



# CAN Based Vehicle Dash Board Control System

## Displays



15" (1920 x 720)



12.3" (1280 x 480)



7" (1024 x 600)

Our display solutions boast ease-of-use, intuitive design, and rich customization. With best-in-class viewability and a wide range of sizes. It integrates vital engine, transmission and diagnostic information into an easy-to-read operator interface.

## PowerView™ Screen Shots

Best-in-class direct sunlight visibility | No fogging  
Day, night & blackout modes | Touch control options





# Rajkot Diesel Machines Tr.€st

## PowerView® & OpenView™ Series Displays



**OpenView S50**  
5 inch



**OpenView S70**  
7 inch



**PV 500** 5 inch



**PV 1100** 10.6 inch



**PV 700**  
7 inch



**PV 70**  
7 inch



**PowerView U 150** 15 inch



**PowerView U 120** 12 inch



**PV 1200** 12.3inch

## EDGE-TO-EDGE DISPLAYS COMPARED



|                       | PV1200                                  | PV1100                                 | PV700                                 | PV500                        | Open View S70                                                      |
|-----------------------|-----------------------------------------|----------------------------------------|---------------------------------------|------------------------------|--------------------------------------------------------------------|
| <b>Screen Size</b>    | 12.3 inches<br>(320 mm x 130 mm)        | 10.6 inches<br>(231.36 mm x 138.82 mm) | 7 inches<br>(178 mm)                  | 5 inch<br>(108 mm x 64.8 mm) | 7 inches<br>(178 mm)                                               |
| <b>Resolution</b>     | (1280 x 480)                            | 1280 x 768 (WXGA)                      | 800 x 480 (WVGA)                      |                              | (1024 x 600)                                                       |
| <b>Processor</b>      | Dual core CPU @ 1.5 GHz                 |                                        |                                       | Dual core CPU<br>@ 1.0 GHz   | Dual-core CPU<br>@ 650 MHz                                         |
| <b>Communications</b> | (2) CAN 2.0B                            |                                        |                                       |                              | 1) CAN, (1) RS-485, (1) USB-2.0,<br>(1) USB Type-C, BT v4.2, Wi-Fi |
| <b>Video</b>          | (3) NTSC/PAL<br>Single Channel Viewable |                                        | (4) NTSC/PAL<br>Dual Channel Viewable |                              | (2) NTSC/PAL<br>Single Channel Viewable                            |
| <b>Inputs</b>         | (3) Analog, (5) Digital, (1) Frequency  |                                        |                                       | (1) Analog, (2) Digital      | (2) Analog, (2) Digital                                            |
| <b>Outputs</b>        | (1) Digital, (1) Frequency              |                                        |                                       | (2) Digital                  | (2) Digital                                                        |





## IX3212

## Power Distribution Module

**IX3212 Intelligent Xpansion™ power distribution module** expands CAN bus control networks by replacing existing relay and fuse boxes with more reliable, solid-state switches that can directly drive work lights, wiper motors, cooling fans, directional DC motors and other high-current loads.

- More Reliable Than Fuse and Relay Technology
- Cuts Wire Harness Costs
- Includes 12 digital inputs, 8 analog inputs and 12 outputs
- Robust, Sealed Enclosure with Cast Aluminum Base

## What is IX3212 ?

**Control Area Network (CAN) SAE J1939 based I/O module**

**Solid state technology: no moving parts**

**Replaces relay and fuse-based power distribution**

**12 or 24 VDC supply**

**12 Digital inputs (HS & LS on each input pin allows up to 24 digital in).**

**8 Analogue inputs, 10 bit resolution: 0 – 5 V standard, other options for high volume.**

**12 High current outputs: 15 A each, max 70 A simultaneous, H-Bridge on output pairs is possible**

**Class-leading environmental protection**

## How is it Used ?

IX3212 is configured via standard SAE J1939 Proprietary A messages

e.g. from a PowerView display, using setup from PowerVision Configuration Suite™

Outputs are commanded via standard SAE J1939 Proprietary A messages

Input data used to generate standard SAE J1939 Proprietary A messages (transmit rate is configurable)

Normally used in conjunction with a display, controller or other device capable of performing logic and sending/receiving CAN messages

## Features & Benefits

**Solid state device: no moving parts; eliminates fuses & relays; longer, more reliable operating life**

**Wiring reduction and better integration with other systems:  
simple power & CAN J1939 network (4 wires)**

**Analogue and digital input measurement and CAN conversion**

**High current drive: 15 A each, 70 A total, H-bridge options**

**Overcurrent shutdown**

**Diagnostic feedback (short, open, overcurrent, overtemp)**

**Rugged, encapsulated & sealed:**

**Fully sealed enclosure uses standard Deutsch connectors**

**Reduced footprint and flexible mounting (can also simplify harness)**

**System Integration: typically controlled from a PowerView display, via CAN, and programmable using the single PowerVision Configuration Studio™ software tool**

**Flexible upgrade & expansion**



## CXM 110

### PROGRAMMABLE INPUT/ OUTPUT EXPANSION MODULE

The Murphy PowerCore CXM-110 configurable expansion module is an out-of-the-box fully sealed industrial I/O module for various environments and applications. It's not just about the hardware; it's about the magic of connectivity and control beneath the surface of any industrial processes!

## What is CXM 110 ?

The PowerCore CXM-110 is ideal for industrial applications where additional I/O is needed, and quality is essential. Whether you're monitoring engines, generators, or other machinery, this module provides flexibility and reliability.

## How is it Used ?

The PowerCore CXM-110 is a versatile input/output (I/O) module designed to integrate with various vehicle systems. It monitor hydraulic pressures, implement position, and vehicle speed. Due to the module's flexibility it allows custom programming and can used to create specific logic for unique applications . It utilize the CAN (SAE J1939) and RS485 (Modbus RTU) communication protocols.

## Features & Benefits

- **Configurable Inputs:** The CXM-110 offers 6 digital inputs (configurable for high, low, or open states) and 8 analog inputs (supporting 4-20 mA, 0-5V, resistive, or digital ground).
- **Outputs:** It includes 6 relay outputs (Form C, dry/volt-free), 2 low-side FET outputs (-DC), 2 high-side FET outputs (+DC), and 2 +5VDC outputs.
- **Communication:** The module supports CAN (2.0B, SAE J1939), RS485 (Modbus RTU), and USB (for programming).
- **Environmental:** Operating voltage ranges from 8-32 VDC, and it's sealed to IP67 standards. It can withstand temperatures from -40°F to +185°F and has robust vibration and shock resistance.
- **Software Customization:** Users can program and develop the module using Murphy's Final PowerVision Configuration Studio. It can be configured as an autostart controller or an auto-throttling controller and can interface with other programmable displays in Murphy's product portfolio



MC2-18-6



MC3-21-10



MC4-26-20



MC4-21-14-H8

**uControl™ mobile machine controllers deliver extreme durability with precision control. With a complete family of scalable machine controllers, the uControl series offers flexible I/O options for a variety of equipment needs and applications.**

### What is uControl™ ?

The uControl series offers flexible I/O options for a variety of equipment needs and applications. Featuring multiple CAN interfaces, extensive outputs and an available high-current output option, uControl mobile machine controllers can handle any job, big or small.

### How is it Used ?

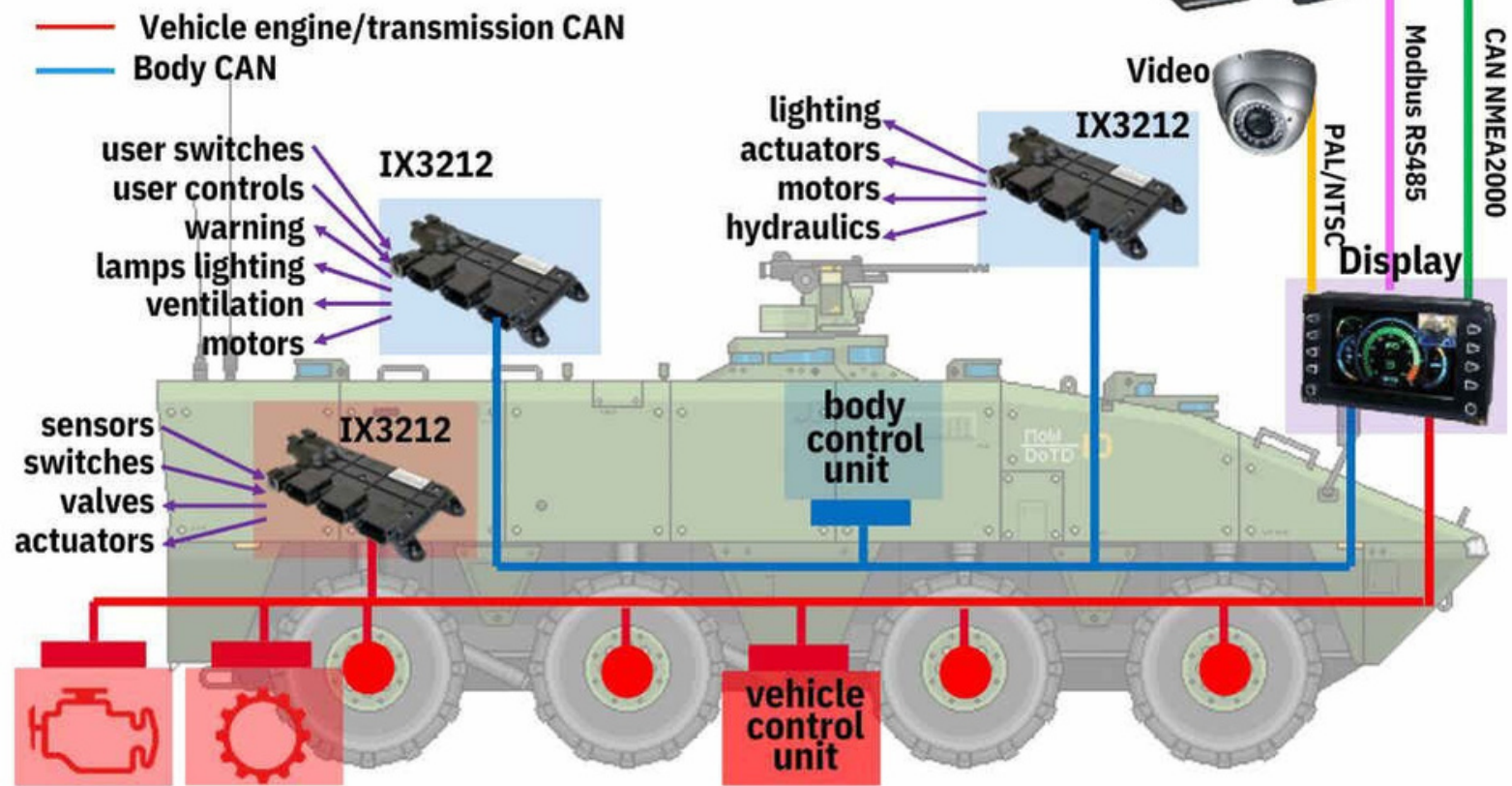
The uControl mobile machine controllers are used to control various functions and features of heavy-duty equipment in harsh environments. They can be programmed and monitored using CODESYS software tools or ACE, a new software development platform from Enovation Controls.

### Features & Benefits

- They provide precise proportional control for heavy-duty equipment in ultra-rugged environments
- They have multiple CAN channels, universal inputs, and software-selectable, current-regulated PWM outputs
- They have a wide operating temperature range (-40°C to +105°C), a fully-sealed IP67/IP69K protected enclosure, and a soft-gel potted design for shock and vibration resistance
- They support CODESYS and ACE, two software platforms from Enovation Controls that allow users to program and monitor the controllers without writing code
- They comply with CE mark and ISO 13766 standards



## Total System Integration



## Applications

