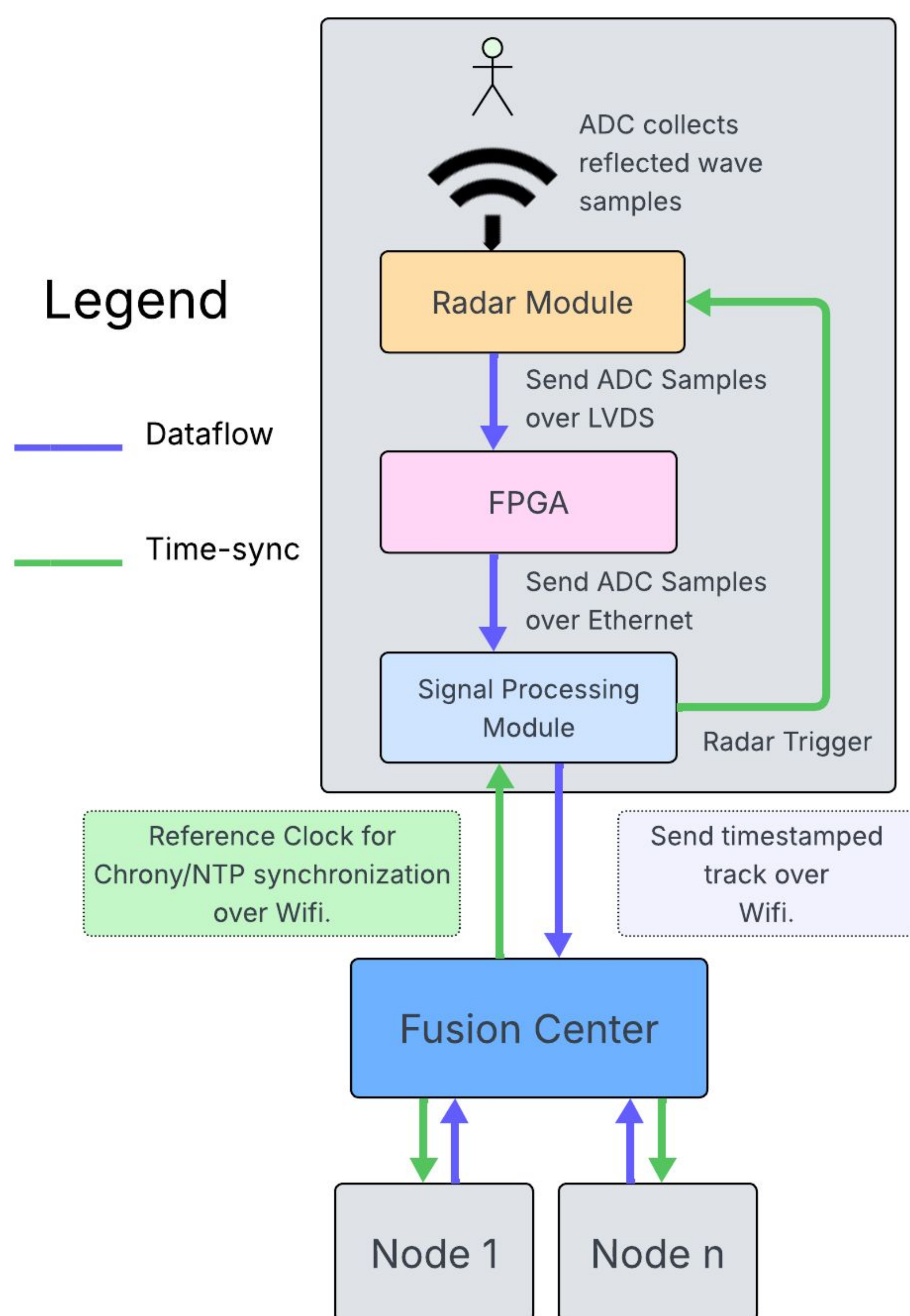


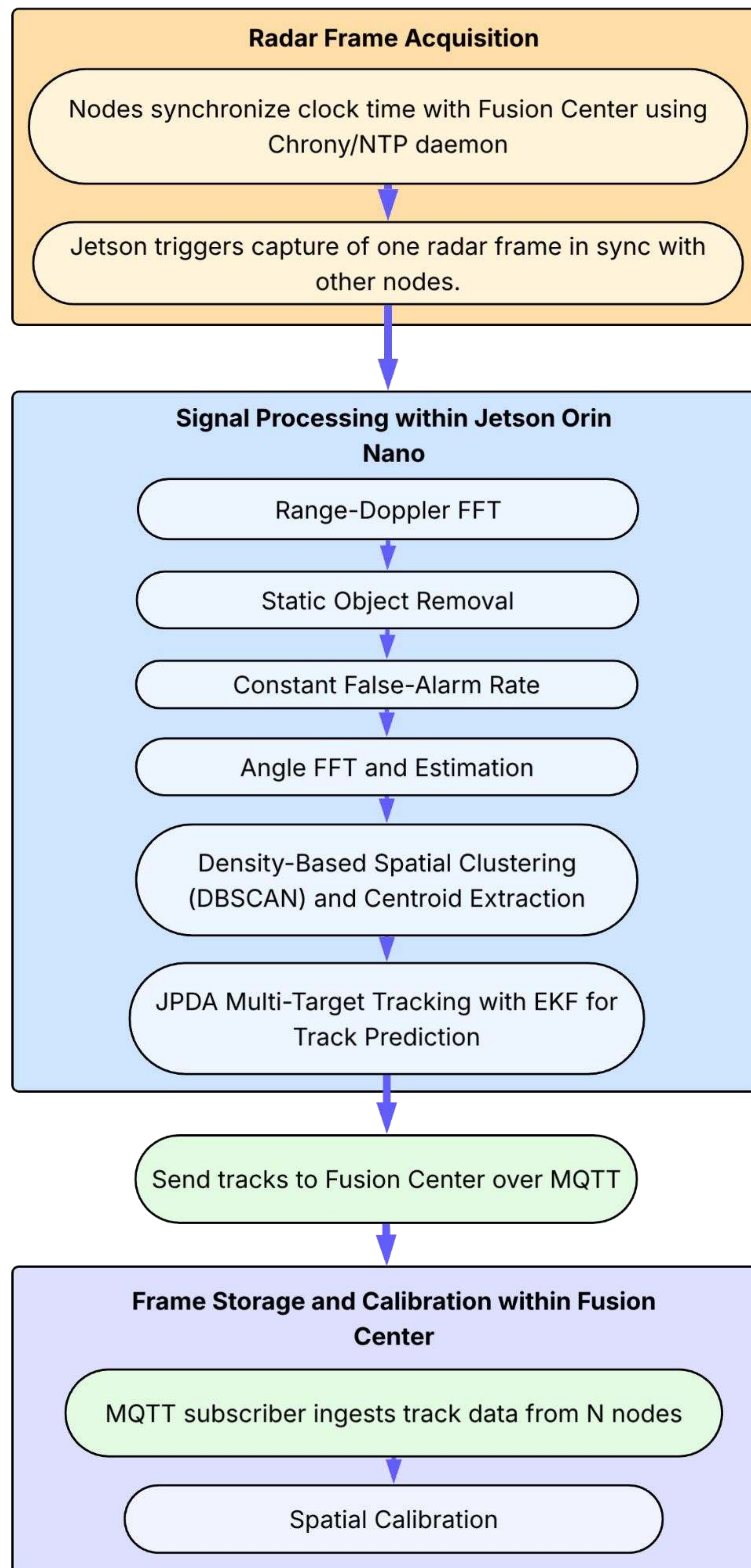
Background

Object tracking using mmWave MIMO radar is well-established, but sensing performance degrades in cluttered environments. We present a time-synchronized distributed radar network that fuses detections across spatially separated nodes, enabling continuous tracking through multiple fields of view and line-of-sight obstructions. This architecture extends spatial coverage and maintains track continuity in scenarios where single-node radar systems fail.

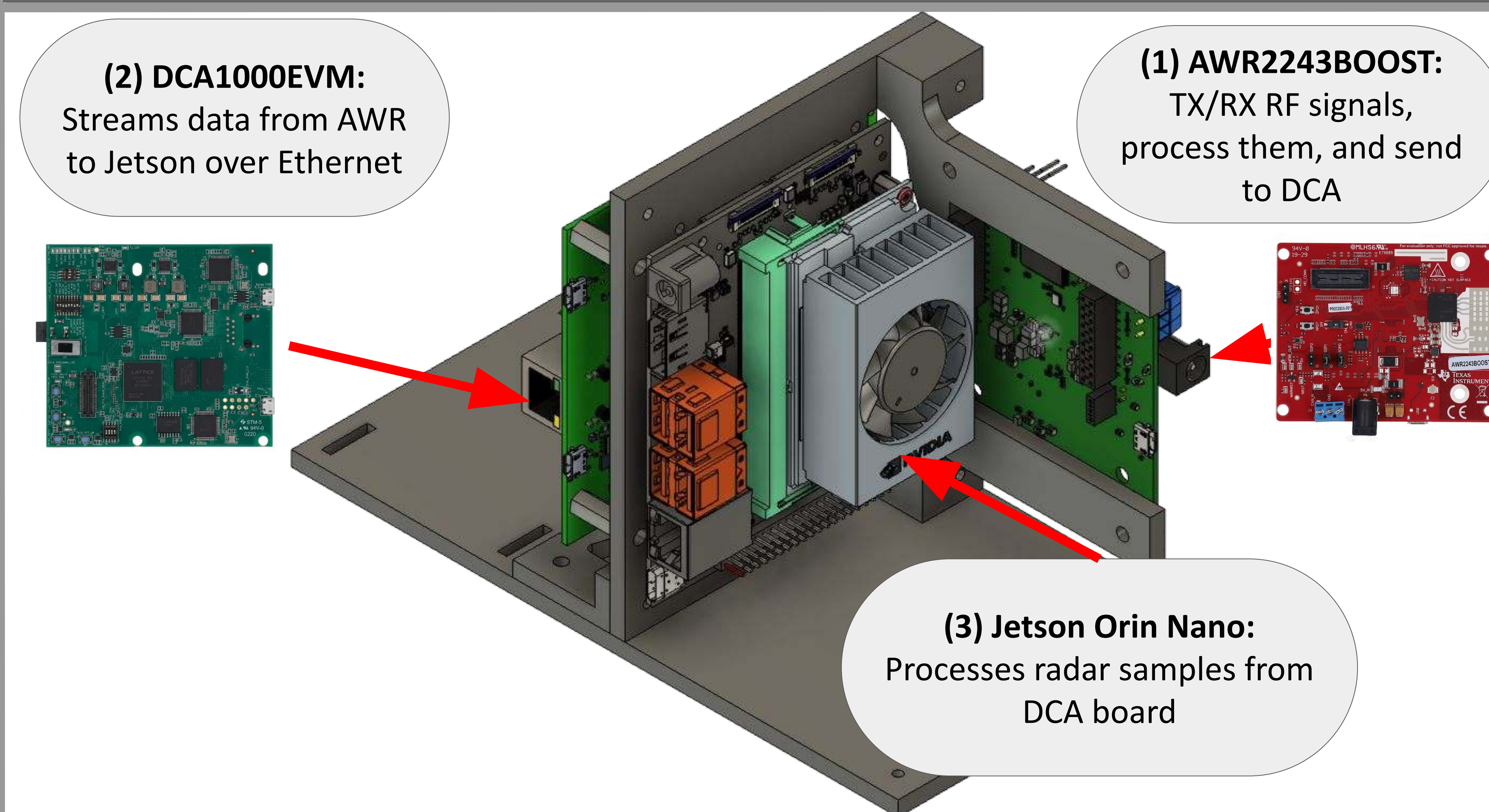
Block Diagram



Data Flow



Radar Node



Birds-Eye Visualizer

Live demonstration of Vihan walking through the overlapping FOV of 2 radar nodes facing each other. The visualizer shows each node (denoted as a diamond), and each node's centroid detections (denoted as a solid dot)



Spatial-calibration estimates each node's relative pose by fusing their detections over frames