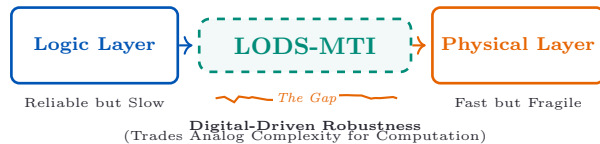


1. CONTEXT: THE GAP BETWEEN LOGIC AND PHYSICS

Scenario: High-Density Inventory

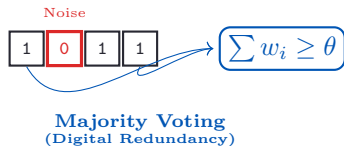


Core Conflict: Efficiency vs. Stability



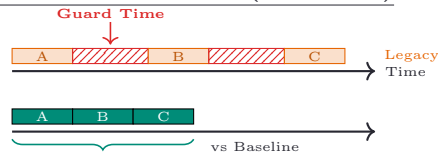
2. MECHANISM AND PHYSICAL IMPACT (HOW IT WORKS)

A. MECHANISM (INPUT)



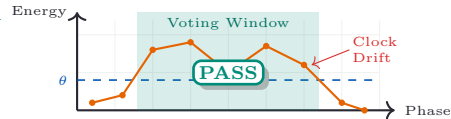
SPECTRAL COMPRESSION

B. PHYSICAL RESULT (OUTPUT)



3.5× Dense ($\Gamma \approx 3.52$)

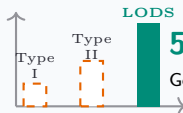
Soft Sync: Recovers Data



3. PERFORMANCE BREAKTHROUGHS (CORE OUTCOMES)



10x Lower Energy
 $\approx 150\mu J/tag$ (vs Analog)



5,200+ Tags/sec
Goodput ($P_e \approx 0.1$)



99.1% Accuracy
Safe Operating Area