

# Custom Solutions



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**Custom and modified off-the-shelf electronic products  
from the leader in high-reliability data & control technology**

## Building Blocks

Achieve your ideal solution using field proven customizable building blocks from the world leader in high-reliability data communications and control technology: **IP, Components, Boards, and Software**

### Applications

- Data Networking
- Motion Control
- Power Control

### Technologies

- AFDX®/ARINC 664
- ARINC 429/615/629/717
- Ethernet
- Fibre Channel
- High-Speed 1760/FC-AE-1553
- Hyper 1553
- MIL-STD-1553 A/B
- MIL-STD-1760
- MMSI/EBR-1553
- Motor Drives
- Solid-State Power Controllers
- Synchro/Resolver Conversion

### Form Factors

- AMC
- cPCI/PXI
- ExpressCard
- Mini-PCIe
- PC/104-Plus , PCI-104
- PCI/ PCI-Express
- PCMCIA
- PMC/XMC
- Small Form Factors
- USB
- VME/VXI

### Hardware Capabilities

- Analog Design
- ASIC/FPGA/IP
- Board Level Design
- Line Replaceable Boxes
- High-Speed Layout
- Ceramic Hybrids
- Magnetics/Transformers
- Mechanical Design
- Miniaturization
- Multi-Chip Modules
- Ruggedization
- Thermal Management

### I/O

- ARINC 429/615/629/717
- Avionics I/O
- CANbus 2.0
- IRIG-106 Chapter 10
- IRIG-B
- MIL-STD-1553
- RS-232
- RS-422/485

### Software Capabilities

- Windows®
- Linux®
- VxWorks®
- Integrity®
- GUIs
- LabVIEW®/LabVIEW Real-Time
- LabWindows®
- LynxOS®

## Bring Our Multi-Disciplinary Expertise To Your Next Design

### Modified Standard Solutions

Using DDC's advanced standard designs, we can easily make modifications to custom fit your individual needs.

### Complete Custom Solutions

Partnering with DDC at the beginning of your design, we will work together to design the optimal circuit card assembly or complete Line Replaceable Unit (LRU) for your applications.



## Your Solution Provider for... Connectivity, Power, and Control

## The DDC Advantage

DDC designs, manufactures, assembles, and tests all products to the highest standards, ensuring your solution works optimally and reliably, outperforming any alternative.

### Ruggedization

DDC designs boards, hybrids, and multi-chip modules (MCM) to meet ruggedness and reliability levels for performance in demanding environments:

- Flyable Boards for Conduction or Air-Cooled Applications
- Extended Temperature Operation
- Conformal Coating Available
- MIL-STD-810/VITA 47 Shock and Vibration

### Complete Support... From Concept to Completion

- Hardware Design
- Software Design
- Thermal and Mechanical Analysis
- Program Management
- Manufacturing and Testing
- Qualification and Validation
- Documentation
- Product Support

### Miniaturization

Reduce size, weight, and power (SWaP) with DDC's multi-channel, multi-I/O, and MCMs.

- High Channel Count
- Multiple I/Os or Protocols on a Single Board
- Small Form Factors
- Small Integrated MCM/Hybrids

### Integration

DDC designs integrated hybrids and multi-chip modules to include protocol, processing, memory, transceivers, and magnetics into small rugged single component solutions.

- Ceramic/Hermetic Hybrids
- Plastic Encapsulated Multi-Chip Modules
- Integrated Protocol, Memory, PHY, Magnetics

### Life Cycle

With close to 50 years of experience, DDC understands the life cycle requirements of the military and aerospace industries. With a comprehensive system to manage obsolete materials, we are committed to supplying electronic products that ensure:

- Uninterrupted product availability
- Backwards hardware and software compatibility
- Configuration control

### Size Matters

DDC manufactures the world's smallest components, enabling the most compact design solutions.

### Experience Counts

DDC has over 200 million hours of in-service history on our Enhanced Mini-ACE® ASIC and more than 500,000 Solid-State Power Controller nodes installed on military vehicles since 1988.

### Advanced Components

DDC's component manufacturing capabilities include plastic encapsulated multi-chip modules as well as traditional ceramic hybrids, and the capability to mix wirebond and flip-chip die, and integrated magnetics.

### World Class Boards

DDC's board manufacturing capabilities include assembling per IPC-A-610 Class 3, completing 100% AOI (Automated Optical Inspection), and the capability for both surface mount and through-hole.

## Quality

- Underwriters Laboratories (UL) Certified:
  - ISO 9001:2008 Certified
  - EN9100 Compliant
  - AS9100, Rev C Compliant
  - JIS Q9100 Compliant
- Defense Supply Center Columbus (DSCC) Certified:
  - MIL-PRF-38534 Class D, G, H, & K
- DDC complies with the following specifications in support of Testing and Qualification of our products and designs:
  - MIL-STD-883
  - VITA 47
  - ANSI/NCSL Z450-1
  - MIL-STD-810
  - IPC-A-610
  - IPC-67
  - MIL-STD-202
  - SAE AS4100 RT Validation
  - JESD-22
  - JEDEC Plastic
  - J-STD-020
  - RoHS

## World Class Support

DDC is committed to the long-term satisfaction of our customers through the largest global network of dedicated functional groups in the industry, all aimed at premier customer support.



## Awards

- Raytheon 3 Star Supplier Excellence Award 2007-2012
- Lockheed Martin Platinum Level Preferred Supplier Award
- L-3 Communication Systems West Platinum Supplier Award
- General Atomics Supplier Award
- Honeywell Sensor & Guidance Supplier Excellence Award

## DDC On-Board

DDC is designed into many of the most advanced platforms in the aerospace and defense industries.

### Military Aerospace

- 767 Tanker
- A-10 Thunderbolt
- A-60 Thunderbolt
- A160 Hummingbird
- A400M Atlas
- AC-130 Hercules
- AH-64 Apache attack helicopter
- AH-64D Longbow attack helicopter
- B-1 Bomber
- B-2 Spirit Stealth bomber
- B-52 Stratofortress
- C-5 Galaxy
- C-17 Globemaster III
- C-130 Hercules
- CH-47 Chinook
- CH-53 Sea Stallion
- E-2C Hawkeye
- E-2D Advanced Hawkeye
- EA-6B Prowler
- EF-2000 Eurofighter Typhoon
- EH-101 Merlin Helicopter
- F-1 Mirage
- F-2
- F-4 Phantom II
- F-5 Freedom Fighter
- F-15 Eagle
- F-16 Falcon
- F/A-18 Hornet
- F-22 Raptor
- F-35 Joint Strike Fighter
- F-117 Nighthawk
- IAI RQ-5 Hunter UAV
- KC-10 Extender
- KC-130 Hercules
- KC-135 Stratotanker
- LAMPS helicopter
- MH-60R Seahawk
- MH-60S Knighthawk
- Mirage 2000
- MQ-1 Predator
- MQ-8 Firescout
- NH-90 Naval helicopter
- P-3 Orion
- Rafale
- RC-135
- Q-4 Globalhawk/BAMS
- SH-60K/R Seahawk
- Tornado
- UH-60 Blackhawk
- V-22 Osprey

### Commercial Aerospace

- Airbus A320
- Airbus A330
- Airbus A340
- Airbus A350-XWB
- Airbus A380
- Ayres LM200 Loadmaster
- Beechcraft 1900D
- Boeing 747
- Boeing 787 Dreamliner
- Bombardier BD-100 Challenger 300
- Bombardier CRJ 700
- Dassault Falcon 7x

### Military Vehicles

- AMX-56 Leclerc Tank
- Bradley Fighting Vehicle
- Foxhound LPPV
- IAV Stryker
- JLTV
- K-21 Infantry Fighting Vehicle
- M109A6 Paladin PIM Mobile Howitzer
- M270 MLRS
- M1A2 Abrams Tank
- M992 FAASV
- MRAPs
- Puma Infantry Fighting Vehicle
- Stormer Armored Personnel Carrier

### Space

- Advanced EHF Military Communications Satellite
- Ariane 5 Rocket
- Chandrayaan-1 Unmanned Lunar Probe
- DORIS
- ExoMars Trace Gas Orbiter
- Hubble Rescue Vehicle
- International Space Station
- Jason 3
- JWST
- MEASAT
- NPOESS
- OCO
- Spacebus 4000
- Spider Lunar Module

### Weapons and Systems

- AIM-120 AMRAAM
- ASMP-A Nuclear Missile
- AN/AAQ-24 Directional Infrared Countermeasure
- AN/APR-39v3 Radar Warning Receiver
- BRU-55/57 Bomb Rack Unit
- IRIS-T-SL
- M51 SLBM
- Phalanx CIWS Anti-Ship Missile Defense System
- Sea Spray Radar
- Sigma 95N Inertia Navigation System
- SN/ASQ ATFLIR
- Storm Shadow Cruise Missile
- THAADs Terminal High Altitude Area Defense



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