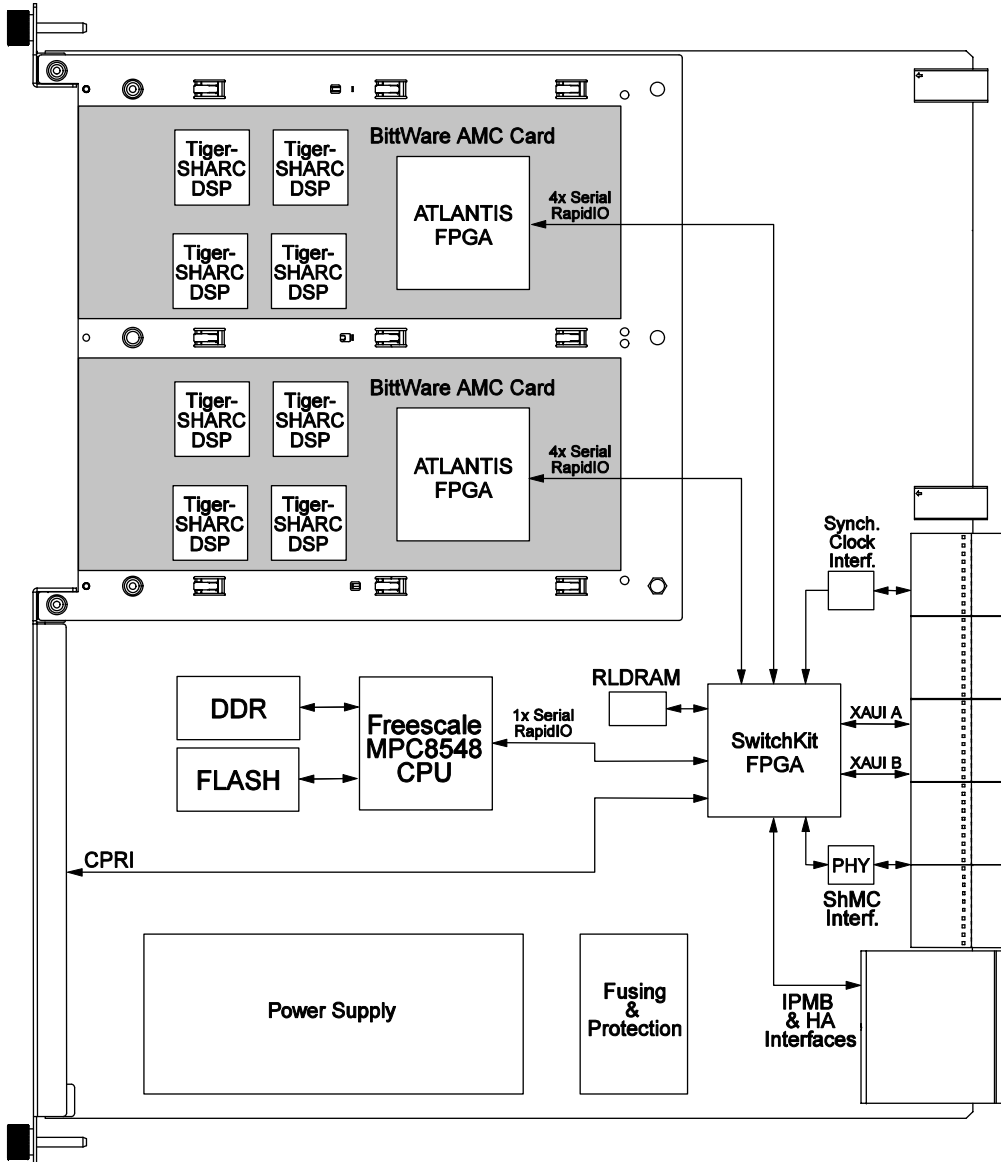


# ***SwitchKit*<sup>™</sup> Case Study: BTS Baseband Processing Card**

# Application Requirements

- Two AMC based programmable baseband processing cards
  - Four TigerSHARC DSPs per card
  - BittWare ATLANTIS FPGA to interface DSPs to 4x serial RapidIO links
- Ethernet backplane interface for OBSAI compatibility
- CPRI radio interface
- Power-QUICC III for control plane functions
- Challenges:
  - Range of interfaces
    - 4x Serial RapidIO to AMCs
    - 1x Serial RapidIO on Power QUICC
    - Two XAUI Ethernet interfaces to the backplane
    - CPRI for radio data
  - High performance, shared memory, pool needed for data streams

# SwitchKit Based Solution



- SwitchKit interface switch implements:
  - Three Port RapidIO switch for AMCs and Processor.
  - Load balances traffic between AMCs
  - Memory controller for shared data
  - Bridge to Ethernet backplane
  - CPRI Interface

# Interface Switch Implementation

