

Custom Power Supplies

for Defence Systems



Pascal

Custom Power Supply Solutions

AIRBORNE

DDC has over 30 years of experience designing power conversion products for airborne applications. Our products are in service on many fighter aircraft platforms including Hawk Trainers, F16, Jaguar, Tornado and Eurofighter Typhoon. We also provide solutions for the Nimrod MR2 and MR4 reconnaissance aircraft, Tiger Helicopter, and Watchkeeper Unmanned Aircraft. In the civil aerospace sector we provide power converters for equipment on board commercial airliners and small business jets.

Defensive Aids Sub System (DASS)



Multiple power supplies on board the Eurofighter Typhoon powering key components of the Electronic Warfare Suite including the wingtip cable deployed decoy.

Helicopter Helmet Display System



High and Low Voltage Power Supplies for the pilot helmet system on the Tiger Attack Helicopter, converting 28Vdc Avionics into multiple outputs in a high vibration environment.

Cockpit Multi Function Display (MFD)



Multiple output low voltage power converters for use in multifunction displays fitted to the Hawk Fighter Trainer aircraft, built-in-test, with variants for 28Vdc and 115Vac inputs.

Unmanned Airborne Vehicle (UAV) Radar



Designed specifically to fit within available envelope, the PSU provides power for the microwave module in the Synthetic Aperture Radar on board the Watchkeeper UAV.

Aircraft Head Up Displays



High Voltage outputs derived from standard 115Vac or 28Vdc aircraft supply, for CRT based cockpit Head-Up- Display (HUD) System, fitted to both commercial and military aircraft.

Cockpit Display and Processing Power



Highly ruggedized VPX format 28VDC to multiple low voltages power converter for use in a Directed Infrared Counter Measure system for airborne applications.

Airborne Radar Processing Power



ATR Chassis compatible 28VDC to multiple low voltage DC power converter for use in airborne Radar Warning Receivers.

Laser Targeting Power



28VDC input Power supply for generating High and Low Voltages for an advanced Targeting Laser for airborne platforms.

Environmental Capabilities

Whether for military or commercial applications, DDC has the expertise to provide a high reliability, competitive solution meeting the latest technical specifications and industry standards.

- MIL STD 704 - Input Supply Transient Conditions
- MIL STD 461 - EMC Requirements
- MIL STD 810 - Environmental Requirements
- Airbus/Boeing - Civil Aircraft Electrical Supply Specifications
- DO160 - Civil Aircraft EMC & Protection

MARITIME

DDC designs and manufactures power supply products for a wide variety of maritime applications, where robust, rugged construction is required to offer high reliability and protection from some of the most demanding environmental conditions, including salt fog, ice and total immersion. On board military surface vessels we provide power for data networking and communications equipment thermal imagers and electronic warfare systems, including radar control and weapons guidance.

Data Network Tactical Communications



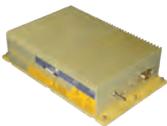
Multiple redundancy power system for central processing of data and communications on board warships. Based on a standard product, but modified to suit the specific application.

Ship-to-Air Defensive Weapons



Weapons IFF deflection system for Navy Ships, combining multiple outputs with robust design, for high vibration environment.

Navy Warship ESM System



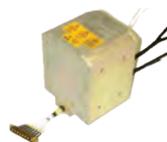
A set of 12 high reliability power converters for a complete ESM system. Each module uses common architecture and components to reduce overall equipment costs.

Seismic Monitoring Equipment



Multiple redundancy power system for seismic monitoring equipment permanently located on the sea bed. High reliability - zero maintenance requirement.

Opto-Electronic Periscope System



Multiple rail low and high voltage power system incorporated in high technology optronics periscope, 12 outputs including some "pulsed" supply rails.

Subsea Power



Wide range high voltage AC input Power supply generating multiple low voltage DC outputs for powering subsea electronic modules in the petrochemical industry at depths of 4 km and 100km from the topside power source.

Environmental Capabilities

Beneath the sea we provide power supplies for state of the art electro-optical periscope systems for navy submarines, and high reliability power conversion equipment for seismic monitoring equipment placed on the sea bed. We design & manufacture to many standards.

- MIL-STD-1399 - Shipboard Power
- STANAG 1008 NATO - Shipboard Electrical Power
- MIL-STD-461 - EMC Requirements

GROUND

DDC has been providing state of the art power conversion solutions for military ground equipment for over 30 years. Our products are in service with ground forces across the world, providing high reliability power for secure communications, optical and infra red imaging, missile command and control systems, and mobile power conditioning solutions for both command centre and remote operated man-portable applications.

Ground to Air Defence



A range of modular power supplies which provide power for optical and radar tracking equipment, missile launch, command & control systems, deployed in the most extreme climates.

Optical Imaging / Infra Red



A range of power supplies designed for Night Vision, Infra Red and High Resolution Optical Camera applications for man portable and multiple vehicle equipment.

Military Vehicle Power Supplies



High reliability power supplies designed to withstand the highest demands of mobile battlefield operations, powering imaging systems, GPS navigation and communications equipment.

Fighting Armored Vehicles Turret and Processing Unit Power



VME/VPX power supplies providing conditioned power within the processor.

Laser Target Illumination



A high reliability laser charging power supply, for tactical target designation equipment, with a capability for either local or remotely controlled operation.

Ground Surveillance Radar Power



Range of custom power supplies for ground radar.

Secure Communications



Power supplies for ground based battlefield secure communications equipment, designed for very low noise, high efficiency and extreme operational environments.

Missile and Missile Launcher Power



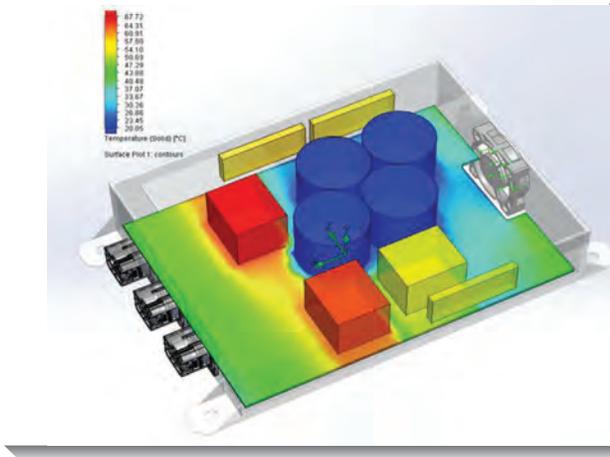
Custom Power Supplies for vehicle based missile launcher applications.

Environmental Capabilities

We design and manufacture to meet our customers high operational performance demands, while maintaining compliance to the most extreme environmental and EMC requirements.

- MIL STD 1275 - Input Supply Transient Conditions
- DEF STAN 59-411 - EMC to Land Class A Requirements
- MIL STD 810 - Environmental Requirements

Capabilities & Services



Design Capabilities

- AC to DC Converters Single and Three Phase
- DC to DC Converters
- Custom Discrete Designs
- Typical Power Range 10W to 4KW
- Insulated Metal Substrate (IMS) Thermal Management
- Multiple Outputs
- Active Power Factor Correction
- Battery/Capacitor Backup
- High Vibration/Shock Environments
- Motor Controllers
- Temperature -55°C to +100°C
- RTCA-DO-160 Current Harmonics
- EMI Filter Design
- Compliance with Military Standards (MIL-STD's 704, 461, 810, 1275 and DEF-STAN 59-41)

Engineering Services

- Electronic Design
- Mechanical Packaging
- MTBF Prediction and FMEA/FMECA
- Circuit Board Design
- Thermal Simulation
- Mechanical Simulation
- Extensive Engineering Laboratory
- HALT Testing
- Temperature Testing
- Conducted EMI Testing
- Qualification Testing: Electrical, EMI & Environmental



DDC Electronics, Ltd. specialises in the design and manufacture of power supply solutions for extreme environments. With over 30 years of experience in the defence, aerospace and industrial sectors, we are a trusted source for complete solutions in the design, development and manufacture of electronic power conversion products – from single converters to complex multi-function conversion systems. Our products are the first choice for power... with IFEC systems, as we have had more than 165,000 power supply units installed on commercial aircraft... with defence systems, as they are in service with Ground, Air and Naval forces across the world, powering state of the art electronic systems... and trusted by industry leaders to deliver reliable proven performance in some of the most challenging environments to be found anywhere.

XCEL and Pascall are Brands of DDC Electronics, Ltd., a subsidiary of Data Device Corporation



DDC is a world leader in the design and manufacture of high-reliability Connectivity, Power and Control solutions (Data Networking; Power Distribution, Control and Conversion; Motor Control and Motion Feedback) for aerospace, defense, and industrial applications. With awards for quality, delivery, and support, DDC has served these industries as a trusted resource for more than 50 years... providing proven solutions that are optimized for efficiency, reliability, and performance. Data Device Corporation brands include DDC, Beta Transformer Technology Corporation, National Hybrid Inc., Pascall Electronics Ltd., and XCEL Power Systems Ltd. DDC is headquartered in Bohemia, NY and has manufacturing operations in New York, California, Mexico, and the United Kingdom.

Connectivity

Data Bus Solutions

DDC is the market leader in high reliability data bus solutions for MIL-STD-1553/1760, ARINC 429, Fibre Channel, Ethernet, CANbus, Serial I/O and other protocols, and is one of the few companies able to provide a full range of computers, boards, hybrids and ASIC solutions for aerospace, defense and space applications.

Power

Power Supplies

DDC supplies high specification power products to the aerospace, defence, maritime and satellite communications industries.

Solid-State Power Controllers

DDC's programmable solid-state power controllers provide simple and reliable power management for aerospace and defense systems.

Control

Motor Controllers and Drives

DDC is the world leader in high reliability torque, speed, and position controllers and drives engineered to operate in demanding environments.

Motion Feedback

DDC is the world leader in the design and manufacture of Synchro/Resolver-to-Digital and Digital-to-Synchro/Resolver converters.



The information in this brochure is believed to be accurate; however, no responsibility is assumed by Data Device Corporation for its use, and no license or rights are granted by implication or otherwise in connection therewith.

For ordering assistance and technical support,

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