MCP SERVER | NO CODE | CLOUD HOSTED

Poker Odds Calculator MCP for AI Agents

Accurate Hand Probability and Equity Calculation in Texas Hold'em

Poker Odds Calculator calculates precise probabilities, win/loss equity, and outs for Texas Hold'em and Omaha. This MCP gives your AI client the math engine needed to move past gut feelings, determining exactly when a call is profitable or impossible.

A+ Quality Score 100/100

poker | texas-holdem | omaha | odds-calculator | combinatorics | equity

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vinkius.com/mcp/poker-odds-calculator

SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

Poker Odds Calculator MCP

4 tools available
Cloud-hosted on Vinkius

Making tough calls at the poker table shouldn't rely on instinct. This connector provides a high-precision combinatorial engine that calculates exact hand probabilities for any given board and opponent setup. Instead of guessing your share of the pot, you can use your AI client to calculate win/loss equity against multiple opponents in real time. It helps pinpoint exactly which cards complete your draws using specific outs identification, and it evaluates whether a call is mathematically sound by determining proper pot odds. By connecting this MCP through Vinkius, you give your agent access to the deep mathematical analysis required for disciplined decision-making, turning guesswork into calculated strategy.

Core Capabilities

01 — Calculate Hand Probabilities

Determines the distribution of all possible final hand ranks given your cards and the board.

02 — Estimate Pot Equity

Calculates the likelihood of winning, losing, or splitting a pot against one or more opponents.

03 — Identify Drawing Outs

Finds specific cards remaining in the deck that improve your current hand to a target strength (like a flush or straight).

04 — Evaluate Pot Odds

Provides an immediate recommendation on whether calling a bet is mathematically profitable.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/poker-odds-calculator** — connect your AI agent in three steps.

01 Input your hole cards, the community board cards, and the betting parameters (e.g., pot size, required call amount).

02 Your AI client processes this data against the combinatorial engine to calculate probabilities, equity, or outs.

03 The MCP returns a clear analysis: a recommended course of action or a set of precise percentages showing your chances.

The bottom line is that you stop relying on feel and start playing with hard math.

Built For

Any serious poker player—from dedicated home game enthusiasts to low-stakes tournament regulars—who are tired of making decisions based purely on gut feeling. You need objective, mathematical proof before you commit chips.

Amateur Poker Player

Uses the MCP to check crucial odds and understand why a specific call is mathematically favorable or unfavorable during a session.

Card Strategy Enthusiast

Tests out complex scenarios, running simulations with your agent to see how different draws perform against various opponent ranges.

What Changes When You Connect

01 Stop guessing when making calls. Use the `evaluate_pot_odds` tool to get a definitive recommendation on whether you should commit chips.

02 Go beyond simple odds; `calculate_hand_probabilities` shows the full distribution of ranks, giving you a complete picture of what your hand can become.

03 Never miss a drawing chance. The `identify_outs` function tells you exactly which cards are needed to hit your flush or straight draw.

04 `calculate_win_loss_equity` estimates your true share of the pot, helping you decide if an opponent's bet is worth risking your stack on.

05 Your AI agent handles complex combinatorial math instantly, saving hours of manual calculation that usually requires dedicated poker software.

Real-World Applications

Determining Value Bets in Hold'em

You hit a pair and your opponent is betting huge. You ask your agent to run `calculate_win_loss_equity` against their potential range, confirming if you have enough equity to justify calling the massive bet.

Evaluating Omaha Draw Potential

In an Omaha game, you are drawing to a flush. You use the MCP's `identify_outs` tool to confirm that you still have 9 specific cards remaining in the deck needed to complete your draw.

Making Pre-Flop Decisions

Before playing, you want to know if a speculative call is worth it. You run `calculate_hand_probabilities` to see your chances of making at least top pair against the field's starting hands.

Analyzing Call Profitability

The pot is $100, and you face a $20 bet. You use `evaluate_pot_odds` to see if your current 15% win probability meets the required equity for a profitable call.

Patterns to Avoid

Assuming basic odds are enough

✗ AVOID

Only knowing that you need 4 cards out of 36 to hit a straight, and rounding down the probability calculation.

✓ INSTEAD

Use `calculate_hand_probabilities` for a full rank distribution, or use `identify_outs` which handles complex draw combinations automatically.

Ignoring opponent ranges

✗ AVOID

Calculating your odds based on the board only, and forgetting to factor in what hands the other players are likely holding.

✓ INSTEAD

Run `calculate_win_loss_equity` by inputting a range of possible opponent hands instead of assuming they hold one specific hand.

Making calls based on feel

✗ AVOID

Calling an opponent's bet because 'it feels right,' without backing up the decision with required mathematical proof.

✓ INSTEAD

Always run `evaluate_pot_odds` first. This tool forces you to check if your required equity is met before committing chips.

The Right Fit

Use this MCP when your poker decisions hinge on precise, combinatorially complex math. If you need to calculate win/loss equity against multiple opponents, or determine the exact probability distribution of possible final hands (beyond simple out counting), this tool is mandatory. Don't use it if you are only checking basic 2-card odds; a simple online calculator will suffice for that. However, if your situation involves complex draw combinations in Omaha or calculating multi-way pot equity, this MCP provides the depth needed to separate good play from luck.

Poker Odds Calculator: Mastering Hand Probabilities and Equity

Today, most serious players rely on memory or simple calculators. You manually track outs for a flush draw, calculate basic pot odds, and hope your gut instinct is right when facing a huge bet. This requires juggling multiple formulas and making assumptions about opponent strength.

With this MCP, you simply ask your agent to run the numbers. It handles the deep combinatorial math instantly, giving you the precise win/loss equity or the full probability distribution of possible final ranks. You get objective proof for every chip you commit.

Poker Odds Calculator: Calculating Optimal Calls and Draws

The manual process involves estimating your opponent's range, calculating the pot size difference, and then figuring out if your current percentage chance of winning meets the required mathematical threshold. This is tedious, error-prone work.

Now, you tell your agent to evaluate the pot odds. It checks your win probability against the payout ratio instantly, giving you a clear 'Go' or 'No-Go' signal for that call.

Poker Odds Calculator: 4 Tools for Hand Combinatorics

Use these four tools to analyze complex poker scenarios, calculate precise hand probabilities, and determine the mathematical edge in any game.

#	TOOL	DESCRIPTION
01	`evaluate_pot_odds`	Gives a recommendation on whether you should call an opponent's bet.
02	`calculate_hand_probabilities`	Figures out the probability distribution of every possible final hand rank for your current situation.
03	`identify_outs`	Pinpoints the exact cards you need to improve your hand to a specific target strength.
04	`calculate_win_loss_equity`	Estimates how likely it is that you will win, lose, or split the current pot with other players.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U I have As Ks on the flop 2s 7h 10c. What are my probabilities of making two pair, and what's my equity against a random hand?

Hand Probability Report

HAND RANK	PROBABILITY
High Card	85.4%
One Pair	13.2%
Two Pair	1.4%

Your current win/loss equity against a random hand is approximately **68%**. This suggests you should look for value bets.

U Omaha: I'm playing with As Ks Qs Js, and the board is 2s 7h 10c. How many outs do I have to complete a flush?

Flush Draw Analysis

You have **9 outs** remaining in the deck to complete your flush. Since you started with four spades, there are only three spades left on the board (2s). You need any of those 9 specific cards to make it.

Remember: This calculation assumes no other player has blocked these critical cards.

U Pot is $100. I have a pair and need to call $25. My current win chance is 18%. Should I call?

Pot Odds Evaluation

- Pot Size: $100 |
- Call Amount: $25 |
- Required Equity: **16.7%**

Since your estimated equity (18%) is greater than the required equity (16.7%), calling this bet is mathematically profitable.

Frequently Asked Questions

01 **How does the Poker Odds Calculator help me with Texas Hold'em draws?**

It tells you exactly which cards you need to complete your draw, whether it's a flush or a straight. Instead of guessing, you get precise outs identification, letting you know if your draw is mathematically worth chasing.

02 **Can I use the Poker Odds Calculator to figure out if calling a bet is good?**

Yes. You can run an evaluation on pot odds. It compares your estimated chance of winning against the size of the pot and the amount you must call, telling you definitively if it's profitable.

03 **What's the difference between calculating hand probabilities and win/loss equity?**

Hand probability shows all possible ranks your final hand could achieve. Win/loss equity estimates your share of the pot money when multiple players are involved, giving you a true percentage chance of winning or splitting.

04 **Is this MCP better than using physical odds charts for Omaha?**

Absolutely. This tool handles the complex combinatorics for Omaha and Hold'em automatically. It factors in multiple opponent ranges, which is something static charts simply cannot do.

05 **Does the Poker Odds Calculator account for my opponents' hands?**

The MCP allows you to run calculations that incorporate assumed opponent hand ranges. This means your odds aren't just against a random player, but against realistic betting patterns.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"poker-odds-calculator": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

Poker Odds Calculator is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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