

AEROSPACE & DEFENSE REVIEW

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Alta Data Technologies



Alta Data Technologies, LLC



The annual listing of 10 companies that are at the forefront of providing Aviation solutions and transforming businesses

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Where Technical and Quality Innovation Drives Growth

The years 2005-2010 have witnessed the consolidation of aerospace and defense companies that opened the door for nimble, innovative startups to take hold. One of these companies is New Mexico-based Alta Data Technologies. Alta was formed in 2007 by former senior design engineers and management of the largest MIL-STD-1553 and ARINC-429 product companies that got gobbled up in this acquisition wave. Today, the company is one of the largest commercial off the shelf (COTS) suppliers of interface cards and real-time appliances of 1553 or ARINC network communications products. That target markets include avionics test, simulation, and rugged deployed platforms.

Richard Schuh, CEO of Alta, reflects, “With my partners, we knew it was time to start with a clean-slate to design innovative products and business processes, including all aspects of manufacturing and quality. We wanted to bring new technologies to a stale market, but we also made sure to look at the big-picture of how product designs and quality practices can improve manufacturing and service. It is one reason we can offer a 5-year warranty for our products—they don’t fail.”

The strategy worked. Alta has already shipped over 45,000 items, surpassed \$130M in total sales with a running 110+ straight months of on-time shipments. Jake Haddock, CTO of Alta, states, “We implemented some pretty radical ideas that upset the industry’s notion of what a 1553/ARINC product should look like. For example, high channel counts, protocol off-load engines (PEs) that packetize data, and software development kits (SDK or APIs) have proper OSI layered functional models.

“Our advanced PEs 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. Our modular designs enabled rapid development of a whole suite of PCI, PCI Express,

and other interface cards for almost any computer system in record time.”

Innovation Continues

A few years ago, Alta surprised the market by combining a real-time Ethernet FPGA interface to their proven 1553 and ARINC PEs and released a new product line of network bridge converters: ENETs. “We recognized that Ethernet is the dominant network technology in Aerospace systems, and there was an unfulfilled demand for real-time 1553 and ARINC Ethernet converters. We responded with the ENET product family and it has been an unmatched success with 1000s of deployed units. There is nothing else like ENETs for performance, size and cost,” says Harry Wild, VP of Sales for Alta.

Alta’s product advancement continues with recent releases of the industry’s only native Thunderbolt™ and USB 3 appliances. The same layered SDK can run on these products as with their first PCI-1553 product released in 2007. This is indeed an epitome of portability.

The customer’s application doesn’t even need to know which Alta device is being controlled from PCI Express

to ENETs because software objects are abstracted to maximize application reuse, resulting in significant cost savings for customers.

In August, Alta announced another new series of products that required the development of advanced electronic and packing designs: NLINE (in-line). As the name suggests, Alta embedded the entire 1553/ARINC control electronics into an extremely rugged cable harness with Ethernet, Thunderbolt, and USB 3 interfaces, all controlled by the same advanced AltaAPI SDK. “The NLINE product line continues our effort to design better, smaller, cheaper for our customers; how can we reduce our customer’s integration effort, platform management and life cycle costs?” states Wild. “It’s embedded in our culture to continually improve our products and processes.” *AD*



Contact Alta at www.altadt.com