

Alta Data Technologies, LLC

TOP
AVIATION
SOLUTION PROVIDERS
2021

Second Year In a Row!
2020-2021 Award Recipient!

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SOLUTION PROVIDERS - 2021

Leading 1553 and ARINC Technology Through Innovation, Quality and Service

For the past 15 years, Alta Data Technologies (Alta) has grown to be a leading supplier of MIL-STD-1553 and ARINC connectivity products. Alta's products are integrated into end-use avionics systems for both commercial and defense programs. The market has responded very favorably as the company is now a top supplier of commercial off the shelf (COTS) 1553 and ARINC products to almost every major aerospace company, on hundreds of platforms worldwide.

Last year, Alta released a new product family of direct in-line (NLINE™) network interfaces, providing tremendous flexibility to integrate legacy 1553 or ARINC interfaces directly in wiring harnesses of airborne or ground applications. These NLINE interfaces can provide real-time Ethernet, USB, or Thunderbolt™ connections for almost any computer platform.

"The NLINE product family is a culmination of advancing our AltaCore 1553 and ARINC protocol engines in both functionality and reduced packaging to allow direct, in-line cable applications. We made considerable investments to have plastic injection molding engineering and equipment capability brought in-house so we can quickly make new products instead of waiting 6-12 months on outside vendors. We can rapidly design PCBs and harness molds to match various deployed application requirements. We have also tested models to meet rigorous environmental MIL-STD-810 & 461 (shock, temp, EMC) specifications, even full operational water immersion. Along with our real-time Ethernet ENET products, the

NLINE has been adopted for some very large programs," states Jake Haddock, CTO of Engineering for Alta. He adds, "Our advanced 1553 and ARINC protocol engines, and signal testing functions are being utilized for everything from simple message scheduling to complex protocol validation and detection of security threats, which is a hot requirement in this complicated cyber world."

Alta continues to fill out the NLINE product family as interface cards are still the bread and butter of the COTS market. ARINC and 1553 network interface cards (NICs) are still very popular for embedded integration and test of avionics systems. Alta started with PMC, PCI Express, XMC, PXI style interface boards and then invented their ENET real-time Ethernet converter appliances, which became one of the

market's leading products. In coming full circle, Alta just announced a new, flexible 1553 NIC that customers can design-in into small, custom systems: mezzanine board MEZ-E1553.

The MEZ-E1553 is a very small NIC that provides 1-2 channels of 1553 bus channels and even includes raw signal capture to troubleshoot bus cabling, which can be used to create signal signatures for cyber threat detections. The host interface is Alta's proven ENET FPGA core, so customers can integrate this card with a standard 10/100/1000 Ethernet interface for almost any operating system or microcontroller.

Harry Wild, VP of Sales, explains, "The MEZ-E1553 allows our customers to implement the industry's most advanced 1553 functional controls directly into their custom system. Coupled with our Mini PCI Express cards, customers have choices to embed 1553 NICs directly on their motherboards. We provide complete design guidelines, example reference schematics, and the software development kit is identical to our other interface cards, ENETs, or NLINE products to maximize portability. We've reached key milestones with over \$150M in total sales, over 50,000 items shipped with only a handful of warranty returns in 15 years. An industry best 5-year warranty is not a cost burden because we have such a low failure rate, which is a real credit to our engineering and manufacturing teams. 2020 was another record sales year, increased backlog, and no shipment delays even with the COVID induced challenges of chip supplies. The company is well poised for more growth through these innovative products, and focused service." AD