

Military Vertical Lift Systems



Mastmount Radar

- 3-Phase BLDC Motor Controller**
Resolver Position Feedback High Performance, Cost Optimized Military Grade Motor Controller with Torque, Speed, and Position Control
- Resolver-to-Digital Converter**
High Precision Position Feedback in the Harshes Environments

Power Management System

- Flight-Safety Critical SSPC PDU**
Flight-Safety Critical Solid State Power Controller Architecture Utilizes Redundancy to Ensure Reliable Operation

Crew Compartment Environmental System (Compressor/Fan)

- 3-Phase BLDC Motor Controller**
High Performance, Cost Optimized Military Grade Motor Controller

Power Supply Unit

- Custom Power Supplies**
High Reliability Power Supplies For Critical Applications

Main & Rear Rotor Control

- Total-AceXtreme®**
Most Compact, Highest Performance MIL-STD-1553 Terminal with Transformers
- Resolver-to-Digital Converter**
High Precision Position Feedback in the Harshes Environments
- 3-Phase BLDC Motor Controller**
Resolver Position Feedback High Performance, Cost Optimized Military Grade Motor Controller with Torque, Speed, and Position Control
- Hybrid 3-Phase BLDC Motor Torque Controller**
High Performance Torque Loop Controller Precisely Regulates Current in Harsh, High Position Accuracy Military and Space Environments
- Custom Magnetics**
Magnetics Custom Designed for Connectivity, Power, and Control Platforms

Data Network Communications

- Compact Rugged Avionics Interface Computer**
Scalable Rugged Avionics Computer to Support Protocol Bridging and System Connectivity
- MIL-STD-1553 Transformers**
Smallest Form Factor MIL-STD-1553 Transformers Enable Space, Weight and Power (SWaP) Savings

Mission Computer

- XMC Multi-I/O Board**
High Channel Count and Multi-I/O Capability Enables Space, Weight, Power, and Cost Savings
- Rugged Avionics Interface Computer**
Flexible and Scalable Platform Enables Multi-I/O Protocol Bridging
- High-Speed 1760 Fibre Channel Network Controller**
High-Speed Data Transfer for Smart Weapons to Support Terrain Maps, Target Templates, Program Files, and Digitized Images and Video
- Custom Power Supplies**
High Reliability Power Supplies For Critical Applications

Defensive Aids Subsystem (DASS)

- Custom Power Supplies**
High Reliability Power Supplies For Critical Applications

Gun Mount

- 3-Phase BLDC Motor Controller**
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Magnetics Custom Designed for Connectivity, Power, and Control Platforms

Flight Surface

- Total-AceXtreme®**
Most Compact, Highest Performance MIL-STD-1553 Terminal with Transformers
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Magnetics Custom Designed for Connectivity, Power, and Control Platforms

- Data Networking
- Power Control
- Motor Control
- Position Control

DDC's field proven technology is integrated into many of the world's most advanced Manned Aircraft systems:

- | | | | | | |
|--|--|--|---|--|---|
| <ul style="list-style-type: none"> A129 Mangusta AH-1S Cobra AH-64 Apache AH-64D Longbow ALH (HAL Dhruv) ARH-70 Arapaho AW101 Merlin AW159 Future Lynx | <ul style="list-style-type: none"> CH-47 Chinook CH-53 Sea Stallion CH-53E Super Stallion CH-53K King Stallion CH-60 Sea Hawk CV-22 Osprey EH-101 Merlin Gazelle | <ul style="list-style-type: none"> H-1 Super Cobra H-60 HH-60 Pave Hawk KHP LAMPS Lynx helicopter MCH-101 MH-60 Black Hawk | <ul style="list-style-type: none"> Mi-17 Mi-35 NH-90 NHP OH-1 Ninja OH-58D Kiowa Warrior RAH-66 Comanche Rooivalk | <ul style="list-style-type: none"> S-70 S-97 Raider SH-2GA Seasprite SH-3 Sea King SH-60 Seahawk SH-60J/K Seahawk T-129 ATAK Tiger/Tigre | <ul style="list-style-type: none"> UH-1 Iroquois UH-60 Blackhawk US101 V-22 Osprey VH-3D VH-60 VH-71 |
|--|--|--|---|--|---|

For more information: www.ddc-web.com/VLS

Power

Flight Safety-Critical SSPC PDU



Model: RP-2F241XXXX

Features:

- Nominal 28VDC Operation, MIL-STD-461, MIL-STD-810, DO-160G Compliant
- MIL-STD-1275C, MIL-STD-704 Compliant
- Total Continuous Current of 260A
- 24 Independent Load Channels
- Channels with 10:1 Current Programmability
- Redundant Channel Failsafe Mechanism
- Dual Redundant Host Controllers

Custom Power Supplies



Model: custom

Features:

- Line Replacement Units (LRUs), Integrated Assemblies, and Embedded Power Supplies
- Power Ranges from 10 Watts through to Several Kilowatts
- Inputs of 115VAC, Fixed or Variable Frequency, 28VDC or Dual 115VAC/28VDC
- Outputs Designed to Specific Customer Requirements

Transformers and Magnetics

MIL-STD-1553 and Power



Models: custom

Features:

- MIL-STD-1553 Transformers
- Built & Tested to MIL-PRF-21038 & MIL-STD-202 (M-Level & T-Level Screening Available)
- For Use with MIL-STD-1553 A & B, McAir, A-3818, A-5690, A-5232, & A-4905
- Power Transformers
- MIL-PRF-27, QPL-DSCC Qualified Transformers (Designation MIL-PRF-27/43-01 A/B through MIL-PRF-27/43-44 A/B)

Motor Drive and Control

Position, Torque, and Speed Control



Model: PW-87XXXNXX0X

Features:

- Complete COTS Motor Control Solution
- 600VDC Rating Available
- Up to 75A Output Current
- CANbus, RS-232, RS-422, and RS-485 Ethernet
- Hall or Resolver Feedback Support
- Sine Drive Capable
- 3 Analog Inputs, 4 Digital Inputs
- 2 Digital Outputs
- GUI Based Set-up Utility

DSP Speed/Torque Controllers



Model: PW-8256XNX

Features:

- Self-contained 3-Phase Motor Controller
- Multiple Voltage/Current Ratings: 100V/30A, 200V/10A, 400V/5A
- Up to 95% Duty Cycle Operation
- 7% Linearity, 3% Current Regulating Accuracy
- Programmable via Easy-to-Use GUI or Direct Control Interfaces
- Torque and Speed Control Modes
- 10kHz - 50kHz PWM Frequency

Motor Positioning & Feedback

Resolver-to-Digital & LVDT Converters



Model: RD-19230

Features:

- Single Chip Synchro, Resolver, Inductosyn, LVDT, RVDT, MR, and Hall Sensor to Digital Converter
- Programmable Resolution (10, 12, 14, 16 bit), Bandwidth, & Tracking
- ±Accuracy up to 1 Arc Minute
- Analog Control System Eliminates Need for DO-178 Re-certification
- Extended Temperature Range: -55°C to +125°C

Data Networking

Compact Avionics Interface Computer



Model: BU-67125

Features:

- Embedded Intel® Atom E3845 Quad Core Processor
- 16GB DDR3 EEC Memory
- 128GB SSD Fixed and/or Removable Memory
- Dual Gigabit Ethernet Interfaces for Network Connectivity
- Expandable 2x mPCIe Sites and Custom Expansion Module to Support Additional I/O Interfaces

XMC MIL-STD-1553 Board

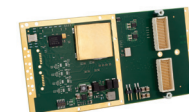


Model: BU-67112X

Features:

- Low 1553 Transceiver Power
- High MTBF for Rugged Environments
- Front or Rear I/O
- 8 Dual-Redundant MIL-STD-1553 Channels
 - BC/MT or Multi-RT/MT per Channel
 - Supports MIL-STD-1553A/B, MIL-STD-1760, and MacAir
- 16 Avionics Digital I/O
- IRIG-106 Chapter 10 Monitor

Fibre Channel Network Controller



Model: FC-75511

Features:

- High-Speed 1760 Fibre Channel XMC Board
- FC-AE-1553 NC and NT Operation
- 2 Channels, which can Operate as 2 NCs, 2 NTs, or 1 NC and 1 NT
- x4 PCI Express Interface
- Choice of 150Ω Differential or 75Ω Coax Physical Layers
- Conduction or Air Cooled XMC for Extended Temperature Operation
- Windows® and VxWorks® 5.5 Software Drivers

Custom Hybrid, MCM, and PCB Solutions

DDC designs boards, hybrids and multi-chip modules (MCM) to meet ruggedness and reliability levels for performance in the most demanding environments. Our expertise lies in our engineering and manufacturing abilities to reduce size, weight and power while providing the highest level of integration into small single packaged solutions.

Quality

- Underwriters Laboratories (UL) Certified:
 - ISO 9001: 2008 Certified
 - AS9100, Rev. C Compliant
 - EN9100 Compliant
 - JIS Q9100 Compliant
- Defense Supply Center Columbus (DSCC) Certified:
 - MIL-PRF-38534 Class D, G, H, & K

For ordering assistance and technical support,

E-Mail: service@ddc-web.com

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