Two Channels Dual Redundant
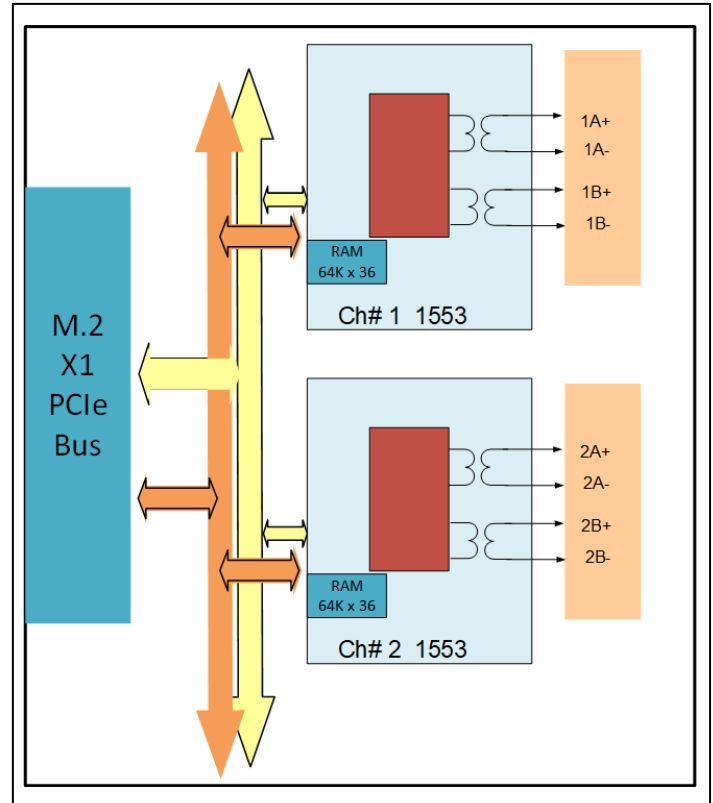## 1553 Controller, Multiple RT Support

Features

- M.2 PCI Express x1 lane interface
- M.2 3042 Key B & M
- Two dual redundant MIL-STD-1553 Total-AceXtreme® controllers (A/B channel)
- Multiprotocol support: MIL-STD-1553A/B STANAG-3838 and MIL-STD-1760
- 2MB RAM per Channel
- Programmable mode: Bus Controller, Remote Terminal with concurrent bus monitor
- IRIG-106 Chapter 10 monitor
- Emulate up to 31 RT addresses simultaneously
- Filter based on RT address, T/R bit, sub-address
- Transformer coupled

Block Diagram and Operational Overview

The M.2-1553-2 uses the DDC Total-AceXtreme® communication device as its 1553 bus controller or remote terminal with concurrent bus monitor. The dual controller has a dual redundant channel with built-in transceivers and transformer. The controller has the capability to emulate up to 31 RT addresses simultaneously. The M.2-1553-2 in RT mode can filter on RT address, T/R, Subaddress.
The M.2-1553-2 is offered in extended temperature. The board format is an M.2 30mm x 42mm.

1553 Capabilities
- Dual redundant MIL-STD-1553
- BC or Multi-RT with Concurrent Bus Monitor
- Supports MIL-STD-1553 A/B and MIL-STD-1760
- 2 MB (64K x 36) RAM
- 48-bit/100ns Time Stamp
- IRIG-106 Chapter 10 MT Support

1553 Bus Monitor (MT)
- IRIG-106 Chapter 10 compatibility
- Filter Based on RT Address, T/R bit, Sub-Address
- Advanced bit-level error detection to isolate bus failures
- DMA engine for ultra-low CPU utilization

1553 Bus Remote Terminal (RT)
- Emulates up to 32 RT addresses simultaneously
- Multiple buffering techniques
- Programmable command illegalization
- Programmable busy by sub-address

1553 Bus Controller (BC)
- Streaming and minor/major frame scheduling of messages
- High- and low-priority asynchronous message insertion
- Modify messages or data while BC is running

Applications
This is a perfect solution for a wide array of 1553 communication applications such as:
- Industrial and Military
- Test equipment supporting evaluation, simulation
- Monitoring and analysis

Available Software Drivers
- Linux® drivers
- Windows® drivers
- VxWorks® drivers

Mechanical
- Size: M.2 Module Key B & M (30mm x 42 mm)
- Power: 240mA
- Front panel I/O
- Vibration: 0.5G, 20-2000Hz rand
- Shock: 20G, 11ms, ½ sine
- Weight: 10g (0.4oz)
- MTBF: >250,000 hours

Operating Environment
- Operating temperature
  Commercial: 0 to +70ºC
  Industrial: -40ºC to +85ºC
- Non-operating: -50ºC to +90ºC
- Airflow requirement: .5CFM
- Humidity: 5 to 90% (non-cond)
- Altitude: 0 to 10,000 feet

Ordering information

M.2-1553-2	Two Channels Dual Redundant Controllers, Industrial Temp -40ºC to +85ºC
M.2-1553-1	One Channel Dual Redundant Controller, Industrial Temp -40ºC to +85ºC
	Append -CC for Conformal Coat

Optional Accessories

CBL-M.2-1553-12	1 x Micro Connector to twin axial cable, 12in length

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