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Data Sheet

August 2, 2026

ASTRONICS / BALLARD TECHNOLOGY

Astronics / Ballard Technology LE1553-5/4M MIL-STD-1553 Interface Card

Astronics / Ballard Technology LE1553-5/4M MIL-STD-1553 Interface Card The Astronics / Ballard Technology LE1553-5/4M (LE155354M) isaPCI Express card in the Lx1553-5 family for communicating with MIL-STD-1553 avionics databuses. The /4M configuration provides four dual-redundant multi-function channels, each independently configurable for concurrent bus controller, remote terminal(s), and bus monitor. The card includes 32 MB on-board memory, 16 avionics-level discrete I/O, IRIG time synchronization/generation, and 48-bit 1 us hardware time-tagging. Maximum throughput is supported on all channels with DMA sequential monitoring. Software uses the BTIDriver API; optional CoPilot analysis software is available (CP-LE1553-5/4M). The Astronics / Ballard Technology LE1553-5/4M (LE155354M) isaPCI Express card in the Lx1553-5 family for communicating with MIL-STD-1553 avionics databuses. The /4M configuration provides four dual-redundant multi-function channels, each independently configurable for concurrent bus controller, remote terminal(s), and bus monitor. The card includes 32 MB on-board memory, 16 avionics-level discrete I/O, IRIG time synchronization/generation, and 48-bit 1 us hardware time-tagging. Maximum throughput is supported on all channels with DMA sequential monitoring. Software uses the BTIDriver API; optional CoPilot analysis software is available (CP-LE1553-5/4M). MI

**MODEL**

**Astronics / Ballard
Technology
LE1553-5/4M**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

LE1553-5/4M

LISTING

<https://aumictechlabs.com/products/le1553-5-4m-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Astronics/Ballard Technology LE1553-5/4M is a PCIe x1 interface card for MIL-STD-1553 avionics databus communication, testing, simulation, and monitoring. Built on a 5th generation protocol engine with bus mastering capabilities, it delivers 1553 channel management without requiring supplemental power - drawing all operating voltage from the backplane. The half-size form factor (6.9 × 4.2 inches) integrates into space-constrained avionics test platforms. Technical Specifications Interface Bus: PCI Express (PCIe) x1 lane Protocol Engine: 5th generation On-Board Memory: 32 MB data memory MIL-STD-1553 Channels: Up to 4 dual-redundant channels (Bus A/B), each independently configurable as Bus Controller (BC), up to 32 Remote Terminals (RTs), or Bus Monitor Channel Modes: Multi-function channels support simultaneous BC, Bus Monitor, and up to 32 RT operation with protocol error injection; single-function channels support BC, Bus Monitor, or up to 32 RT configuration Coupling Options: Transformer or direct coupling; jumper-selectable on-board termination resistors for direct coupling Avionics Discrete I/O: 16 channels (general-purpose or linked to 1553 activity as triggers/syncs) Time Synchronization: IRIG A/B, AM, PWM, and PPS modes with generation and synchronization capability Hardware Time-Tagging: 48-bit resolution, 1 µSec accuracy Connectors: LFH Operating Temperature: -40°C to +85°C Storage Temperature: -55°C to +100°C MTBF: 2,500,000+ hours Power Supply: +3.3 VDC and +12 VDC from PCIe backplane Compliance: RoHS Key Features Bus mastering architecture for efficient databus control Dual-redundant MIL-STD-1553 channel topology Flexible channel configuration supporting mixed BC/RT/Monitor operation Precision time-tagging and IRIG synchronization for time-correlated test data Status LEDs controllable via software Typical Applications MIL-STD-1553 databus simulation and emulation Avionics system integration and validation testing Real-time 1553 traffic monitoring and analysis Hardware-in-the-loop (HIL) testing with synchronized discrete I/O Compatibility & Integration API: Universal BTIDriver API supporting C/C++, C#, VB, VB.Net, and LabVIEW Operating Systems: MS Windows and Linux

drivers Legacy Support: Translation DLL available for migration from earlier Ballard devices
Analysis Software: Optional CoPilot software for interactive databus testing and simulation

Features & description

From manufacturer datasheet

Features

- PCIe MIL-STD-1553 interface (LE1553-5 family)
- Four dual-redundant multi-function 1553 channels
- Concurrent BC, RT(s), and monitor on multi-function channels
- 32 MB on-board memory
- 16 avionics discrete I/O
- IRIG A/B PWM and AM
- 48-bit, 1 us hardware time-tagging
- LFH60 connectors (standard /4M)
- BTIDriver API; optional CoPilot (CP- prefix)
- Power from PCIe backplane (no auxiliary power cable)
- MTBF class about 2,500,000+ hours (LE1553-5 family manual)

LE155354M Characteristics / Specifications

PARAMETER	VALUE
Model	LE1553-5/4M (LE155354M)
Manufacturer	Astronics Ballard Technology
Instrument Type	PCIe MIL-STD-1553 interface card
Protocol	MIL-STD-1553B
Host Bus	PCI Express (LE1553-5)
Channels	4 dual-redundant multi-function MIL-STD-1553
Functions	BC and RT(s) and monitor concurrent (multi-function)
Memory	32 MB SDRAM; 4 MB Flash (family manual)
Discretes	16 avionics I/O
Timing	IRIG; 48-bit 1 us hardware time-tag
Connector	LFH60 (J1/J2 pinouts per Lx1553-5 manual)
Related	LP1553-5/4M (PCI); single-function /4S variants Standard Operating Conditions Install incompatible PCIe slot. Observe transformer-coupled bus wiring and stub limits per MIL-STD-1553 practice. Use BTIDriver or CoPilot appropriate to the OS/driver revision.

LE155354M Specifications

PARAMETER	VALUE
Key Features	- PCIe MIL-STD-1553 interface (LE1553-5 family)
Technical Specifications	Model: LE1553-5/4M (LE155354M)
Operational Notes	/4M means four multi-function channels—not single-function /4S. Confirm LE (PCIe) vs LP (PCI) faceplate marking.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

Specifications

PARAMETER	VALUE
Model	LE1553-5/4M (LE155354M)
Manufacturer	Astronics Ballard Technology
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Related	LP1553-5/4M (PCI); single-function /4S variants

Standard Operating Conditions

Install incompatible PCIe slot. Observe transformer-coupled bus wiring and stub limits per MIL-STD-1553 practice. Use BTIDriver or CoPilot appropriate to the OS/driver revision.

Operational Notes

/4M means four multi-function channels-not single-function /4S. Confirm LE (PCIe) vs LP (PCI) faceplate marking.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.