MCP SERVER | NO CODE | CLOUD HOSTED

Mouse Sensitivity Converter MCP for AI Agents

Maintaining Consistent Aiming Mechanics Across Different FPS Titles

The Mouse Sensitivity Converter calculates precise sensitivity settings for competitive games like CS2, Valorant, and Apex Legends. It helps you maintain muscle memory consistency by calculating eDPI, converting raw sensitivities between different game engines, determining physical movement distance, and adjusting for FOV changes.

A+ Quality Score 100/100

gaming | sensitivity | mouse | precision | esports | conversion

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vinkius.com/mcp/mouse-sensitivity-converter

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.

Mouse Sensitivity Converter MCP

4 tools available
Cloud-hosted on Vinkius

Switching between high-stakes titles can destroy your aim if your settings aren't perfect. This MCP handles the complex math behind consistent input mechanics. It lets you calculate effective Dots Per Inch (eDPI) to standardize your hardware setup across different games, regardless of their internal variables. You can also determine physical mouse distance for a full 360-degree turn and adjust for field of view scaling impacts when switching maps or engines. If you're constantly jumping between titles like CS2 and Valorant, this tool finds the exact sensitivity adjustment you need to keep your muscle memory consistent. Vinkius hosts this MCP alongside thousands of others, letting your AI client access all the conversion tools you need in one spot.

Core Capabilities

01 — Convert Sensitivity Between Games

It calculates the precise new sensitivity value needed when moving from one game's input profile to another.

02 — Calculate eDPI

It determines your effective Dots Per Inch (eDPI) based on your current DPI and in-game sensitivity setting for hardware standardization.

03 — Measure Physical Distance per 360 Degrees

It calculates the physical distance, measured in centimeters, required to perform a full 360-degree turn at your current settings.

04 — Account for FOV Scaling Changes

It adjusts sensitivity calculations when field of view changes impact the game's visual scaling.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/mouse-sensitivity-converter** — connect your AI agent in three steps.

01 Start by telling your AI client which games you are moving between and what your current settings are.

02 The MCP processes this input, running calculations to standardize variables like eDPI and physical distance per 360 degrees. It also accounts for any field of view changes involved in the transition.

03 Your agent returns a clear, calculated set of new sensitivity values ready for you to apply in your target game.

The bottom line is that it standardizes your aiming setup so your aim feels the same whether you're playing CS2 or Valorant.

Built For

Anyone serious about competitive first-person shooters who needs consistent input mechanics across multiple titles. This MCP is for players, coaches, and content creators who treat aiming as a standardized skill.

Esports Player

Uses this to find the perfect sensitivity conversion when switching between different tournament games.

Gaming Coach

Uses this to standardize client settings, ensuring muscle memory is trained correctly regardless of the game engine.

Content Creator/Streamer

Uses this to demonstrate proper setup procedures and calculate optimal hardware DPI for viewers.

What Changes When You Connect

01 Stop losing aim because of conflicting game settings. Use the convert_sensitivity tool to find your exact new setting when jumping from CS2 to Valorant.

02 Standardize hardware inputs with calculate_edpi. This ensures that your DPI and sensitivity translate consistently, regardless of which FPS title you're playing.

03 Never guess your physical distance again. calculate_cm_per_360 tells you the precise centimeters needed for a full 360-degree turn at your current settings.

04 Correctly account for visual changes with calculate_fov_scaling, maintaining consistent aim even when maps or game modes change the Field of View.

05 It's faster than cross-referencing multiple forums. Your agent handles all the complex calculations instantly.

Real-World Applications

Switching Games Mid-Tournament

A player needs to switch from playing Valorant to CS2 for a scrim block. Instead of manually testing settings, they ask their agent to use convert_sensitivity to instantly calculate the exact required sensitivity drop or increase.

Optimizing DPI Settings

A user wants to know if switching from 400 DPI to 800 DPI affects their performance. They ask the agent to run calculate_edpi, getting a standardized number they can use across all titles.

Analyzing Physical Aiming Range

A coach needs to know if an athlete's arm reach is adequate for competitive play. They use calculate_cm_per_360 to measure the physical distance required, confirming the range is appropriate.

Patterns to Avoid

Manual Calculation Errors

✗ AVOID

Looking up old forum threads and trying to manually divide DPI by in-game sensitivity ratios. These calculations are often incomplete or based on outdated game versions.

✓ INSTEAD

Use the calculate_edpi tool with your agent. It handles all the necessary variables to give you a standardized, reliable eDPI number that works across multiple games.

Ignoring FOV Changes

✗ AVOID

Switching from a low-FOV shooter to a high-FOV shooter and noticing your aim feels 'off.' The problem is the game's internal scaling, not just your settings.

✓ INSTEAD

Run calculate_fov_scaling. This tool specifically adjusts for field of view changes, keeping your relative aiming feel consistent.

Mixing Up Conversion Formulas

✗ AVOID

Confusing the formula for DPI to eDPI with the direct sensitivity conversion needed between two different engines like Valorant and Apex Legends.

✓ INSTEAD

The agent uses convert_sensitivity. It knows the specific mathematical mapping required when moving from one game's engine ruleset to another.

The Right Fit

Use this MCP if your goal is consistency: you are frequently switching between different FPS titles (like CS2, Valorant, and Apex Legends) or changing hardware DPI settings. You need a single source of truth for standardized aiming metrics like eDPI and physical movement distance. Don't use it if you just need to know what sensitivity works in one game; that requires an in-game guide. Also, don't rely on this for general networking issues—it only handles input mechanics. If your problem is purely about optimizing mouse polling rates or connecting peripherals, you need a different type of hardware utility.

Mouse Sensitivity Converter: Fixing Inconsistent Aiming Across FPS Titles

Today, if you play multiple competitive shooters, every single switch feels wrong. You might move from the tight aim required in Valorant to a game with different FOV scaling, and suddenly your crosshair feels too big or too small. The problem isn't your mouse; it's that each game engine treats input variables differently, forcing you to constantly guess at optimal settings.

With this MCP, you simply ask your agent to standardize your aiming profile. It handles the complex math for field of view and DPI changes. You get a single, reliable set of numbers that maintain consistent muscle memory whether you're running through maps or practicing in an isolated range.

Mouse Sensitivity Converter: Calculating Accurate Aiming Distance (cm/360)

Manually measuring your physical reach for a full 360-degree turn is impossible, and relying on generic 'standard' numbers doesn't account for your specific DPI or sensitivity. You waste time doing estimations that don't reflect true mechanical limits.

This MCP calculates the exact distance in centimeters required for a full rotation using calculate_cm_per_360. This gives you concrete data about your physical capabilities, allowing coaches and players to build truly effective training routines.

4 Tools Available

#	TOOL	DESCRIPTION
01	calculate_cm_per_360	Calculates the physical distance, in centimeters, required for a 360-degree turn based on your mouse settings.
02	calculate_edpi	Determines the Effective Dots Per Inch (eDPI) based on your current DPI and in-game sensitivity.
03	calculate_fov_scaling	Adjusts for changes in Field of View (FOV) to maintain accurate relative aiming distance.
04	convert_sensitivity	Converts your raw mouse sensitivity value when moving between two different competitive games.

See It in Action

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

U I'm going from Valorant to Apex Legends; what should my new sensitivity be?

Sensitivity Conversion Report

Based on your current settings, here are the recommended targets:
- **Valorant:** 0.35 (Current)
- **Apex Legends:** 0.21

This conversion maintains an effective eDPI of approximately 900, ensuring consistent recoil control and tracking across both titles.

U What is my eDPI if I use 800 DPI and a 1.2 sensitivity?

eDPI Calculation

- **Input:** DPI: 800 | Sensitivity: 1.2
- **Result:** Your calculated eDPI is **960**.

This standardized number helps you compare your setup against professional players, regardless of the game they are playing.

Frequently Asked Questions

01 **How accurate are the sensitivity conversions?**

The conversions are highly precise as they use the exact engine yaw constants for games like CS2, Valorant, and Apex Legends to calculate the ratio between different input scales.

02 **What is eDPI and why does it matter?**

eDPI (Effective Dots Per Inch) is your mouse DPI multiplied by your in-game sensitivity. It provides a standardized way to compare sensitivity across different hardware settings using `calculate_edpi`.

03 **Can I calculate physical mouse movement distance?**

Yes, the `calculate_cm_per_360` tool calculates exactly how many centimeters your mouse must travel on your pad to complete a full 360-degree turn in a specific game.

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 `"mouse-sensitivity-converter": { "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

Mouse Sensitivity Converter 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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