Comp-Core System Architecture

Computational Choreography Framework

v2.0.0 | Production Architecture

Computational Choreography

"What does movement mean, and how can we compute it in real time?"

TrajectoryOS

Long-Horizon Operating System

Hours → Years

RAG	**RAG++** 5D Trajectory Memory Fabric	HNSW · I-RCP
ORB	**Orbit** Project & Session Orchestration	Axum
CTW	**CognitiveTwin** Style Learning & Signature	EMA
MCP	**MCP Server** AI Assistant Integration	Tools

Echelon

Real-Time Embodied Engine

Milliseconds

L0	**cc-relay** TLV Parsing, Mocopi Protocol	<50µs · Rust
L1	**cc-collection** Extended Kalman Filter Fusion	<100µs · 13-dim
L2	**cc-anticipation** 7 Scalars: Commitment, Uncertainty	<2ms
L3	**DELL** Dual Equilibrium (60Hz + 2.5Hz)	<500µs
L4	**cc-conductor** Beat Scheduling, Audio DSP	<6ms

End-to-End Data Flow

Mocopi	cc-relay	cc-collection	cc-window	cc-anticipation	DELL	cc-brain	cc-conductor	Audio
27-bone	TLV	EKF	50Hz	7 scalars	Equilibrium	Latent	Beat	DJ
<1ms	<50µs	<100µs	<1ms	<2ms	<500µs	<1ms	<100µs	<6ms