PAYROLL

Payroll — 50-State Engine, Proven to the Cent

An in-house tax engine Stratum owns end to end — no third-party payroll or tax core.

Stratum's payroll engine is fully **in-house** — federal, state, and local withholding across all 50 states and D.C., computed to the cent and owned end to end. There's no third-party payroll or tax core to license, mark up, and pass on to your clients — and because the platform is self-hosted, you can run the entire test program yourself: correctness isn't something you take on faith.

1 One engine, every jurisdiction

Layer	What it covers
Federal	2020+ W-4 (IRS Pub. 15-T), including the multiple-jobs and dependents steps; FICA with wage caps; FUTA including credit-reduction states; supplemental-wage withholding and gross-up.
State	Withholding across all 50 states + D.C. — no-tax, flat-rate, and bracketed regimes — plus state disability / paid-family programs (e.g. CA SDI / PFML).
Local / municipal	NYC; Ohio RITA/CCA cities; Pennsylvania Act 32 EIT (resident vs. nonresident); Michigan city tax; Missouri earnings tax; KY/IN counties; Portland Metro; Seattle; Oregon transit; and more — resolved through a documented connector, flat-file, built-in-table chain.
Multi-state	Worker allocation across work and residence states, with reciprocity-certificate handling so cross-border employees aren't double-withheld.

2 Proven two ways — and we don't conflate them

Correct — to the cent	Complete — against real data
The golden regression suite pins **exact** values from authoritative worked examples across the whole engine: federal withholding, FICA, the Form 941 Social-Security wage cap, FUTA credit reduction, CCPA garnishment limits, gross-up, supplemental classification, bracket-boundary continuity, and the balanced GL journal. A tax-table update that changes a single computed cent fails the build.	Separately, **666,814** real public wage-and-worksite records (U.S. Department of Labor disclosure data) are replayed through the engine to rank which real-world jurisdictions it doesn't yet recognize. This is a coverage map, not a correctness claim — it turns “we think we cover the important places” into a ranked list of the ones that actually occur.

*Two different jobs: the golden suite proves the **math is right**; the sweep proves the **coverage is broad**. Conflating them would be dishonest, so we don't.*

3 From gross to funded — the rails

What carries a run from computed to paid

- **NACHA ACH** files generated and pushed to the funding bank over a real transport rail (not a “download and hope” — the transport raises on failure).
- **Garnishments** computed under CCPA limits and remitted to the agency; **GL export** to QuickBooks Online, Xero, or generic as a balanced double-entry journal.
- **Off-cycle and final-pay** runs, a **delta / preflight** review before a run commits, and **Form 941** built on real per-employee wage bases.

The strongest proof is your own data: run Stratum in parallel with your current provider and penny-diff every tax on every paycheck (the shadow trial). You keep the comparison report either way — the fastest way to see that an in-house engine is exactly as correct as the one you're paying a per-employee fee for.