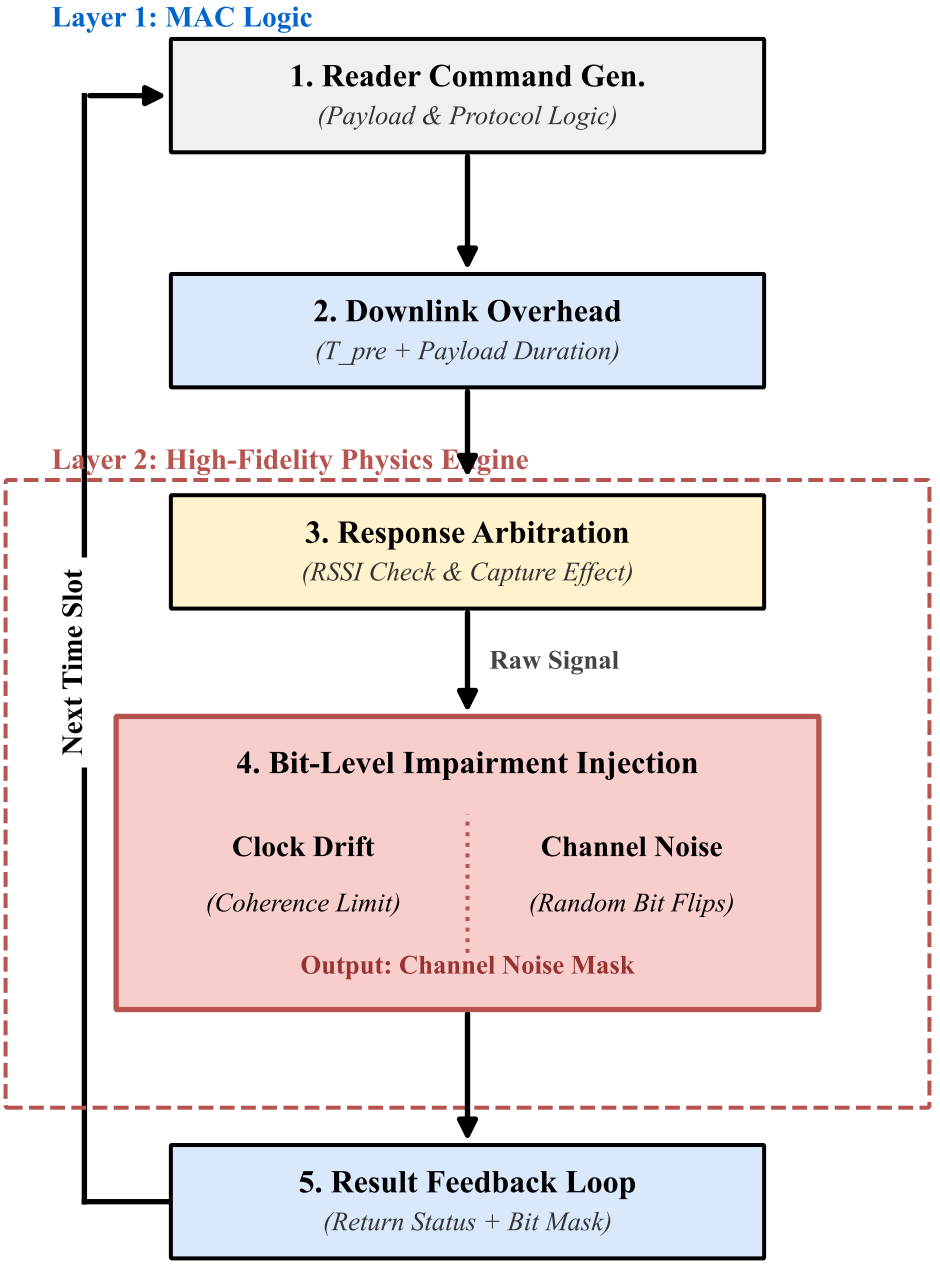
Layer 1: MAC Logic
1. Reader Command Gen.
(Payload & Protocol Logic)
2. Downlink Overhead
(T_pre + Payload Duration)
Layer 2: High-Fidelity Physics Engine
3. Response Arbitration
(RSSI Check & Capture Effect)
Raw Signal
4. Bit-Level Impairment Injection
Clock Drift
(Coherence Limit)
Channel Noise
(Random Bit Flips)
Output: Channel Noise Mask
Next Time Slot
5. Result Feedback Loop
(Return Status + Bit Mask)