MIL-STD-1553 / ARINC 429 PC/104-*Plus* and PCI-104 Cards

DDC®
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Product Brief
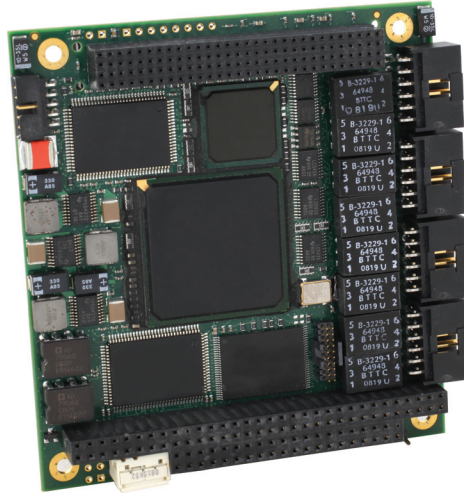
Compact and reliable, DDC's PC/104-*Plus* and PCI-104 family of embedded cards are engineered for rugged environments and can be used in custom conduction cooled or air cooled systems. The unique I/O mix and high channel count on a single card saves space, power, weight, and cost—making this an ideal solution for systems with limited space.

Key Features

- Up to 4 Dual Redundant MIL-STD-1553 Channels
  - BC/Monitor or Multi-RT/Monitor per 1553 Channel
  - Supports MIL-STD-1553 A/B & MIL-STD-1760
  - MIL-STD-1760 RT Auto Boot
  - External RT Address Inputs
  - BC Disable for RT Only Applications
  - Tx Inhibit for MT Only Applications
  - Transformer and/or Direct Coupled
- Up to 16 Receive and 8 Transmit 429 Channels
- Up to 9 Digital Discrete I/O
- Up to 8 (+35V) Avionics Discrete I/O
- IRIG-B Time Code Input/Output
- 48-bit/100ns Time Stamp
- +5V Only Operation
- Low Power Dissipation
- High-Level C SDK and Drivers for Linux®, VxWorks®, and Windows® 2000/XP/Vista/7
- Graphical Avionics Bus Analysis & Simulation Software Available
- **ACE X TREME®** - Next generation 1553 Core

Benefits

- Rugged Design for Harsh Environments
- Field Proven Reliable Techology Based on over 62 Million Hours of In-Flight Performance
- Unique I/O Mix & High Channel Count Reduces:
  - Space, Power, Weight, Cost
- Shorten Development Cycle and Reduce Risk with Automated Code Generation
- IRIG-106 Chapter 10 On Board Formatting
- User Selectable BC Disable/Tx Inhibit per 1553 channel
- On-Board DMA Engine for Low CPU/PCI Utilization

Applications

- Digital Flight Data Recorders
- Telemetry/Instrumentation Recorders
- Mission Computers
- Small Avionics Displays
- Line Replaceable Units (LRU's)
- Radar Systems/Situational Awareness
- Munitions
- Ground Vehicles
- Avionics Labs

For more information: www.ddc-web.com/BU-67104C | www.ddc-web.com/BU-67108C

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Overview

The BU-67108/9C series contains up to 16 Rx and 8 Tx ARINC 429 channels that is optionally available with up to two MIL-STD-1553 channels for use in systems that interface to both 1553 and 429. The ARINC 429 model is a perfect fit for commercial aerospace applications while the multi-i/o model is a perfect fit for military cargo aircraft, helicopters, and other platforms that use both 1553 and 429 to save space, power, weight, and cost. The cards are entirely powered from +5V power only for increased compatibility with more stacks and lower overall power dissipation.

Quick Specs

POWER DISSIPATION (75% Utilization)	MIN	TYP	MAX
BU-67104/5C200L (2-ch 1553)	-	3.3 W	-
BU-67104/5C400L (4-ch 1553)	-	6.5 W	-
BU-67108/9C000L (16Rx,8 Tx 429)	-	3.7 W	-
THERMAL	MIN	TYP	MAX
Operating Temperature	-40 °C	-	+85 °C
Storage Temperature	-65 °C	-	+150 °C

Ordering Information

BU-6710XCX00L-XX0X

- N = Acrylic Conformal Coating
- U = Polyurethane Conformal Coating
- Blank = No Conformal Coating

- 2A = -40°C to +85°C Rugged Air Cooled Card
- 2C = -40°C to +85°C Rugged Conduction Cooled Card

Option	# of 1553 Channels	# of Digital Discrete I/O
1	1	5
2	2	5
4	4	5

- 4 = PCI-104 Card
- 5 = PC/104-Plus Card

Note: All Models Include RT Address Inputs per Channel, and IRIG-B Inputs

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Option	# of 1553 Channels	# of ARINC 429 Channels RX	# of ARINC 429 Channels TX	# of Digital Discrete I/O	# of Avionics Discrete I/O
0	0	16	8	9	8
1	1	12	6	9	8
2	2	12	4	9	8
3	0	8	4	9	8
4	1*	12	6	9	8
5	2*	12	4	9	8
6	1*, 1	12	4	9	8

- 8 = PCI-104 Card
- 9 = PC/104-Plus Card

Note: All Models Include IRIG-B Input/Output
   * Direct Coupled 1553

Included Software:
- 1553 C Software Development Kit (SDK)
- Windows 2000/XP/Vista/7, Linux, and VxWorks support
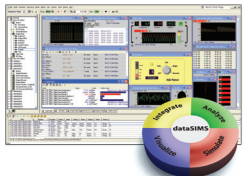
Optional Software:

BusTrACEr™ Data Bus Analyzer and Monitor Software
- Generate or monitor live MIL-STD-1553 data without writing any code
- Saves time and reduces development costs
- Program in minutes with one-click ANSI 'C' source code generation
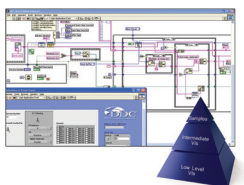- Rapid creation and setup of custom applications

Model: BU-69066S0-XX0

dataSIMS Avionics Data Bus Test and Analysis Software
- Accelerates development and deployment
- Eliminates cost of learning and maintaining separate software programs
- Easy-to-use and customize
- Supports all data protocols and I/O formats

Model: BU-694X4DS-64VM

LabVIEW® & LabVIEW Real-Time Support
- Simple interface for quick startup and easy programming
- Access real-time 1553/429 data using LabVIEW
- Easily integrate data from different types of instruments and sensors
- Create custom user interface from scratch or by modifying samples provided

Model: BU-69093S0-XX0

Commercial Avionics Utilities
- Graphical ARINC 429 data bus analysis and simulation
- Advanced filtering, message scheduling, and triggering
- Graphical ARINC 615 data loader to load data to and from airborne computers

Model: DD-42999S0-XX0

For ordering assistance and technical support,
Call: 1-800-DDC-5757
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