

# Keno Fast (Crypto)

Multi.Bingo Keno · Tier fast · Cert Pack v1

<b>Tier</b>	fast
<b>Cycle</b>	60 seconds per round
<b>Number pool</b>	1..40
<b>Balls drawn</b>	10
<b>Player picks</b>	1..10
<b>Denom</b>	100 cents

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## 1. Game mechanics — Keno Fast (Crypto)

Players select 1 to 10 numbers from a pool of 40. Every 60s, the engine draws 10 balls deterministically from the RGS service. Players are paid according to the per-pick-count payable based on matches (hits) between their picks and drawn balls.

## 2. Cycle protocol

Each cycle (round) of **60s** has 3 phases: **sale** (bet acceptance), **countdown** (10s lock), **draw + settle** (1-2s). The `cycle_id` is monotonic per room. ball-draw seed comes from `multibingo-rng:9443` with `RNG_STRICT=true`.

## 3. RTP & payable

Per-pick-count paytables persisted in `keno_rooms.paytable_json`. RTP varies by pick count (typical 88-92% for state lotteries, 95-98% for crypto/iGaming tiers). Full payable JSON available via `GET /api/keno/rooms/keno-fast/paytable`.

## 4. Audit chain (K.A.R. (h) compliance)

Each round records: `round_id`, `seed_hash`, `drawn_balls`, `ball_sequence_hash`, `merkle_root_of_all_bets`. Ed25519-signed (key ID `d651f1b9f793f40d`). Daily Merkle anchor spans Keno + Bingo + iLottery rounds, WORM-locked in PG + S3 Object Lock.

## 5. Verifier endpoints

```
GET /api/keno/rooms/keno-fast/state
GET /api/keno/rooms/keno-fast/paytable
GET /api/keno/draws/:draw_id/audit
GET /api/ilottery/audit/public-key (shared signing key)
GET /api/ilottery/merkle/proof/:bet_id (cross-vertical Merkle)
```

## 6. Operator Ed25519 public key

```
-----BEGIN PUBLIC KEY-----
MCowBQYDK2VwAyEAU2k0zXnm09QHduKLSEQYUAFeACAEOTUceEuirGLSiXs=
-----END PUBLIC KEY-----
```