

# Communications: Replacing EOL CompactFlash With Virtium TuffDrive CF

Virtium fills networking company's  
high-capacity / small form factor  
requirement.



**Industrial Embedded  
Technology for an  
Interconnected World**



## Challenge

A large provider of wireless base stations required an additional five years of support for their current base station design. The system had already been deployed in the field for the past seven years and the company's design engineering team had long since moved on to other projects. The customer's current CF vendor had exited the market and no longer provided industrial grade CompactFlash solutions.

The sustaining engineering team was left to find a new solution, but lacked the tools and expertise to change the system software to accommodate a new CompactFlash product. They tried several off the shelf industrial CF solutions but none of them worked.

Requirements:  
Interface – CompactFlash  
Capacity requirement – 1GB  
Operating temperature – -40 to 85C

## Solution

At first Virtium sent in its standard CompactFlash solution but that did not fare any better than the others the OEM tried. In order to try to troubleshoot the issues, Virtium field application engineering team visited the OEM's lab with a logic analyzer and other tools to read identify device information.

The OEM was using a non-standard set of CHS values. The system was designed around the ATA-3 specification. Virtium's standard CF was ATA-7 compatible. The system did not perform a standard handshake to identify the proper operating mode of the CF.

Virtium had the proper tools on-hand to re-program the TuffDrive CF on-site. He matched LBA values of the known-good card that was EOL, capped the operating mode at multi-word DMA mode 2, and set all ID file words that were don't cares in ATA-7 to their recommended ATA-3 values.

## Result

The result was a card that worked in the lab. The Virtium FAE then captured all required data and worked with the customer to fill out Virtium's new product request document to set up an OEM-specific part number.

The Virtium TuffDrive CF uses the latest CompactFlash controller and SLC NAND flash, so the customer can achieve at least five more years of product deployment with its current base station solution.

---

Virtium manufactures memory and storage solutions for the world's top industrial embedded OEMs. For nearly two decades we have designed, built and supported our products in the USA - fortified by a network of global locations. Our world-class technology and unsurpassed support provide a superior customer experience that continuously results in better industrial embedded products for our increasingly interconnected world.

© Copyright 2015. All rights reserved. Virtium®, StorFly® and TuffDrive® are registered trademarks of Virtium Technology Inc. All other non-Virtium product names are trademarks of their respective companies.