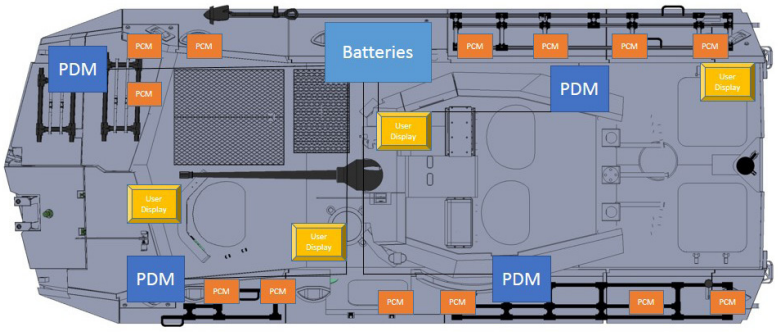
Distributed Power Control and Monitoring System (DPCMS)



DUAL REDUNDANT ARCHITECTURE

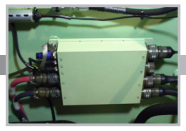
SMART POWER DISTRIBUTION

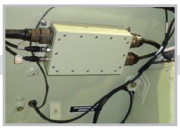
MODULAR AND SCALABLE

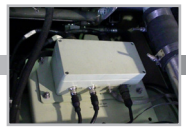
RAPID FAULT ISOLATION AND TROUBLESHOOTING

- **Dual CAN Bus Provides Redundant Communications**
- **Dual Power Bus Provides Redundant Power**
- **Expandable Digital Backbone**
- **Plug-and-Play Modules Auto Discover their Role**
- **Self-Diagnostics and Alerts**
- **Capable of Predictive Failure Analysis**
- **No Special Tools or Diagnostic Equipment Required**
- **Vehicular or Fixed Site Implementations**
- **Open Architecture for Expansion**
- **Replaces Analog Gauges with Digital Display**


Controller


Power Distribution Module


Power Control Module


Sensor Interface Module


Video Display Unit

The DPCMS is a dual-dual architecture which provides a fault tolerant power control system. Redundancy is provided in the form of two or more, separate identical digital and power channels. Each channel may provide all critical vehicle power control functions without restriction (shoot, move, communicate). DPCMS monitors and displays a variety of data coming from the engine, transmission, anti-lock brakes and other vehicular subsystems.

Depending on the criticality of the platform, multiple controllers can be integrated into the architecture or a single controller can perform all necessary functions.


Legacy Driver Interface Panel (DIP) New DIP and Display

The DPCMS yields substantial space and weight savings by removal of relays, switches and analog gauges; replacing them with reliable solid-state electronics.

UEC Electronics, LLC | 5914 Howard Street | Hanahan, SC 29410 | 843.552.8682 | www.uec-electronics.com | Cage Code 1MCJ4

Distributed Power Control and Monitoring System (DPCMS)

Power from the alternator is routed to the Power Distribution Module (PDM) where it controls 300 Amperes (Amps) via four 24 Volt DC 75 Amp output channels. A single 75 Amp output is connected to the Power Control Module (PCM) where the power is further distributed with up to 12 channels of 28 VDC, 15 Amps each (maximum 75 Amps combined).

The modular architecture can accommodate any size of power generation, (e.g. vehicle alternator, generator or micro-grid) by simply incorporating modules to distribute the power.

Optional Integrated Slip Ring Offers:
2x High Power - 250 Amp, 28 VDC Power Channels
2x Low Power - 3 Amp, 28 VDC TOCNET Power Channel
- 2 Amp, 28 VDC CAN Bus Power Channel
Low Resistance Grounding and Bonding Ring
10x Signal Channels
-TOCNET Channel
-4x Analog Video (RS 170) Coaxial Channels
-2x Gigabit Ethernet Channels of 1000 Base T
-2x Fiber Optics 62.5/125um/850nm

Typical C4ISR Equipment in Tactical Vehicles

Standard Configuration

Quantity	Description	Part Number	Dimensions	Weight
1	Controller	0778A23	6.4” x 8.8” x 4.4”	6 lbs
1	Power Distribution Module (PDM)	0778A02	12.0” x 6.1” x 3.0”	12 lbs
2	Power Control Module (PCM)	0778A03	9.0” x 6.1” x 3.0”	8 lbs
2	Video Display Unit (VDU)	0778A24	6.4” x 8.8” x 4.4”	6 lbs
Options	Sensor Interface Module (SIM)	0778A16	10.5” x 5.0” x 2.5”	4 lbs
	CAN BUS Splitter (HUB)	0778A101	6.0” x 3.0” x 2.0”	1.5 lbs
	Integrated Controller and VDU	0778A04	6.4” x 8.8” x 4.4”	9 lbs
	Slip Ring	0778CX7176	6.26 x 14.375”	35 lbs

General Specifications

Electrical – MIL-STD-461F Compliant
MIL-STD-1275D Compliant
Software – Prioritized Message Handling
Maintainability – No Special Tools
MTTR < 0.5 Hours
On-screen Alerts and Diagnostics
Reliability – MTBF >87,000 Hours
Human Machine Interface – MIL-STD-1472G Compliant

Environmental – Temp Range -25°F to 125°F (-40°C to 52°C)
Corrosion Resistance, MIL-STD-810F, Method 509.4
Sand and Dust, MIL-STD-810F, Method 510.4
Shock Resistance, MIL-STD-810F, Method 516.5, Proc IV
Immersion (non-operating), MIL-STD-810F, Method 512.4
Rain Resistance, MIL-STD-810F, Method 506.4
IP-67 Enclosure, fully encapsulated