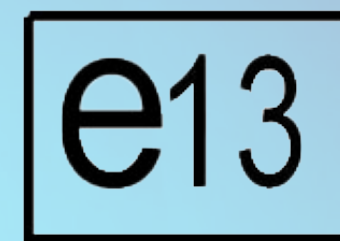
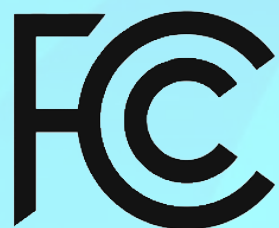
## Field Support

Troubleshooting for field issues ([support@axiomatic.com](mailto:support@axiomatic.com))

## Returned Goods

Return materials process (RMA) ([rma@axiomatic.com](mailto:rma@axiomatic.com))

## Testing for Harsh Field Conditions



**IP67**

## Materials Compliance



**RoHS**



**SCIP**



# Fieldbus Networking

Many Axiomatic controls feature CAN bus networking:

- SAE J1939 (250 kbps, 500 kbps, 667 kbps, 1 Mbps)
  - Auto-Baud-Rate detection
- High speed CAN ISO 11998-2
- CANopen
- MilCAN

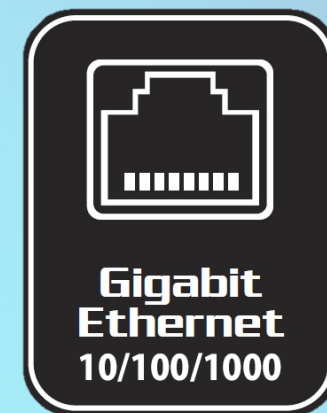
Other fieldbus protocols include:

- Automotive Ethernet (100 Mb), Gigabit AE (1000 Mb)
- Ethernet (10/100 Mb), Gigabit Ethernet (1000 Mb), 10 GBe (10Gb)
- LIN
- Modbus RTU, Modbus TCP/IP
- RS-485, RS-422, RS-232
- J2497, J1587

We also interface with Classic Bluetooth and BLE.

CAN | J1939

CANopen®



## Quality Manufacturing



## Axiomatic Manufacturing Facility





## Automation Solutions



**Analog, Digital, & Enhanced I/O**  
(for Signal Conditioning, Measuring,  
Converting, Controlling of Outputs, and  
Datalogging)

## Automation Solutions

**Controls for Engine Management  
+ Data Acquisition**





# ElectroHydraulic Solutions



**Hydraulic Valve Drivers + Controllers**



## Connectivity Solutions



### Vehicle & Engine Protocol Converters, Gateways, Switches, Routers

(Automotive Ethernet, Gigabit Ethernet,  
Ethernet TCP/IP, Modbus, RS-485/422/232,  
CAN, LIN, WiFi, Bluetooth)

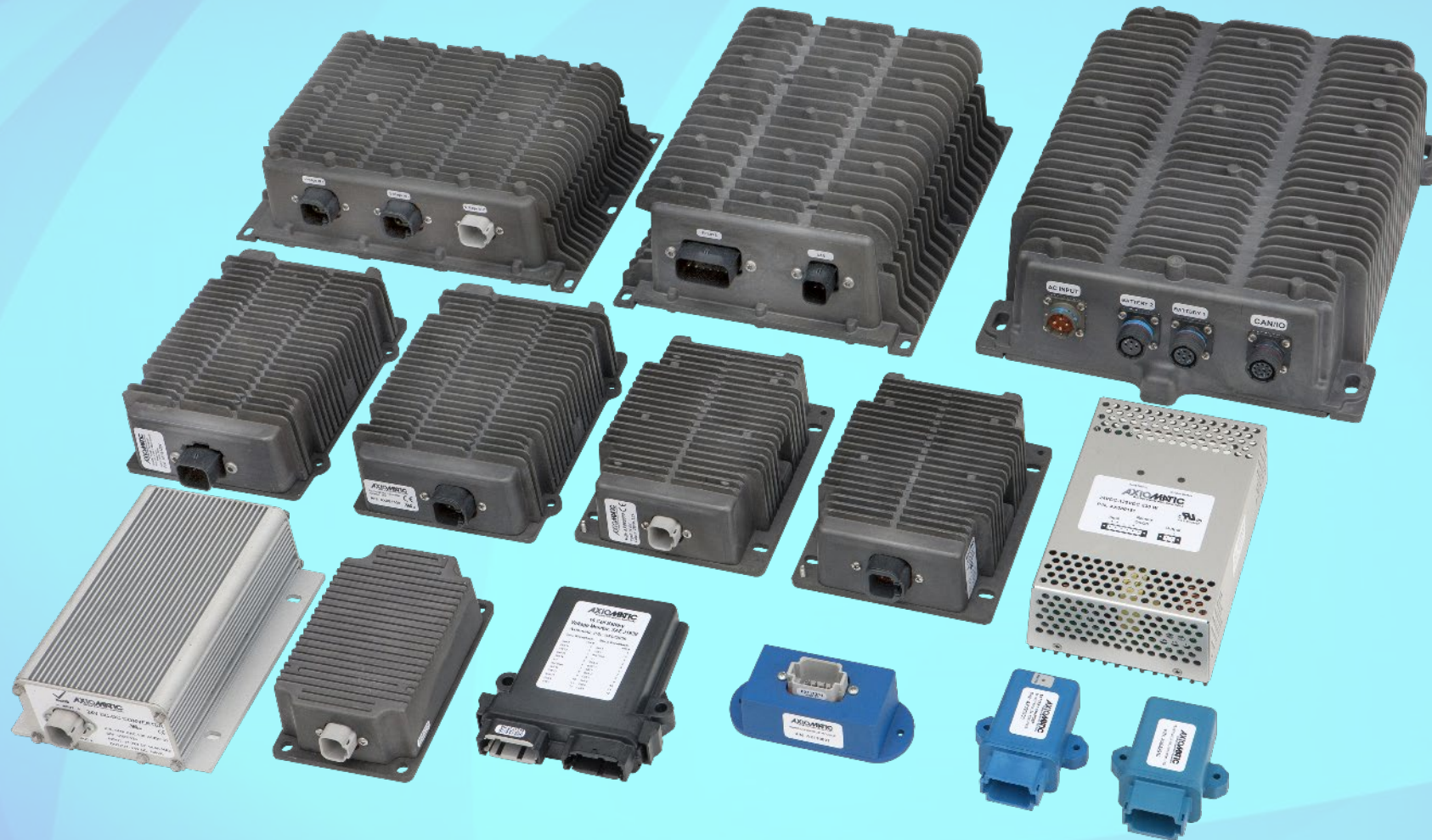
## Machine Control Solutions



**Machine Control Systems, Inclinometers,  
Gyroscopes + Laser Receiver + Level Sensor**



# Power Management Electronic Solutions



**AC/DC, DC/DC Converters, Power  
Supplies + Battery Chargers +  
Surge Protectors**



## H-Bridge, BLDC Motor Control Solutions



**DC, BLDC, PMSM & Stepper  
Motor Drives + Actuators**

## The Way to Autonomous Machines



**AX141550:**

Gigabit Automotive Ethernet to  
Gigabit Ethernet Converter



**AX140700:**

6 Port Ethernet Switch

**AX140705:**

6 Port Gigabit Ethernet Switch



**AX140720:**

4 Port Gigabit Ethernet Switch

**Our controls interface with advanced sensors and devices to add autonomous features to vehicles.**



## Connecting Sub-Systems



**AX140900, AX140900RST, AX140905 :**  
CAN to Ethernet Converters



**AX141530:**  
CAN to Automotive Ethernet  
Converter



**AX141550:**  
Gigabit Automotive Ethernet to  
Gigabit Ethernet Converter

Run Axiomatic controls in any weather for safe performance over many years.



## Digital Construction Site



**AX141600:**  
CAN Isolator/Router



**AX141200:**  
CAN/WiFi Module



**AX141150, AX141155, AX141156:**  
CAN to Bluetooth BLE Converter  
with iOS and Android CAN2BLE  
Configuration Apps

- BT SIG, CE, RCM, UKCA, FCC, Giteki marking

**Utilize remote data analytics on-site.**

## Valve Controls: 6, 7 or 8 Inputs with 5 Outputs & SAE J1939



AX020510: 6 Inputs, 5 Outputs,  
CAN, +5V



AX020530: 7 Inputs, 5 Outputs,  
CAN, +5V



AX021910: 8 Inputs, 5 Outputs,  
CAN, +5V

## Valve Control – CAN Inputs



CAN to 1



CAN to 2



CAN to 4



CAN to 6

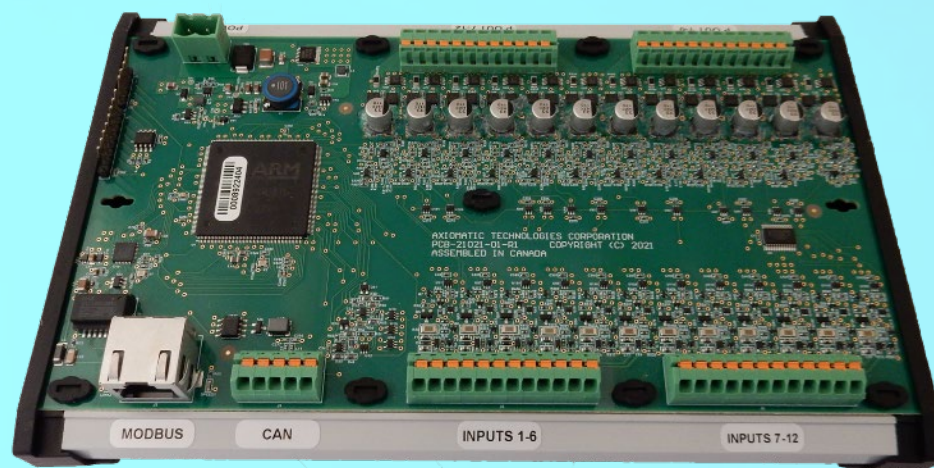


CAN to 10



## Multiple I/O

- 12 Inputs
- 12 Valve Driver Outputs
- 12V, 24Vdc
- IP67 or DIN rail mount
- 1-2 CAN bus ports



AX028010 12I/12O DIN rail mount



12I/12O Rugged  
AX020420 (SAE J1939)  
and AX020421 (CANopen®)

## Functional Safety



### AX103000:

3 Universal Inputs, 2 Outputs Motor Controller, H-Bridge



### AX022950:

7 Digital In, 6 Digital & 4 LED Outputs Controller

**Designed for SIL2 compliance.**

## The Way to Zero Emissions - Electrification



**AX032000:**  
Monitor Battery Cells



**AX090690:**  
Lithium-ion Battery Charger

**Manage battery performance.**



## 48VDC Input Power Converters

- New model: **AX081220**

	Output Power (W)	Output Current (A)	Output Voltage (V)	Input Voltage (V)	Isolation	Enable
<b>AX082410</b>	18	0.75	24	48	Yes	No
<b>AX090670</b>	54	2	12/ 24	48	No	No
<b>AX082400</b>	180	15	13.8	48	No	No
<b>AX081550</b>	240	20	12	48	Yes	No
<b>AX083204</b>	240	10	24	24/ 36/ 48	Yes	Yes
<b>AX081520</b>	312	13	24	48	Yes	No
<b>AX081801</b>	330	13	26	48	No	No
<b>AX080300</b>	350	15	24	24/ 36/ 48	Yes	Yes
<b>AX081220</b>	600	25	24	48	Yes	No
<b>AX081860</b>	720	30	24	48	No	No

## 95-260 VAC to 48Vdc or 24Vdc Power Supply

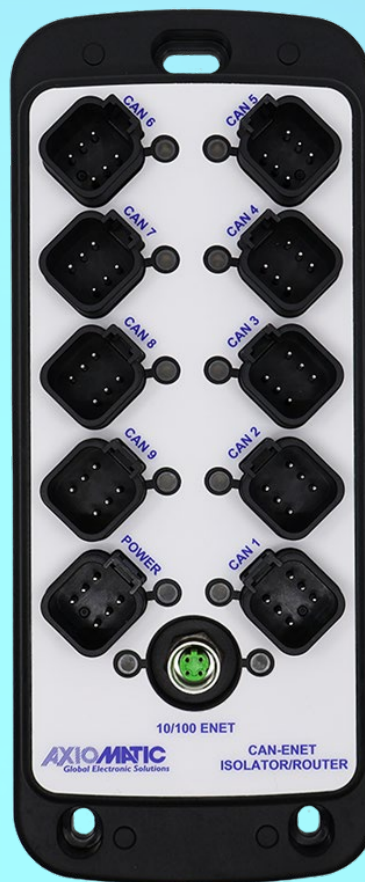
- AX080710, AX080720
- Wide ranging input from 95 to 260 VAC, 45/65 Hz
- 24V / 15A or 12V / 30A output
- Isolation of 3.75kVAC
- Designed for mounting in a vehicle
- Managed heat dissipation so no fan cooling is required
- Highly efficiency design (90% for 24V model)
- Inherent power factor correction



## The Way to Zero Emissions - Connectivity



**AX141560A:**  
Automotive Ethernet  
Converter, Master



**AX141620:**  
CAN Isolator/Router



**AX141810A:**  
Modbus/CAN Converter

Optimize vehicle network buses while saving on cabling.



## Gigabit Ethernet to 10Gb Ethernet Switch

- **AX140740**
- 1x 10 Gigabit Ethernet port (10/100 Mbps, 1/10 Gbps )
- 4x Gigabit Ethernet ports (10/100 Mbps, 1 Gbps)
- Power port
- LED indicators
- IP67



## CAN FD to Ethernet Converter

- AX140970
- 2 CAN FD or Classic CAN ports
- Ethernet
- Cybersecure models available





## The Way to Zero Emissions – Performance Optimization



**AX021910:**  
8 Input, 5 Output Valve Controller  
**Add advanced features to your control systems.**



**AX082310:**  
18W Isolated Power Converter  
**Protect machine system components.**



## The Way to Zero Emissions - Efficiency



### AX105000:

150A DC Motor Drive

**Maximize efficiency, noise reduction, and power density.**



### AX180800:

20 TC, 2 RTD, 4 Signal Inputs, 6 Relay Outputs Controller

**Improve vehicle performance, functionality and cost.**

## The Way to Zero Emissions - Efficiency



### AX100280:

10-16A BLDC Motor Drive, 48Vdc input, 125°C

**Maximize efficiency, noise reduction, and power density.**



### AX100250:

40A BLDC Motor Controller, 48Vdc input, SAE J1939

**Improve vehicle performance, functionality and cost.**

# Part Documentation Search in 4 Steps

axiomatic.com

AX020200

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**CATALOG**

**SEARCH RESULTS**

1 Parts

P/N	Part Name	Add to Quote
AX021910	8 Inputs, 5 Outputs, Valve Controller, SAE J1939	+

1. Enter P/N into Search Tool and press the Magnifier Button

Home » Catalog » Automation » Hydraulic Valve Drivers & Controllers » 8 Input, 5 Output Valve Controllers » 8 Inputs, 5 Outputs, Valve Controller, SAE J1939

## 8 INPUTS, 5 OUTPUTS, VALVE CONTROLLER, SAE J1939

Item # AX021910 — 8 Inputs, 5 Outputs, Valve Controller, SAE J1939

All Downloads

Share

The 8 Input, 5 Output Valve Controller is designed for versatile control of up to five proportional output:

## 3. Select All Downloads

### DOWNLOADS

Datasheet

AX021910 Datasheet

User Manual

AX021910 User Manual

2D Drawing

AX021910-MD-A 2D Drawing

Step Files (3D)

TE Deutsch 24-pin Enclosure Step Files (3D)

Compliance

EMC - DoC - AX02191X Compliance

RoHS - DoC - All Compliance

4. Select literature, drawing or compliance documents.

2. Select the product.



## EA & Other Configuration Tools

**PROTECTED: EA & OTHER CONFIDENTIAL TOOLS**

Home > EA & Other Configuration Tools

### Electronic Assistant Downloads

Electronic Assistant Service Tool	Type	Download Link
Software License Agreement	Document	
Electronic Assistant and USB-CAN Converter	User Manual	<a href="#">UMAX07050x</a>
AX070505 USB-CAN Converter	User Manual	<a href="#">UMAX070505</a>
Using the EA with Windows 7, 8, 10	Application Note	<a href="#">EA and Windows 7, 8 &amp; 10</a>
Electronic Assistant	Program	<a href="#">ElectronicAssistantSetup V5.15.133.0</a>
USB-CAN Drivers	Drivers	<a href="#">USBCANDrivers</a>
USB-CAN Firmware Updater	Program	<a href="#">USBCANFirmwareUpdater</a>
CAN Assistant – Scope	User Manual	<a href="#">UMAX070501SCO</a>
CAN Assistant – Scope	Program	<a href="#">CANAssistantScopeSetup V3.4.0</a>
CAN Assistant - Visual	User Manual	<a href="#">UMAX070501VIS</a>

**Solve your control challenges by emailing Axiomatic.**



**Technical Questions:**

[support@axiomatic.com](mailto:support@axiomatic.com)



**Sales Questions:**

[sales@axiomatic.com](mailto:sales@axiomatic.com)