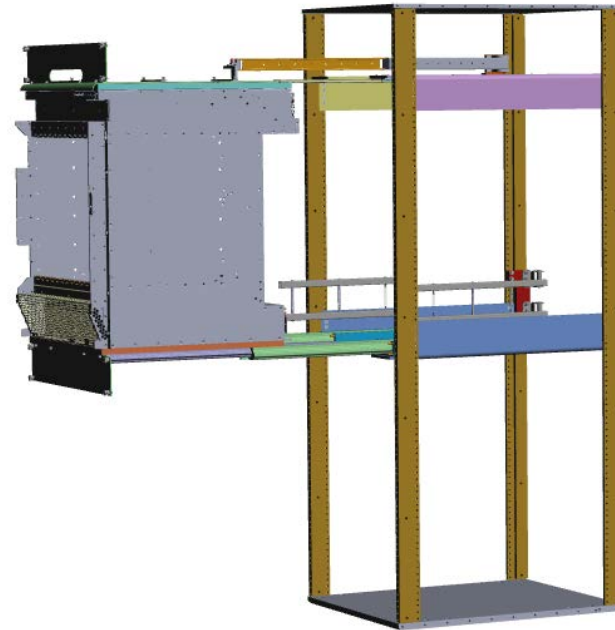


Taking NEBS to Sea



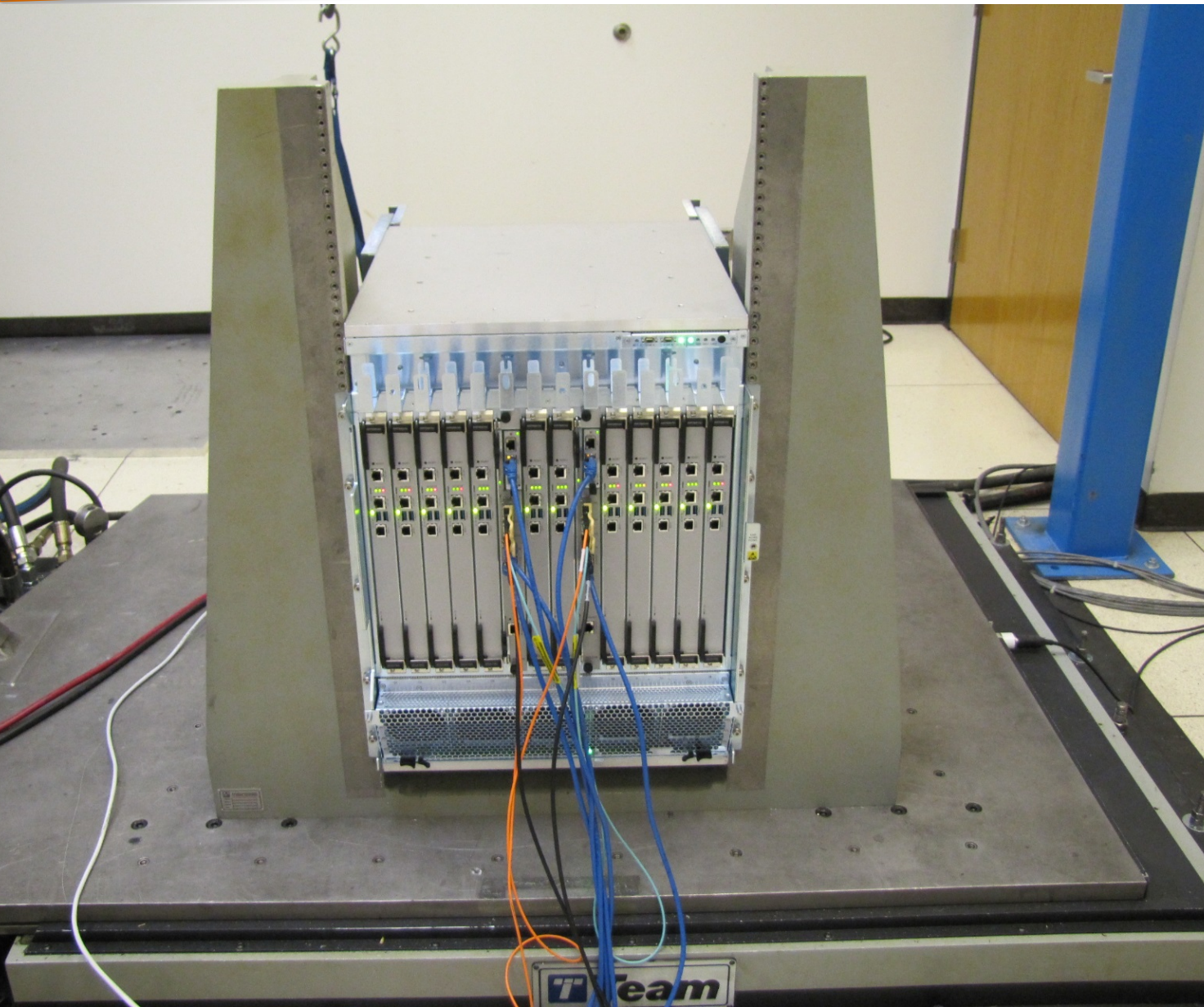
How ATCA Was Adapted to Survive
Aboard Ship While Maintaining “Open-ness”

(TI – Technical Insertion)



ATCA Design Decision

- Bladed Architecture
- Good Performance to Space Ratio
- Reduced Cabling for 40G Network
- Cost Competitive
- Good Power Consumption
- Long Life
- **OPEN ARCHITECTURE**



Vibration Operational (endurance):

X Axis : Side-to-side (60 minutes) – 1.6G

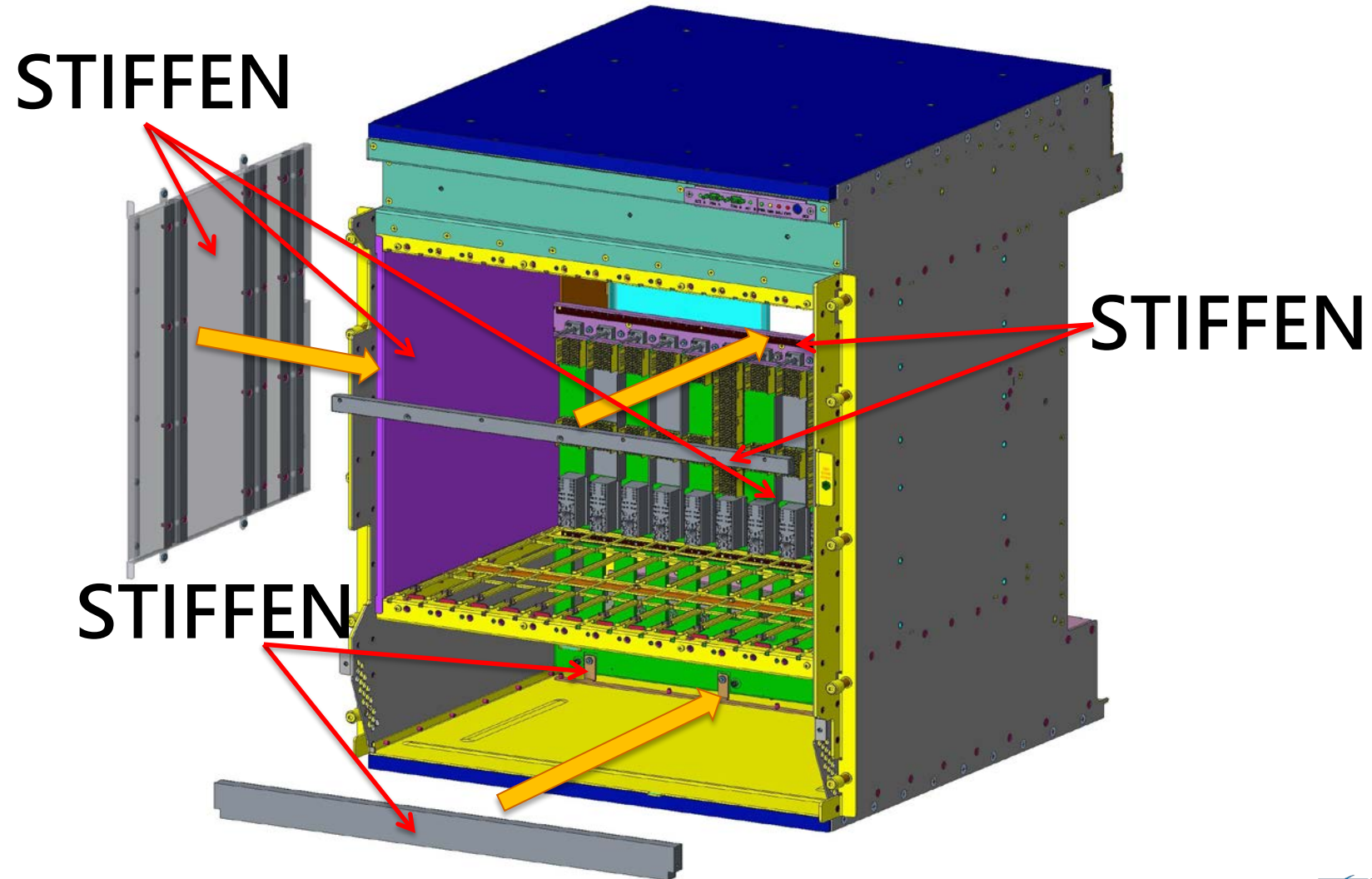
Z Axis : Front-to-Back (40 minutes) - 2.5G

Y Axis : Vertical (60 minutes) – 1.9G

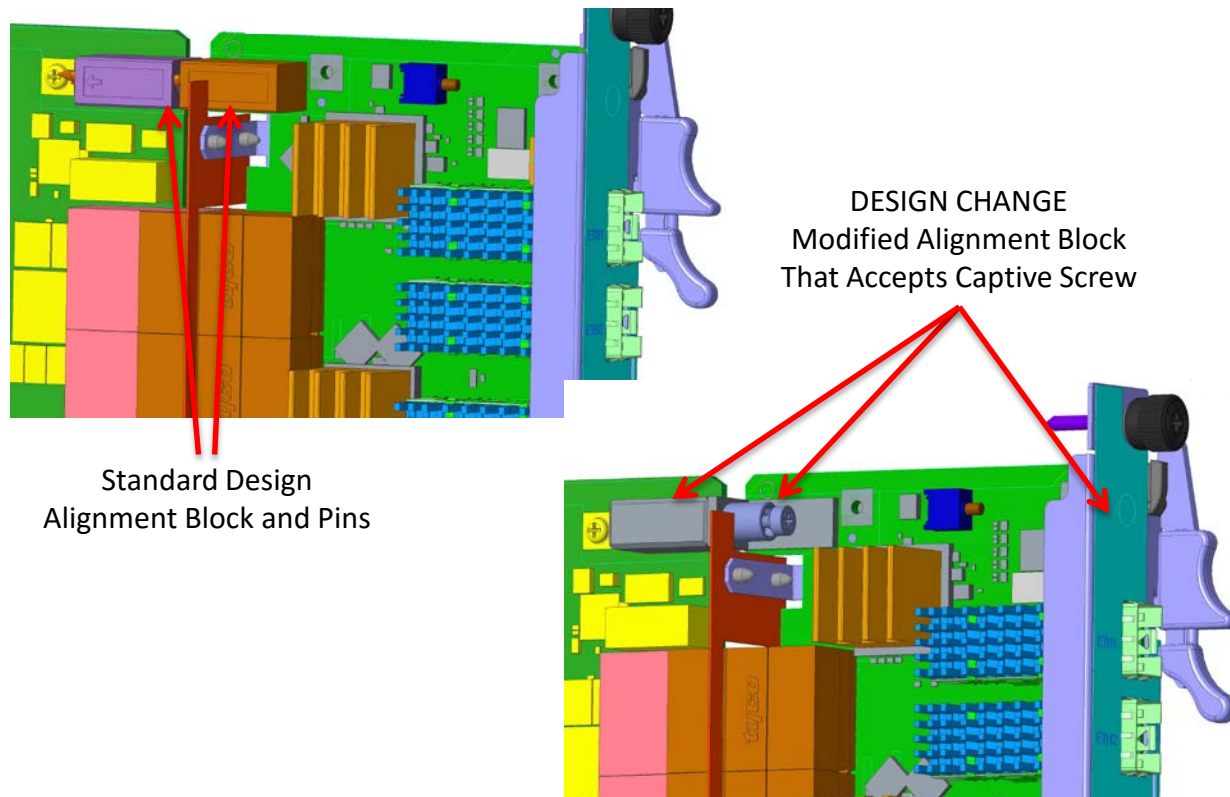
Shock Operational:

Y-axis: approx. 18-20G

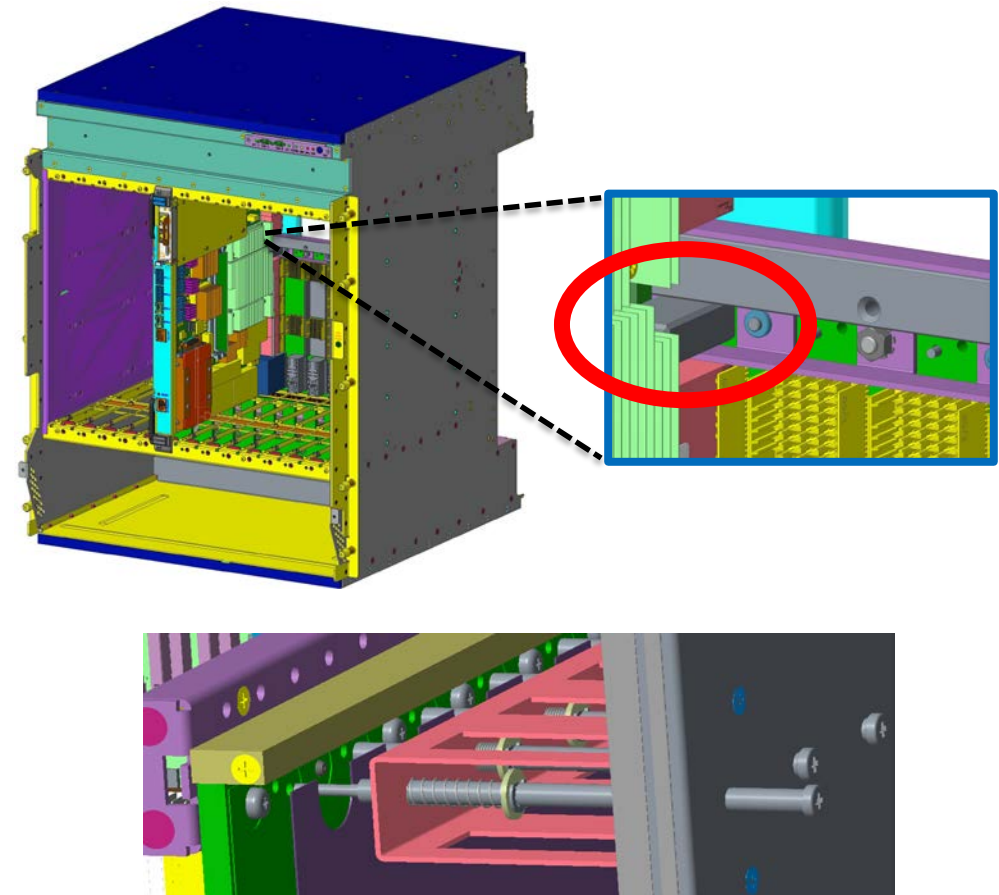
Z and X axis: approx. 10-12G



RTM ATTACHMENT



PAYLOAD ATTACHMENT



- Strengthen the Original Enclosure
- Attach the Payload Boards to the Backplane
- Attach the RTM's to the Payload Boards
- RTM and Board Attachment Points
 - Modified Board Alignment Blocks on Board
 - Captive Screws for Attachment Blocks, Part of Chassis
- Third Party Products Easily Modified to Work in Chassis
- Maintained Critical Part of Design Decision,

Ruggedize ATCA Beyond NEBS, Maintain *Open-ness*