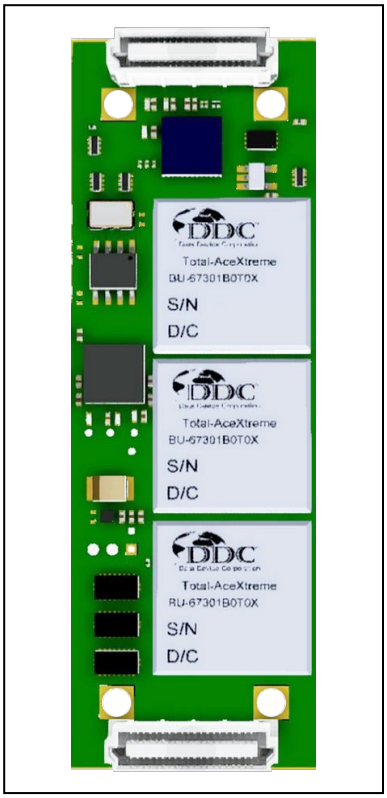
MIL-STD-1553 Dual-Redundant Communication Module for QMC Systems
Bus Controller, Concurrent Monitor, and Multiple RT Support

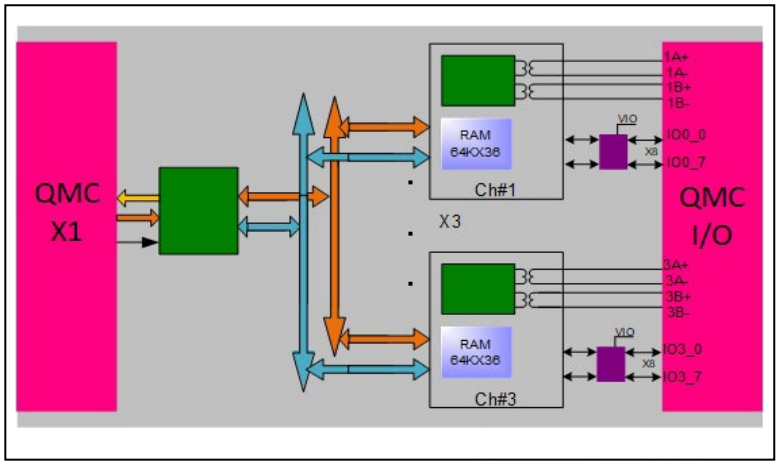
Features



- QMC PCI Express x1 lane interface
- Compact QMC module providing up to three dual-redundant MIL-STD-1553 channels for rugged and embedded applications.
- Multiprotocol support: MIL-STD-1553A/B STANAG-3838 and MIL-STD-1760
- 2 MB (64 K × 36) 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
- Up to Twenty Four I/O LVTTL/TTL Support configurable 3.3V/5V

Block Diagram and Operational Overview

The QMC-1553-3 uses the DDC Total-AceXtreme® communication device as its 1553 bus controller or remote terminal with concurrent bus monitor. Each controller supports dual-redundant A/B channels with integrated transformers and transceivers. The controller has the capability to emulate up to 31 RT addresses simultaneously.
The QMC-1553-3 in RT mode can filter on RT address, T/R, Subaddress.
The QMC-1553-3 is offered in extended temperature. The board format is an QMC 26mm x 78mm.



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QMC-1553-3

QMC Module

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 (64 K × 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 31 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: QMC Module (26mm x 78 mm)
- Power: 240mA
- Vibration: 0.5 G, 20–2000 Hz random
- Shock: 20G, 11ms, ½ sine
- Weight: 10g (0.4oz)
- MTBF: >250,000 hours

Operating Environment

- **Operating Temperature:**
  Commercial: 0°C to +70°C
  Industrial: –40°C to +85°C
- **Non-Operating Temperature:** –45°C to +125°C
- **Airflow Requirement:** 5 CFM minimum
- **Humidity:** 5% to 90% (non-condensing)
- **Altitude:** 0 – 10,000 ft

Ordering Information

QMC-1553-3	QMC Three Channels Dual Redundant Controllers, Industrial Temp -40ºC to +85ºC
QMC-1553-2	QMC Two Channel Dual Redundant Controller, Industrial Temp -40ºC to +85ºC
QMC-1553-1	QMC One Channel Dual Redundant Controller, Industrial Temp -40ºC to +85ºC
Append - CC	Conformal Coated HumiSeal 1A33

Optional Accessories

CBL-QMC-1553-12-X	VHDCI-68 Connector to twin axial cable, 12in length X= 1 to 3 Channels

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