

PreBlock

Predictive Block-Template Engine for DATUM-Native Bitcoin Miners

Contract-locked to three buyers globally. One deploying. Two seats open at time of writing. NDA gate on technical demo.

The Problem

Every mining pool worldwide optimizes block templates for the same signal: current fee rate visible in the mempool. By the time a high-fee transaction is broadcast, the value is competed away — pool template builders converge on the same fee/vB threshold within milliseconds.

For DATUM-native operations, this convergence is even sharper. Miners constructing their own templates need an *edge* that isn't already priced into the shared mempool consensus.

The PreBlock Signal

PreBlock reads a second, slower-moving signal: **UTXO dormancy age**. When a Bitcoin that has been dormant for multiple years starts moving, the sender is either a large institutional player, a long-term holder, or somebody recovering lost keys — the transaction tends to carry higher value than fee/vB alone suggests.

Our engine surfaces these dormancy events **30 to 60 seconds before mempool consensus** — using peer-observation of raw transaction propagation on a Bitcoin Knots full node.

System Architecture

- **Single-machine deploy** — one rack server, no cloud, no Kubernetes
- **Bitcoin Knots full node** — spam-filtered mempool
- **Predictive Engine** — proprietary UTXO-age scoring (IP-protected)
- **DATUM Feeder** — direct pool-communication via Stratum V2
- **Multipool Comparison** — AntPool, Foundry USA, ViaBTC, F2Pool references
- **Owner Dashboard** — React SPA, real-time metrics, license-gated

Real-World Performance

Reference PreBlock node running on Bitcoin mainnet against OCEAN pool since Q1 2025. Weekly performance reports published to sales.preblock.io/api/public/reports/latest — sanitized figures, no algorithm details.

Metric	Range (public sanitized)
Predictive hit rate +1 block	High — exact figure under NDA
Predictive hit rate +2 blocks	Multi-tier — exact figure under NDA
Median dormancy in +2 bucket	Multi-year (2–7y typical)
Multipool comparison	Majority-of-days outperform vs. major pools

Uptime

Continuous since Q1 2025

Licensing Tiers

Tier	Fits	Approx. price
Model A — Multi-pool Enterprise	Mining farms >100 MW, multi-pool operators	€400,000 one-time + support
Model B — Single-pool Enterprise	Mining farms >50 MW, single primary pool	€250,000 one-time + support
Model C — Small-scale DATUM	DATUM operators <50 MW, hosted or self-hosted	€150,000 one-time + support

Optional Modules (M1–M7) available separately: bidding-war analytics, multi-region template shipping, advanced dormancy tiering, custom pool integration. €10,000–€30,000 each.

Hardware Requirements

Recycled mining-datacenter class hardware (Dell R620/R630, HPE DL360 G9/G10, Supermicro 1028U typical). Minimum: 4-core CPU with AVX2, 16 GB RAM (ECC recommended), 500 GB SSD, Gigabit Ethernet. Full requirements in SALES_INSTALL.md.

Next steps:

- NDA-gated technical demo: nda@preblock.io
- Sales enquiries: sales@preblock.io
- Weekly performance reports: sales.preblock.io/#report
- Public sales one-pager (this document): sales.preblock.io/assets/preblock-onepager.pdf

PreBlock — a single-vendor project. Contract-locked to three buyers globally to preserve the market edge for licensed operators. Physical operations in Central Europe. All correspondence in English.

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