

MCP SERVER

NO CODE

CLOUD HOSTED

Binding Angle Setup MCP

Find the perfect stance for your riding style.

Binding Angle Setup MCP uses biomechanical data to calculate your ideal snowboard binding configuration. It analyzes your stance width, riding style, and terrain to suggest specific angles that balance stability with agility while protecting your joints from unnecessary strain.

A+ Quality Score 100/100

snowboard

biomechanics

binding-angles

sports-tech

rider-safety



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.

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.

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.

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

Encryption at rest

Ed25519

PKI vault signatures

24h TTL

Ephemeral session keys

V8 Isolate

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.

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.

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.

06 — Honeypot Trap System

Phantom credentials are injected into isolated environments. If a honeypot 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.

FinOps

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

Firewall & DLP

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

Agent Activity

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

Tool Health

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

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.

Binding Angle Setup MCP

4 tools available

Cloud-hosted on Vinkius

Stop guessing your binding angles and risking knee or ankle pain. This MCP gives your AI client the technical data it needs to build a custom stance profile for you. Instead of following generic advice, you can input your specific riding style and stance width to get precise degree recommendations for your front and rear bindings. It looks at how your stance interacts with the terrain and evaluates whether your setup will help or hinder your ability to ride switch. Most importantly, it checks your proposed angles against biomechanical safety standards to help you avoid joint strain. You can use it to test different setups before you ever touch your gear, ensuring your setup matches your physical needs and your goals on the mountain.

Core Capabilities

01 — Stance Optimization

Your agent uses this to find the balance between stability and agility.

03 — Joint Health Protection

Your agent runs this to check if your angles might cause joint strain.

02 — Switch Riding Assessment

Your AI client uses this to rate how well you can ride in the opposite direction.

04 — Technical Angle Calculation

Your AI client uses this to generate specific degree recommendations for your bindings.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/binding-angle-setup — connect your AI agent in three steps.

- 01 Connect your preferred MCP-compatible client to Vinkius.
- 02 Provide your riding style and stance width to your AI client.
- 03 The AI uses the MCP tools to run biomechanical calculations.
- 04 You receive specific angle recommendations and safety ratings.

Connect your AI client to Vinkius and start asking technical questions about your snowboard setup.

Built For

This MCP is for snowboarders who want to optimize their gear setup based on physics and biology rather than guesswork.

Freestyle Riders

They ask the AI to find duck stance configurations that favor switch riding.

Carvers

They use the tool to check if a wider stance will provide enough stability for high-speed turns.

Injury-Conscious Riders

They hand off their stance data to the AI to ensure their setup won't cause joint strain.

What Changes When You Connect

- 01 Reduces joint strain by validating angles against biomechanical safety data.
- 02 Provides specific degree recommendations instead of vague advice.

- 03

Balances stability and agility based on your specific stance width.
- 04

Evaluates switch riding capability before you adjust your bindings.

Real-World Applications

Switch Riding Prep

A rider wants to know if their current duck stance will make riding switch easier.

Injury Prevention

A rider validates a new setup to ensure it won't put too much stress on their knees.

Stability Testing

A rider checks if increasing their stance width will make carving more stable.

Freestyle Setup

A rider calculates the best front and rear angles for a 45cm stance.

4 Tools Available

#	TOOL	DESCRIPTION
01	analyze_stance_stability	This tool evaluates how your chosen stance width interacts with your specific riding style. It helps you understand the trade-off between being stable and staying agile.
02	calculate_binding_angles	This is the core tool for getting technical recommendations. It provides the specific front and rear binding angles you should use.
03	get_switch_capability_rating	This tool determines how easily you can ride switch with a specific angle configuration. It rates your setup's ability to support riding in the opposite direction.
04	validate_biomechanical_safety	This tool checks your proposed angles for potential risks. It identifies if your setup poses a high risk of joint strain based on your stance.

See It in Action

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

U What are the best binding angles for a freestyle rider with a 45cm stance width?



For a freestyle rider with a 45cm stance, the recommended configuration is a front angle of +15 degrees, a rear angle of -12 degrees, and a duck stance is recommended.

U Is a 55cm stance width stable for carving?



A 55cm stance width provides a high stability score but will result in lower lateral agility for carving maneuvers.

U Will a +10 degree front and -10 degree rear angle allow me to ride switch easily?



Yes, the duck stance configuration provides a high capability level for switch riding.

Frequently Asked Questions

01 How does this MCP help with snowboard binding angles?

It uses biomechanical calculations to provide specific front and rear angle recommendations based on your riding style and stance width.

02 Can I use this to prevent knee pain?

Yes, the `validate_biomechanical_safety` tool checks if your proposed angles pose a high risk of joint strain.

03 Will it tell me if I can ride switch?

Yes, the `get_switch_capability_rating` tool determines how well a specific configuration supports riding in the opposite direction.

04 Does it work with my existing AI tools?

Yes, it works with any MCP-compatible client like Claude, Cursor, or Windsurf once connected via Vinkius.

05 Can it help with carving stability?

Yes, the `analyze_stance_stability` tool evaluates how your stance width affects your stability and agility.

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 <code>"binding-angle-setup": { "url": "..." }</code>
 Windsurf	MCP Settings → <code>mcp_settings.json</code> → 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

Binding Angle Setup 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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DOCUMENT INFORMATION

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Platform	Vinkius Cloud for AI Agents
Endpoint	<code>https://edge.vinkius.com/{token}/mcp</code>

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