

RegX³ Transaction Monitoring Technical Spec Sheet

Hardware specifications, latency benchmarks, ephemeral memory data-pipeline flow, and stateless velocity engine metrics for high-throughput ACH & instant rails.

1. High-Throughput Pre-Flight Pipeline & Ephemeral Memory

RegX³ operates as a zero-retention, inline pre-authorization proxy for commercial originators and banking platforms. Transactions are evaluated strictly in volatile volatile-RAM memory buffers via our *Split-Security Framework™*. At no time are Primary Account Numbers (PANs), CVVs, or full depository account numbers written to persistent storage or unencrypted logs.

Specification Parameter	Engine Metric & Production Architecture
Execution Model	Asynchronous stateless micro-kernel; Rust & Python async runtimes
Memory Architecture	Zero-disk volatile inspection; cryptographic purge post-verification
Throughput Capacity	10,000+ pre-authorization decisions / second per clustering node
Network Security	mTLS (Mutual TLS 1.3), Strict SHA-256 HMAC request signing
High-Availability SLA	99.99% Availability with active Fail-Open latency tripwire (<100ms)

2. Certified Latency Benchmarks (Production Load Profiling)

Metric	p50 (Median)	p90	p95	p99 (Peak)	Fail-Open Tripwire
Pre-Flight Auth	18.4 ms	34.1 ms	42.0 ms	78.2 ms	100.0 ms (Active)
FedACH Directory Lookup	4.2 ms	6.8 ms	8.9 ms	14.5 ms	Bypass & Pass-Through
FedNow ISO 20022 Schema Check	9.1 ms	14.0 ms	18.3 ms	29.4 ms	Local Syntax Validation

3. Payment Rail Protocols & Supervisory Governance Controls

Payment Rail	Standard / Message Type	Pre-Flight Defense Mechanism
NACHA Web Debits	SEC Code: WEB, TEL, CCD, PPD	Zero-float account validation; Mod-10 checksum; velocity scoring
Federal Reserve FedNow®	ISO 20022: pacs.008, pain.013	Pre-execution participant verification and schema integrity
The Clearing House (RTP)	ISO 20022 Real-Time Clearing	Stateless recipient routing validation; duplicate payment suppression
ODFI Supervisory Shield	NACHA Appendix Ten (2026 Mandates)	0.35% return rate EWS tripwire; automated batch quarantine circuit breaker