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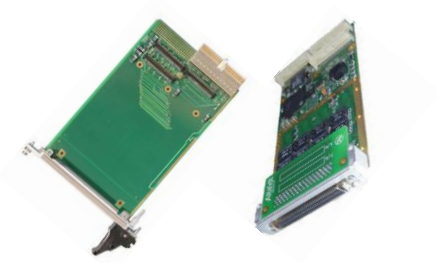
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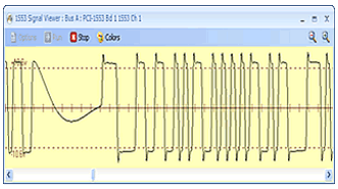
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Find the *Alta Data Technologies CPCIC3-MA4-1D8-T* at our website: ***Click HERE***

# CPCIC3/6-MA4

## Multi-Channel, Multi-Protocol 1553 and ARINC Interface for cPCI Systems



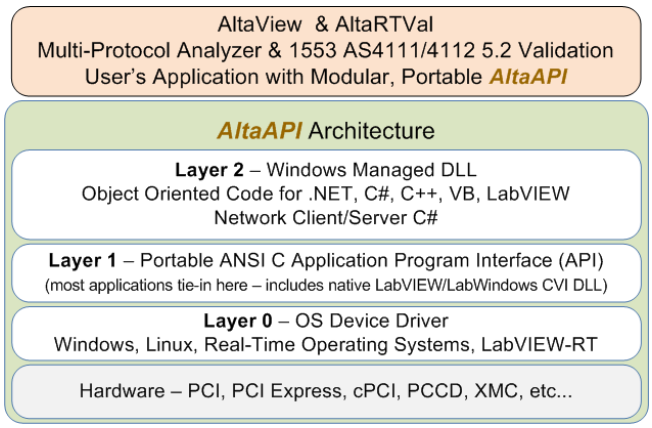


A/D Signal Capture on First 1553 Channel & First Two ARINC RX

Alta Data Technologies' CPCIC3/6-MA4 interface module is a multi-channel, multi-protocol 1553 and ARINC CPCIC3 card supported by the latest software technologies for Compact PCI (CPCI) systems. The CPCIC3/6 cards (PMC on 3U or 6U Carrier) are 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 2.0 (MSVS 2005 C++, C#, VB .NET) architecture. This hardware and software package provides increased system performance and reduces integration time.

The CPCIC3-1553's BC capability includes variable message/label framing/subframing with transmission scheduling provides the most advanced control operations. ARINC TX has complete frequency control per channel. RT and ARINC RX, Monitor, Playback and Signal Generator functions also include industry leading functions to meet the most demanding requirements.

***AltaCore-1553*** is guaranteed 1553B Notice II & IV compliant and all cards are manufactured to the highest IPC-Class 3 standards and ISO 9001:2008 processes. Cards are available in 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. 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 to Five Independent, Dual Redundant MIL-STD-1553 Channels**
- 3U or 6U Carrier Configurations
- Dual Function 1553 (BC/Mon or mRT/Mon) or Full Function (BC/mRT/Mon)
- 512 Kbyte RAM per 1553 Channel
- **ARINC – 8 Channels Total:**
  - 4 Shared TX/RX & 4 Dedicated RX
  - 512 Kbyte 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
- Commercial, Industrial (Extended) Temperature and Conduction Cooled
- Front or Rear Panel (P4) Configurations
- Advanced BC & ARINC TX Frequency Controls: 1553 Framing/Subframing;
- RT/ARINC RX Full Buffering with 64-bit 20 nsec Time Tags
- Advanced, Multi-layer *AltaAPI* Provided at No Cost with Source Code
- Windows, Linux, RTOS, LabVIEW & RT
  - .NET Managed DLLs
  - Contact Factory for Latest RTOS Support
- True HW Playback (BC or TX)
- Industry First: 20/1000 ns Signal Generation
  - Bit Construction
  - Supports RT or ARINC Validation Testing
- IRIG-B RX PAM or RX/TX PPS Ext Clock
- Avionics/ RS-485 Discretes
- Advanced BIT Features and Dual Temperature Sensors
- Full HW Interrupt Features
- PCI 32 Bit, 33/66MHz & PCI-X Compatible


**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
# **CPCIC3/6-MA4** Specifications

## General

- 32-Bit PCI 33/66MHz/PCI-X Compatible
  - PCI-SIG PCI 2.1 Compliant
  - ANSI/VITA 20-2001 Compliant
- **1-5 MIL-STD-1553B Notice II & IV Channels**
- **4 Shared RX/TX & 4 RX ARINC Channels**
- 3U and 6U Carrier Configurations
- PXI Compatible
- Dual and Full Function 1553 Channels
- Weight: 8oz/240grams
- Power (Estimated @ Max Bandwidth) 8-10W
- Parts Temp (C) : -55 to +120 Storage, 0 to +70 Commercial, -40 to + 85 Extended
- 6 Avionics and 1 RS-485 Discretes
- Loop-Back & User BIT, Dual Temp Sensors
- IRIG-B RX PAM and RX/TX 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 TX)

- Real Hardware Playback from Archive Files.
- Signal Vector Generation at 20/1000 (1553/ARINC) nsecs **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, AltaRTVal*

- Multi-Layer ***AltaAPI*** Architecture to Support Windows (.Net 2.0) 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
- Optional ***AltaRTVal*** provides full AS4111/4112 5.2 RT Validation GUI and Reports

## Part Numbers

Add Suffix **#D** or **#F** for 1553 Dual or Full Function Channel Count (#). Further add "**8**" for ARINC.

Example: **CPCIC3-MA4-5D8-T**

Select 3 or 6 Suffix for 3U or 6U Configuration.
Contact Factory for Desired Channel Configuration.

Options: -E for Ext Temp Parts (-40 to +85C), -C for Ext Temp, Conduction Cooled/Conformal Coated/Rear Panel, -R for Rear Panel P4 Commercial.

NOTE: On shared channels: TX lines have an extra RX load; when powered-off, RX channels can have severe voltage drain – use only dedicated RX channels for critical systems.

**5 Year Limited Warranty!**

EU and China RoHS Compliant

Contact Alta for Special Lead Build Configurations

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**505-994-3111 (outside US)**
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