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## Certificate



### Alta Data Technologies



This award is in recognition of **Alta Data Technologies**'s stellar reputation and trust among customers and industry peers, evident in the numerous nominations we received from our subscribers. **Alta Data Technologies** emerged as a **Top Company** after an exhaustive evaluation by an expert panel of C-level executives, industry thought leaders, and our editorial board.



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**AEROSPACE  
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# ALTA DATA TECHNOLOGIES

## Advancing MIL-STD-1553 and ARINC Connectivity



**A**lta Data Technologies continues to redefine the landscape of MIL-STD-1553 and ARINC connectivity with a series of groundbreaking product releases. In addition to several new commercial off the shelf (COTS) interface cards, Alta has introduced the in-line (NLINE) product family, a truly innovative solution that embeds their advanced protocol engine directly into ruggedized cabling.

The NLINE products deliver an incredibly compact form factor with ultra-fast communication capabilities. This makes the NLINE ideal for a wide range of applications, including general avionics testing and operational flight plan (OFF) data loading. Expanding its versatility, the NLINE is now available with Ethernet, Thunderbolt, and USB 3 interfaces.

The NLINE design leverages Alta's proven success with their widely deployed real-time Ethernet 1553 and ARINC converters (ENET), trusted in thousands of air and land vehicles. Alta's proprietary FPGA protocol engines deliver maximum data throughput between the 1553/ARINC and Ethernet networks, achieving real-time packet speeds.

Further simplifying integration, the NLINE offers an auto-bridge mode. This eliminates the need for programming, automatically converting 1553 or ARINC, time-stamped packets to Ethernet UDP packets. The ENETs and NLINE products streamline the integration of 1553 and ARINC connections for new and legacy avionics systems.

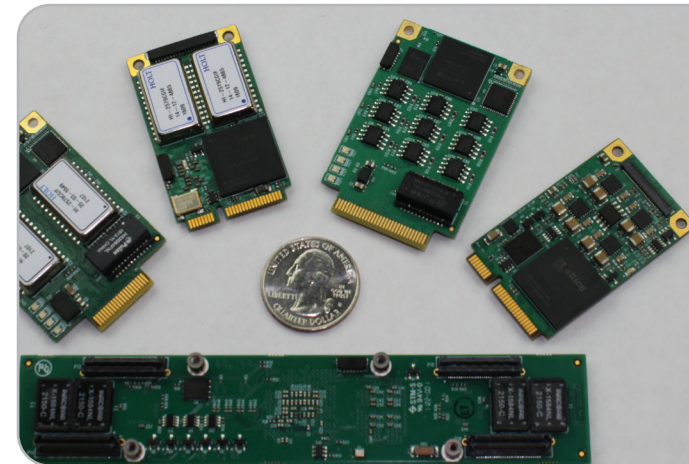
### Miniaturized, Modular Connectivity for Demanding Avionics

"The enthusiastic reception for our ENET and NLINE products has been truly inspiring, and customers are eager to push this technology directly into their avionics computers using interface cards similar to our PMC and XMC cards, but in even more compact, mezzanine (MEZ) form factors," explains Harry Wild, VP of sales for Alta.

He continues, "This demand has fueled the development of our latest innovation: the MEZ family of interface cards. These remarkably small circuit cards pack a powerful punch, offering 1553, EBR (enhanced bit-rate 1553), WMUX, and ARINC interfaces, paired with either Ethernet and PCI Express host connections."

These products are accompanied by comprehensive reference design schematics and development cards, allowing customers to initiate software development with the same hardware while their system design is finalized. The MEZ represents Alta's commitment to providing cutting-edge, adaptable connectivity solutions for the evolving avionics landscape.

"We strive to make our products the most straightforward to integrate, keeping pace with the rapid evolution of computer hardware and operating systems. This means continuously adapting to new architectures like ARM and staying ahead of Linux updates. We're constantly developing drivers, example programs, and providing specialized integration support,



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**The dedication of our employees to quality in design and meticulous manufacturing processes benefits everyone: customers, suppliers, and Alta alike**

### Adapting to Evolving Needs - Alta's Commitment to Legacy and Emerging Standards

While Alta's PMC and XMC interface cards continue to be widely adopted in test, VPX, and MOSA line-replaceable units (LRUs), the MEZ product line caters to the growing demand for compact solutions in mission and flight support systems. Drawing inspiration from the mini PCI Express (MPCIE) and M.2 cards commonly found in servers and laptops (for flash discs and WIFI), MEZ offers similar flexibility and space efficiency. In response to the rising demand for M.2 solutions, Alta is set to introduce an M.2 1553 interface card in early 2025.

Further pushing the boundaries of integration, Alta is introducing an XMC board with an unprecedented array of avionics interfaces for cPCI, VPX, MOSA LRU, and test systems. The XMC-MAS card combines asynchronous serial interfaces (RS-232, RS-422, and RS-485) with 1553/ARINC capabilities and digital discretes, providing comprehensive connectivity on a single card. This complements Alta's existing high-density XMC-1553 1553 card, which boasts an impressive capacity of up to 10 individual channels.

### Alta's Software Development Augments Hardware Advancements

"Our ambitious hardware roadmap necessitates a parallel commitment to software development, ensuring our customers experience a smooth and efficient integration process," says Jake Haddock, CTO of Alta. "While we're known for offering hardware solutions, their full potential is unlocked by our comprehensive software packages."

including compatibility with LabVIEW and DO-178 applications. Furthermore, we continually enrich our AltaView analyzer with exciting new features to be provide customers the best tool for avionics network analysis."

All Alta products include the streamlined AltaAPI SDK, a full software-ware tool kit that promotes code reuse across our entire product line, and accelerates development with hundreds of readily available example programs.

### Uncompromising Quality - The Foundation of Alta's Success

Alta's unwavering commitment to quality is evident in their rigorous, ISO audited manufacturing processes. Each product undergoes multiple JTAG boundary scans, multiple IPC-610 Class 3 inspections (the highest commercial standard), image scanning, and comprehensive functional testing. This dedication to excellence allows Alta to confidently offer an industry-leading 5-year warranty.

"Since our inception in 2007, we've shipped over 70,000 items with an astonishingly low repair rate," says Richard Schuh, CEO of Alta. "We rarely charge for repairs, even beyond the warranty period as it's simply not worth the customer's procedural hurdles, and they really appreciate this level of support. The dedication of our employees to quality in design and meticulous manufacturing processes benefits everyone: customers, suppliers, and Alta alike. This approach has translated into consistently record-breaking sales and impeccable on-time delivery, even amidst the challenges of COVID-related supply chain disruptions." **AD**