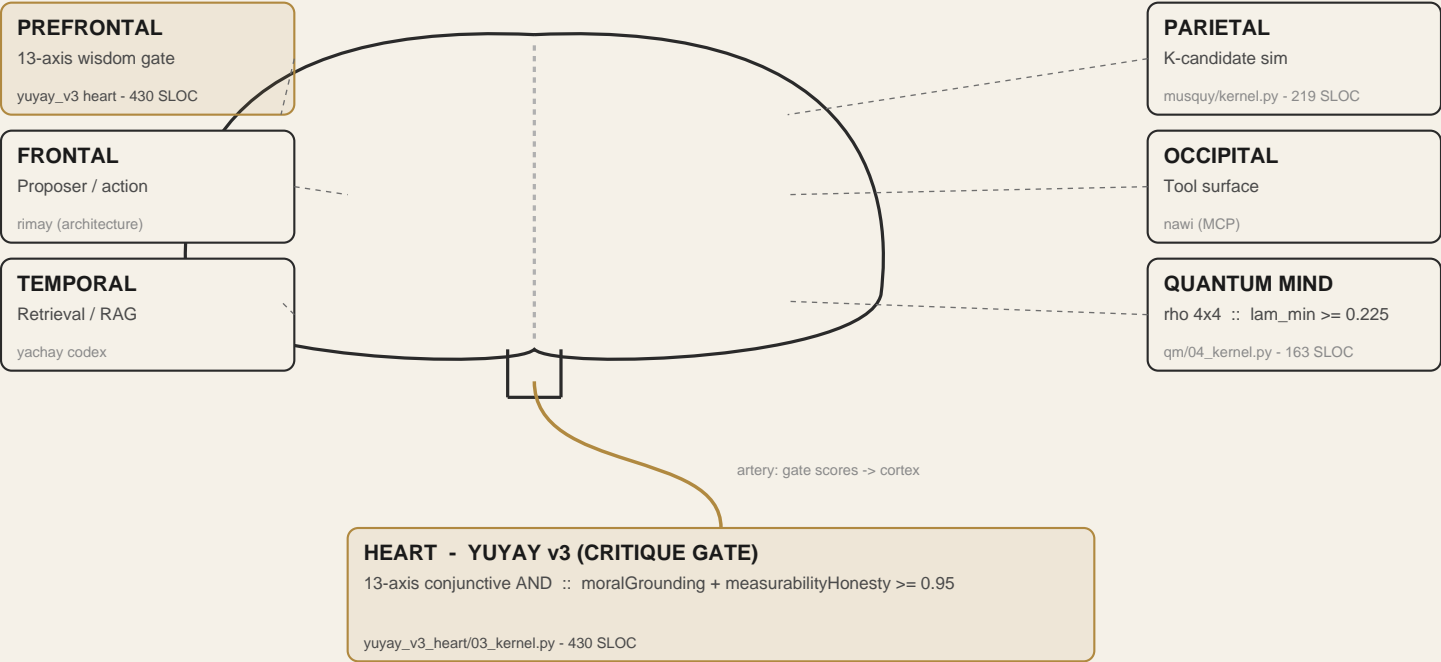


AGENT ANATOMY — INSIDE THE HEAD

Companion to agent_architecture.pdf. Every region traces to an on-disk kernel with 5x byte-identical replay verified live at publication time.

OVERWATCH (R0513)
r0513_overwatch_evolution/06_kernel.py - 146 SLOC
Event-log lines only. R0513 does not halt or gate; CRITICAL alerts notify operator.

READ-ONLY - I1 KL drift :: I2 joint margin :: I3 TUKUY re-gate :: I5 Maxwell rigidity :: I6 continuum-hash chain



BLOOD - YAWAR receipt bus :: continuum-hash chain + SHA-256 pre-disclosure :: cryptographic receipts per action

Every component reads from YAWAR; only authorized writers commit. R0513 is read-only over the bus.

IMMUNE - HUKLLA (10 tripwires)
T01..T10 safety checks each cycle. Any trip -> halt + re-gate.
hukla (architecture) - 42 SLOC

IMMUNE - SENTRA (egress inspector)
Outbound payload scan. Failed payloads re-enter via inspector.
sentra (architecture) - 18 SLOC

HATUN-RAID (KHIPU-RAID) - sovereign orchestrator - 199 SLOC
Long-horizon multi-subagent dispatch. Energy-gated (Butler-Volmer). Doctrine-gated (YUYAY 9-axis per cycle). Cryptographic receipts on YAWAR.

SOVEREIGN SEAL - HATUN crown
Final allegiance check :: identity-trace to a human principal :: 10-tripwire egress :: byte-deterministic commit :: 5x replay verified

KERNEL LEDGER - every region, on-disk truth

REGION	KERNEL FILE	SLOC	CANONICAL REPLAY HASH (sha256)
Prefrontal / Heart (YUYAY v3)	yuyay_v3_heart/03_kernel.py	430	bacf54434f1a3bf2d758b27a62d5fd580ca4c8d3b180693573eeebcaea631fc5
Overwatch (R0513)	r0513_overwatch_evolution/06_kernel.py	146	df4e974109df9803a660abef7b7504a88f70bdd3ca67612e4dcd7bd66f8ce1c1
Sovereign Seal (HATUN-RAID)	hatun_runs_ourmodel/03_kernel.py	199	6381bc236fe95d64dce2909d5a3a74fa59cb9cfdd7196cf37cc1b17c59aaaf88
Immune harness (TUPU-T7)	tupu_t7_closure/t7_harness.py	138	43f0c3a9b5d5a00625546952bc7d1f14726c5ee376d27224a2e772eba2efd4df
Quantum Mind	quantum_mind_layer/04_kernel.py	163	ea65ddc574a34882d650bfc0a6762d83323abcdef637e9b05a5e86352df1c524
Parietal (MUSQUY simulator)	musquy_simulate_evolution/kernel.py	219	(replay via test_replay.py)
Egress (TUKUY)	tukuy_action_evolution/kernel.py	70	(replay via test_replay.py)

9-AXIS DOCTRINE GATE - conjunctive AND, floors below

moralGrounding	>= 0.95	no overclaim, no false attribution
measurabilityHonesty	>= 0.95	every quantitative claim verifiable on disk
empiricalGrounding	>= 0.90	claims trace to artifacts
logicalConsistency	>= 0.90	no internal contradictions
sourceTransparency	>= 0.90	primary citations present
reproducibility	>= 0.90	5x byte-identical replay
licenseHygiene	>= 0.90	Apache-2.0 / MIT / BSD-3 / CC-BY only
scopeDiscipline	>= 0.90	no scope creep beyond kernel reality
claimCalibration	>= 0.90	conservative phrasing where uncertain

WHAT THIS DIAGRAM IS NOT

- Not a neuroscience model. Anatomical region names map cognitive functions to architectural positions for legibility.
- Not a frontier-throughput claim. Throughput inherits from the configured inference substrate (Cerebras, SambaNova, vLLM, etc.).
- Not a quantum-physical claim. Quantum Mind uses density-matrix formalism (real 4x4 matrices) on classical hardware.
- Not yet wired end-to-end. HEART (YUYAY v3, 13-axis) is a sibling kernel; the on-disk HATUN-RAID still calls a 9-axis YUYAY envelope.