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Find the *DDC BU-67121W* at our website: ***Click HERE***

Avionics Interface Computer
Test & Development Platform

Connectivity Power Control

Product Brief

Models: BU-67121W



ETHERNET
MIL-STD-1553
ARINC 429
ARINC 717
DISCRETE
intel Atom inside
ACEXTREME®

DDC's Avionics Interface Computer (AIC) provides a scalable, programmable, and portable platform to develop and test MIL-STD-1553 and ARINC 429 system applications via an Ethernet network... eliminating the need and cost of long cabling/wire runs from the test lab to the onboard 1553/429 interfaces under test.

Key Features

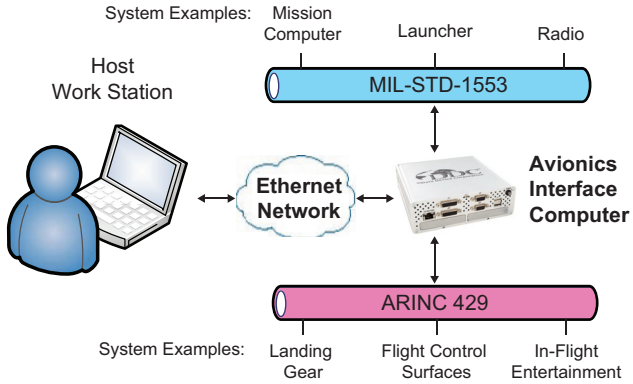
- Bridging Ethernet, MIL-STD-1553, and ARINC 429
- Development Computer
  - Intel® Atom™ E3845 Quad Core 1.91GHz Processor
  - 2GB DDR3L SDRAM
  - 30 GByte SSD
  - 10/100/1000 Base-T Ethernet, USB 2.0, RS-232
  - Linux Operating System
  - Lab Grade, Rack-Mountable Chassis
  - 2 PMC and 2 Mini-PCIe Expansion Slots
- Various PMC and Mini-PCIe Modules Support a Range of Avionics Interfaces
  - MIL-STD-1553
  - ARINC 429
  - ARINC 717
  - Avionics Discrete I/O
  - Custom I/O
- Three Modes of Operation, Using DDC's Hardware and Software
  1. **Remote Access Mode** Uses Ethernet as a Virtual Backplane Between Applications Running on a Host Computer and 1553/429 Interfaces Located Within the AIC, Eliminating the Need and Cost of Long Cabling to Onboard 1553/429 Connections from the Test Lab
  2. **Protocol Conversion Mode** Uses Bridging SDK, Which Allows Users to Easily Create Embedded Software on the AIC that will Autonomously Forward Data Between MIL-STD-1553, ARINC 429, and Ethernet Interfaces
  3. **Standalone Mode** Allows the AIC to Operate as a User Programmable Computer System.

Benefits

- Embedded Intel® Processor Provides Programming Flexibility, Enabling the AIC to Serve a Broad Range of Data Conversion and Unique Application Needs.
- The AIC is Compatible with all Linux-based PMC and Mini-PCIe I/O Boards, Providing Hardware Flexibility to Suit Your Current and Future Needs.
- Optimized Hardware and Software Solution with Field-Proven Technology, Saves Development Time and Costs.
- Three Modes of Operation Provide Complete Bridging Capability for Lab Environments.

Applications

- Systems Integration Labs
- Simulators
- Production Test Stands
- System Troubleshooting
- Software Development
- Data Recording



Quick Specs

THERMAL	TYPICAL
Operating	0°C to +55°C
Non-operating	-5°C to +55°C

HUMIDITIY	TYPICAL
Operating	5% to 85% (non-condensing)
Non-operating	5% to 90% (non-condensing)

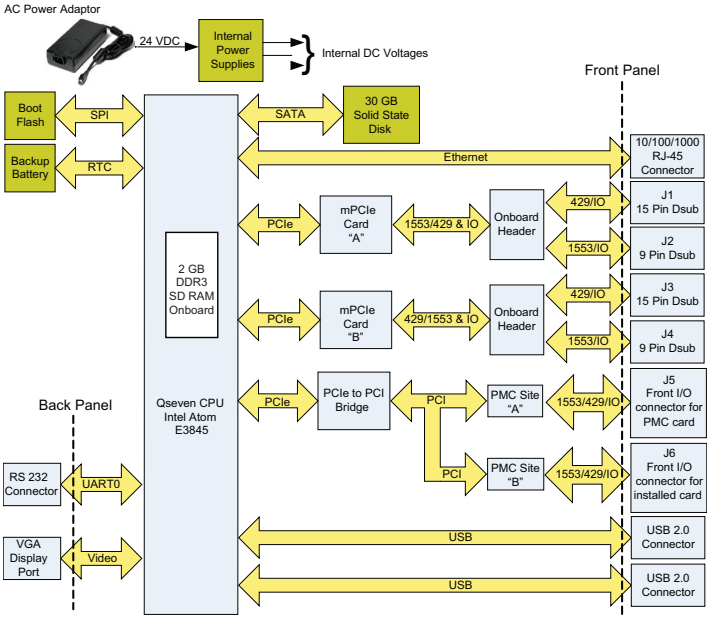
TOTAL POWER DISSIPATION	TYPICAL
Input Voltage Range	18 to 33 VDC (5A max)
AC to DC Power Adapter	110/240V, 50/60Hz

For more information: www.ddc-web.com/BU-67121W

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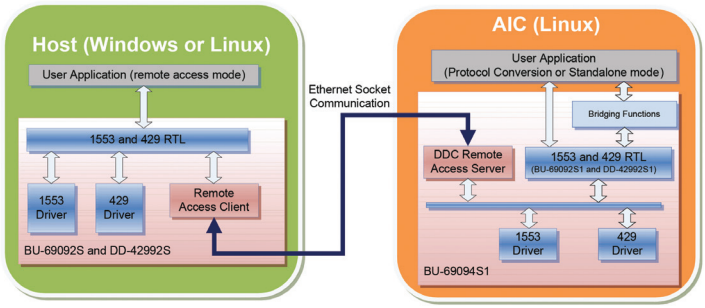
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Block Diagram



Software Architecture

The BU-69092S and DD-42992S Software Development Kits (SDKs) provide seamless support for remote access to MIL-STD-1553 and ARINC 429 interfaces. The 1553 and 429 Runtime Libraries (RTLs) make calls to either a local device driver (for controlling a board located within the host computer) or they utilize an Ethernet socket based client/server interface to make calls to the appropriate device driver running on the AIC (for controlling an interface located within the AIC).



The key to the AIC's remote access performance lies in DDC's highly efficient functional partitioning between the Runtime Library (RTL) and device drivers. The RTL/driver interface is optimized to maximize block transfers of data with minimal overhead and thus provides the benefits of remote access without sacrificing real-time performance.

Ordering Information

Two Ways to Order... Thousands of Configurations:

1. **Development Computer Only** - The AIC can also be ordered without PMC and Mini-PCIe boards installed. With this method, the user would need to order the required boards and install them into the AIC.
2. **Complete with Installed Boards** - The AIC can be ordered with selected PMC and Mini-PCIe boards installed. This method includes full testing and validation of the assembled AIC.

Model Number	System Description	Expansion Options	Operating Temperature	Size	Weight
BU-67121W000R-JL0	Intel Atom E3845 Quad Core, 1.91 GHz Processor, 2GB DDR3L SDRAM, 30 GByte SSD	2 PMC Sites 2 Mini-PCIe Sites	0°C to +55°C	6.7 in x 7.4 in x 2.1 in (170 mm x 188 mm x 53 mm)	2.7lbs (1.2kg)

Notes: 1. Contact Factory for Custom Ordering Options.
2. Product Specifications for DDC's PMC and Mini-PCIe boards are available at www.ddc-web.com/databus

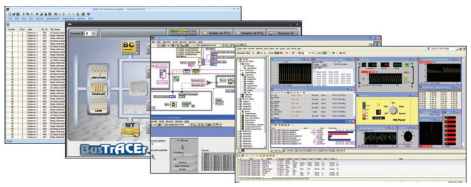
Included Software:

- BU-69094S1 Bridging SDK for 1553/429 (runs AIC)
  - Includes Web Server and Remote Access Server
- BU-69092S0 Windows 1553 SDK (runs on host)
- BU-69092S1 Linux 1553 SDK (runs on host and AIC)
- DD-42992S0 Windows 429 SDK (runs on host)
- DD-42992S1 Linux 429 SDK (runs on host and AIC)

Included Accessories:

- AC to DC Power Adapter
- D-Connector and Shells
- Flat Flex Cables (FFC)
- USB Recovery Drive for Automatic Restoration to Default Configuration

Optional Software:



PROTOCOL ANALYZERS

BusTrACEr®
Data Bus Analyzer & Monitor
Model: BU-69066S0-XX0

Commercial Avionics Utilities
Data Bus Analyzer & 615 Data Loader
Model: DD-42999S0-XX0

SYSTEM LEVEL SOLUTIONS

dataSIMS
Avionics Data Bus Test & Analysis
Model: BU-694X4DS-64VM

LabVIEW® & LabWindows® Support
Model: BU-69093S0-XX0

DATA DEVICE CORPORATION
REGISTERED TO:
ISO 9001:2008, AS9100C:2009-01
EN9100:2009, JIS Q9100:2009
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