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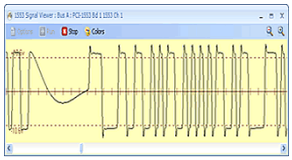
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Find the *Alta Data Technologies PC104E-MA4-1D8* at our website: *Click HERE*

PC104E-MA4

Multi-Channel, Multi-Protocol 1553 and ARINC Interface for PCI/104-Express Systems

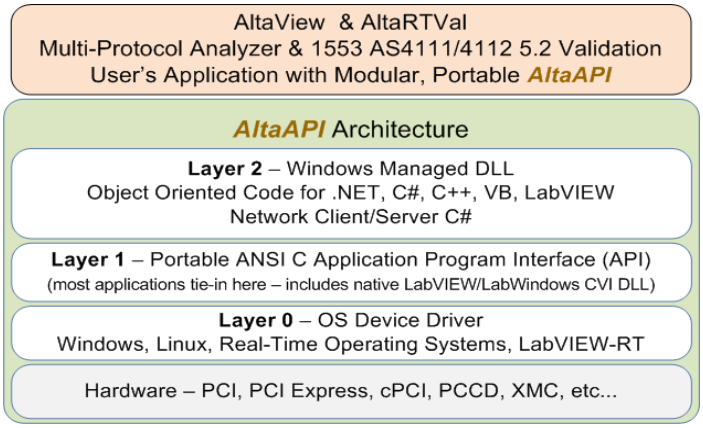




A/D Signal Capture on First 1553 Channel & First Two ARINC RX

Alta Data Technologies' PC104E-MA4 interface module is a multi-channel, multi-protocol 1553 and ARINC PCI/104-Express interface card supported by the latest software technologies. The PC104E-MA4 card is based on the industry's most advanced 32-bit FPGA protocol engine, ***AltaCore***™, and by a feature-rich application programming interface, ***AltaAPI***™, which is a multi-layer ANSI C and Windows .NET (MSVS 2005/08/10 C++, C#, VB .NET) architecture. This hardware and software package provides increased system performance and reduces integration time.

AltaCore-1553 is guaranteed 1553B Notice II & IV and ARINC compliant and all cards are manufactured to the highest IPC-610 Class 3 standards and ISO 9001:2008 processes. Cards are available in 1553 dual-function (BC/Mon or multi-RT/Monitor) or full-function (BC, mRT and Mon) configurations. Playback and Signal Generation are part of BC operations and Waveform Capture is for Monitor only operation. Alta is committed to a risk free integration and will be glad to help with any level of your system development.



Alta's Advanced Software Architecture

Key Features:

- **One or Two Independent, Dual Redundant MIL-STD-1553 Channels**
- Dual Function 1553 (BC/Mon or mRT/Mon) or Full Function (BC/mRT/Mon)
  - One Mbyte RAM per 1553 Channel
- **ARINC – 8 Channels Total:**
  - 4 Shared TX/RX & 4 Dedicated RX
  - One Mbyte of RAM for all Channels
- ***Capture 1553 & ARINC Waveforms***
  - First 1553 Channel & First Two ARINC RX Channels
  - 8-bit, 50 nSec for 1553 – 1 uSec for ARINC A/D for Voltage Measurements
- Channels May be Factory configured for fixed ARINC RX/TX or Monitor only 1553
- **PCI/104-Express Form Factor (with PCI pass through connector). PCIe/104 Optional.**
- Commercial, Industrial (Extended) Temperature and Conduction Cooled
- Advanced BC & ARINC TX Frequency Controls: 1553 Framing/Subframing;
- **Advanced BIT Features and Dual Temperature Sensors**
- RT/ARINC RX Full Buffering with 64-bit 20 nsec Time Tags
- Advanced, Multi-layer *AltaAPI* Provided at No Cost with Source Code
- 32 & 64-bit Windows & x86 Linux
  - .NET Managed DLLs
  - Contact Factory for Latest RTOS and NI LabVIEW Support
- Industry First: 20/1000 ns Signal Generation
  - Supports RT Validation Testing
- IRIG-B RX PAM or RX/TX PPS Ext Clock
- Avionics/ RS-485 Discretes
- Full HW Interrupt Features
- **PCI Express 1.1. x1 Lane capable of shifting. Card may be above or below host SBC/CPU in stack.**

www.altadt.com

4901 Rockaway Blvd., Building A Rio Rancho, NM 87124 USA
(In US): 888-429-1553 (Outside US): 505-994-3111 Fax: 805-504-8588

Multi-Channel, Multi-Protocol Avionics

PC104E-MA4 Specifications

General

- PCI/104-Express (Optional PCIe/104)
- PCI Express 1.1. x1 Lane capable of shifting. Card may be above or below host SBC/CPU.
- **1-2 MIL-STD-1553B Notice II & IV Channels**
- **4 Shared RX/TX & 4 RX ARINC Channels**
- Dual and Full Function 1553 Channels
- Connectors
  - 1553: 10-Pin Locking Molex
  - ARINC: 20-Pin Molex
  - AUX: 16-Pin Locking Molex
- Weight: 6oz/180grams
- Power (Estimated @ Max Bandwidth) 4-5W
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended
- 6 Avionics, One RS-485 Discretes, One TTL I/O
- Loop-Back & User BIT, Dual Temp Sensors
- IRIG-B RX PAM, TTL/RS-485 PPS Time Sync
- IPC Class 3 and ISO 9001:2008 Processes

BC & ARINC TX Features

- Variable Framing and Subframing
- Schedule Message Timing in Frames or Intermessage/Label Gap Spacing
- Low and High Priority Aperiodic Scheduling
- ARINC TX Has Complete Frequency Control Per Channel – No Framing/Subframing
- Infinite Linked Data Buffers
- Interrupts, No-Ops, Ext Trigger
- 1553 Legal and Reserved Mode Codes
  - 1553A and 1553B Support
- 64-Bit, 20 ns Time Tags
- Full Error Injection/Detection

1553 RT Features

- Infinite Linked Data Buffers
- Legal and Reserved Mode Codes
  - 1553A and 1553B Support
  - Full Buffering of All Mode Codes
- 64-Bit, 20 ns Time Tags
- Full Error Injection/Detection

ARINC RX Features – 3 RX Modes

- Channel Level Label/Word Tables
- Multi-Channel Data Tables for All Channels
- Channel Level Current Value Tables
- ARINC 717 Frame Support
- 64-Bit, 20 nsec Time Tags
- Full Error Detection

Playback/Signal Vector (BC or ARINC TX)

- Real Hardware Playback from Archive Files.
- Signal Vector Generation **INDUSTRY FIRST**
- 20 nSec 1553 Vectors and 1 uSec ARINC Vectors

1553 Monitor

- Sequential and RT Mapped Monitoring with Infinite Linked CDP Data Buffers
  - Available with All Card Models
  - 64-Bit, 20 ns Time Tags, Interrupts, Triggers
  - Full Error Detection
- 8-bit, 50 nSec 1553 and 1 uSec A/D Waveform Signal Capture. 1st Channel 1553 and First 2 RX of ARINC ***AltaView*** Software is Ideal for Signal Display

Software: *AltaAPI & AltaView*

- Multi-Layer ***AltaAPI*** Architecture to Support Windows , .NET and ANSI C Linux, VxWorks, Integrity, etc…
  - Contact Factory For RTOS Platforms
  - LabVIEW & RT No Cost
- Optional ***AltaView*** is Based on the Latest Windows MS Office User Interface Style with Ribbon-Bar
  - Full Analyzer Integration Tool
  - Multi Language Support

Part Numbers

Add Suffix **-D** or **-F** for 1553 Dual or Full Function and Channel Count (**1** or **2**). Add "**8**" for ARINC.

Example: PC104E-MA4-**2F8**

Contact Factory for Desired Channel Configuration.

Options: -E for Ext Temp Parts (-40 to +85C), -F for Conformal Coating, -A for AltaView, -H for PCIe/104 (No PCI Connector).
Example: PC104E-MA4-2D8-AEFG

5 Year Limited Warranty!

EU and China RoHS Compliant

Contact Alta for Special Lead Build Configurations

AltaAPI Software with ANSI C Source, .Net Managed DLLs and LabVIEW & LabVIEW-RT Provided at No Cost.

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