

Modular Accessory Power System

MAPS

Our next-generation Modular Accessory Power System (MAPS) offers a compact and lightweight modular design that delivers premium power and performance utilizing BAE Systems' trusted power electronics.

Building upon 25 years of electric drive solution experience, we are constantly evolving to increase efficiency and reliability using the latest technology and materials. The modular design of our power electronics enables our customers to choose their required functionality without adding unnecessary weight, thus creating a more compact component. Your MAPS can be customized based on the number of electric vehicle accessories needing power and the amperage needed to operate.

We utilize advanced materials such as silicon carbide to improve heat management, lower weight, and increase power density. Wide band gap transistors with gallium nitride are used to provide faster switching, generate less heat, and decrease power losses and component size.

At a systems level, our electric drive configurations use 50 percent fewer connections, wires, and cables than competitive systems.



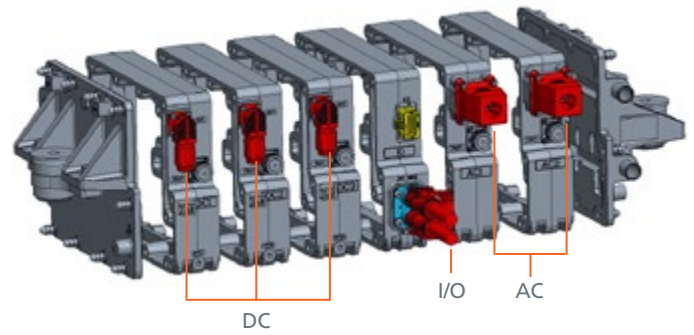
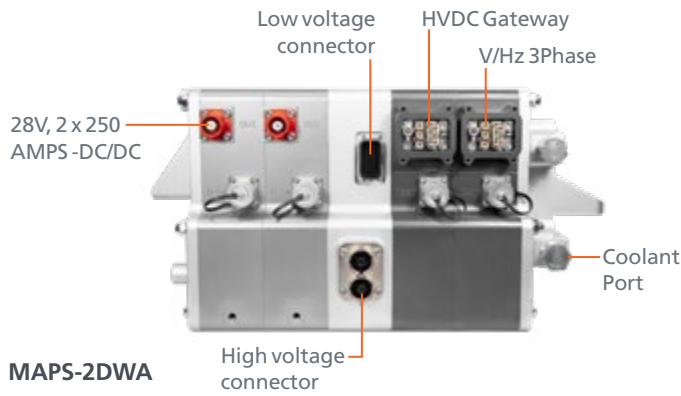
MAPS-2DM2A system is capable of powering up to 500 amps of 28V systems and two high voltage vehicle accessories such as power steering, air conditioning, or air compressors.

Powers:

- Starter and ignition power (12 or 24VDC)
- HV air conditioning
- Electric power steering
- HV vehicle accessories
- HV air compressors

Features:

- Modular, scalable design
- Common buildable modules
- Configurations for lower or higher power systems
- Rugged, compact multi-functional design
- Utilizing advanced materials such as silicon carbide and gallium nitride
- Independent power sources for fault isolation
- No regularly scheduled maintenance is required



The size of each system is based on the number of functional slices combined. Each slice is approximately 75mm.

Specifications - 2DMWA	
Width	606 mm
Depth	372 mm
Height	272 mm
Mass	40 kg

Slice	Weight (lbs)	Weight (kg)	Width
Left End Cap	9.2	4.2	~123mm
Right End Cap	17.6	8.0	~123mm
DC (D,S)	17.3	7.8	72mm
I/O (M,N)	17.3	7.0	72mm
AC (A,P,W)	14.3	6.5	72mm

Which configuration is best for you?

The number of modules needed is based on the amount of 12/24VDC amperage needed (D) and the number of HV accessories to power (A).

Output and powers:

Model 2DMWA will provide 500 amps of 28 volt power an independent three-phase inverter and a monitored gateway to the HVDC link.

Coolant:

Temperature for full performance: -40°C to 65°C
 External ambient: -40° to 75°C
 Coolant: water ethylene or propylene glycol

Model	28V Output A	3-Phase Power 28 Amps RMS ea.	Total Power (kW)
1D	250	-	5.6
2D	500	-	11.2
1D1A	250	1	20.6
2D1A	500	1	26.2
1D2A	250	2	35.6
2D2A	500	2	41.2
2D3A	500	3	56.2
3D2A	750	2	46.8
3D3A	750	3	61.8

MAPS Module Descriptions	
D	Base 28V module
S	D with battery measurements
M	Base I/O module
N	I/O module with one output
A	Base 3-phase module
P	A with additional measurement
W	High voltage DC gateway module

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