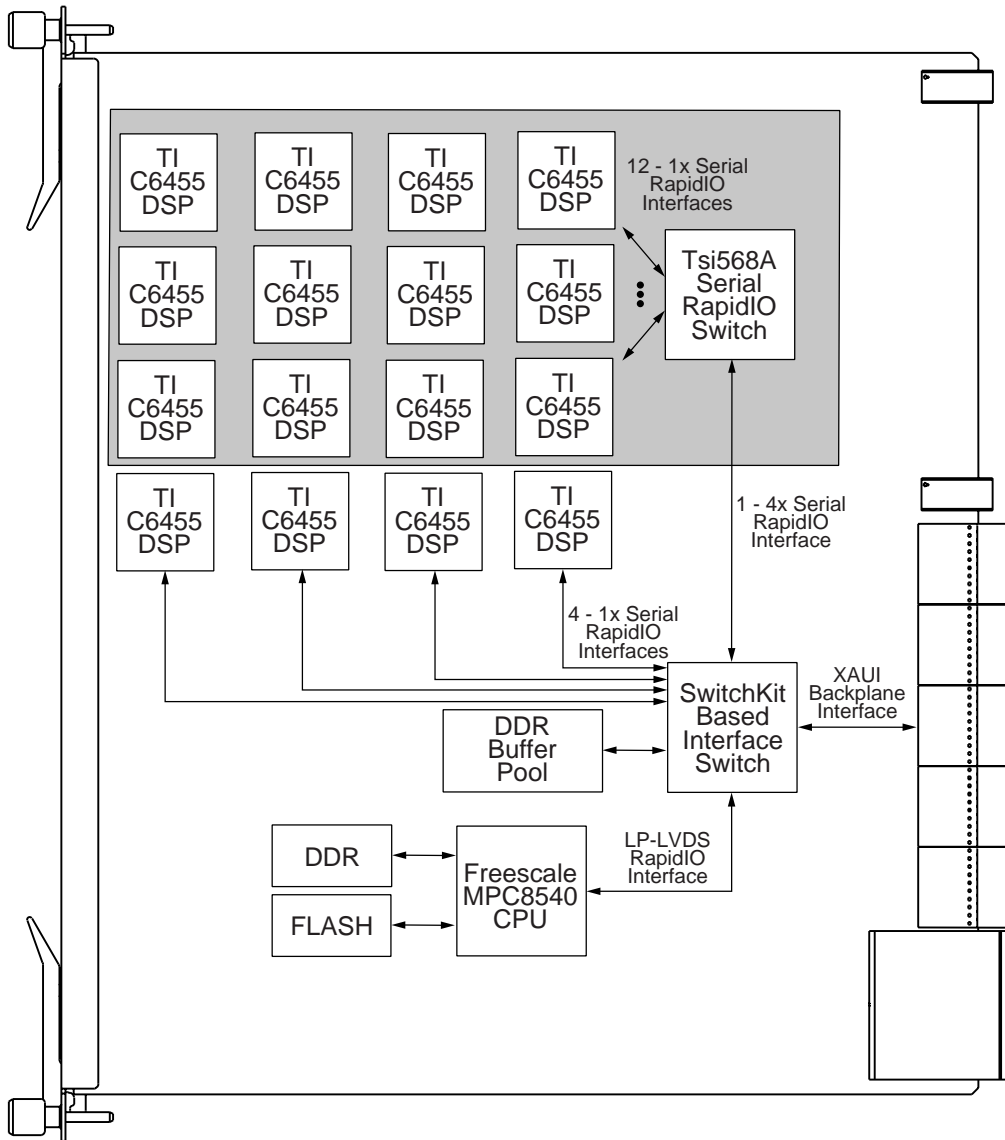


# ***SwitchKit*<sup>™</sup> Case Study: VOIP Echo Cancellation**

# Application Requirements

- Sixteen TI C6455 DSPs to maximize channel handling capacity
- Ethernet backplane interface for OBSAI compatibility
- Power-QUICC III for control plane functions
- Challenges:
  - Range of interfaces
    - Serial RapidIO on DSPs
    - Parallel RapidIO on Power QUICC
    - Ethernet to the backplane
  - Number of Serial RapidIO ports needed
    - 16 1x Serial RapidIO Links to DSPs for connectivity
    - RapidIO fat-pipe to memory
  - High performance, shared memory, pool needed for data streams

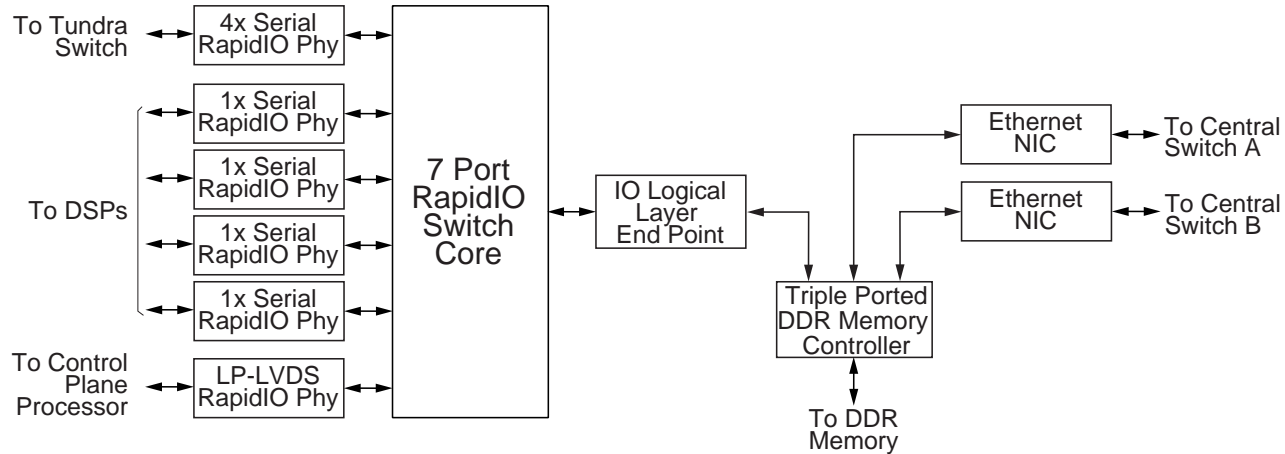
# SwitchKit Based Solution



- 12 DSPs connected with ASSP switch
- SwitchKit based interface switch implements:
  - Serial RapidIO connectivity for 4 remaining DSPs
  - Parallel RapidIO connectivity for control processor
  - Memory controller for shared data
  - Bridge to Ethernet backplane

# Interface Switch Implementations

### Dual Star Configuration



### Mesh Configuration

