

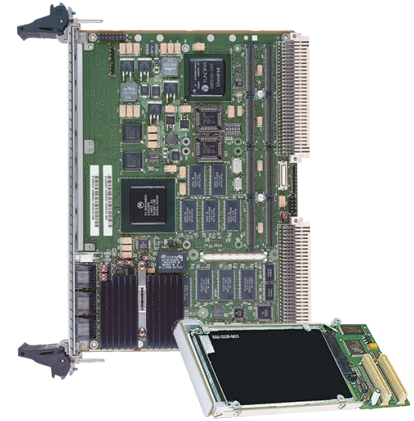
Airborne SigInt

RUGGEDIZED COTS SBC SOLUTION WITH SOLID STATE STORAGE

END OF LIFE REPLACEMENT OF SYSTEM CONTROLLER

This rugged single board computer and solid state storage module functions as a system controller in extreme environments in UAV signal intelligence systems.

- MPC7410 based SMART Embedded single board computer model MVME5110
- Option for rugged PMC based 65 / 128 GB SATA SLC solid state storage
- Stiffening brackets for increased resistance to shock and vibration
- VxWorks boot image, run time license
- Full operating system PMC storage driver integration
- Conformal coated over the complete assembly per MIL-I-46058 using urethane based conformal coating for resistance to the effects of excessive humidity
- Complete environmental stress screening
- Complete assembly documentation
- Shipped fully tested and ready for service



Requirements

Provide a form, fit and functional replacement for a popular single board computer product - the SMART MVME5107 (formerly Motorola) - which had moved to end of life (EOL). Carry out and document a full suite of operational and environmental testing to ensure this new replacement board met all existing requirements of this critical, rugged UAV application.

Solution

Leveraging our longstanding partnership with SMART Embedded, Elma worked to develop a replacement for the 5107 board based on their MVME5110. Elma provided the customer with a detailed comparison of the feature sets of each of the two boards before making the necessary modifications. A ruggedized MVME5110 with PMC SATA solid state storage was developed as a fully integrated assembly including operating system, driver support, environmental stress screening and ruggedization related enhancements.



Benefits

Seamless technology transition was achieved by avoiding the difficulties typically associated with EOL components. The customer was able to quickly and cost effectively demonstrate a direct replacement to the end user. Elma's solution allowed the customer to purchase the unit as a complete assembly rather than individual components for in house processing and testing. Elma's years of custom assembly and test experience resulted in these additional cost savings:

- Improved assembly yields and total assembly costs compared to in house processing and labor
- Higher overall assembly quality
- Reduced inventory carrying costs
- Lower procurement costs when purchasing the unit complete
- Streamlined support and spares services with Elma as the one stop supplier