MCP SERVER | NO CODE | CLOUD HOSTED

Crop Coord Maximizer MCP for AI Agents

Determine Perfect Cropping Coordinates for Social Media Content

Crop Coord Maximizer calculates the exact pixel coordinates needed to crop any image for a specific aspect ratio, like 16:9 or 9:16. It ensures your primary subject remains centered and visible in the cropped frame, saving you time and preventing wasted visual space.

A+ Quality Score 100/100

cropping | aspect-ratio | pixel-perfect | image-editing | coordinates

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vinkius.com/mcp/crop-coord-maximizer

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.

Crop Coord Maximizer MCP

1 tools available
Cloud-hosted on Vinkius

This MCP lets content creators stop guessing where their subjects are when resizing images. Instead of manually cropping and hoping the main focus stays put, you feed the system a source image and tell it what ratio you need—whether that's for Instagram Stories or YouTube thumbnails. It calculates precise top-left and bottom-right coordinates that guarantee your focal point stays centered within the new frame. You can also check if different ratios are standard formats and review the metadata to understand how much area reduction is involved. By connecting this MCP via Vinkius, your AI client handles all the complex geometry calculations instantly. It’s essential for anyone who needs reliable, pixel-perfect cropping coordinates without the guesswork.

Core Capabilities

01 — Determine precise crop coordinates

Calculate exact top-left and bottom-right pixel points to fit any specified aspect ratio (e.g., 1:1 or 9:16).

02 — Validate image ratios

Check if a given numeric ratio matches common industry standards like 'portrait_mobile' or 'landscape'.

03 — Review crop metadata

Get data about the scale factor and percentage of area preserved when executing a crop.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/crop-coord-maximizer** — connect your AI agent in three steps.

01 You upload your source image and specify both the target aspect ratio (e.g., 16:9) and the location of your key subject within that image.

02 The MCP processes this information, running an algorithm to find coordinates that crop the image while minimizing the shift of your specified focal point toward the center.

03 You get a set of precise pixel coordinates (top-left/bottom-right) and metadata confirming the resulting dimensions and area preservation.

The bottom line is, it gives you exact numerical instructions for cropping so your visuals look right every single time.

Built For

This MCP is built for visual professionals who regularly adapt the same source material for dozens of different platforms. If you're a content manager constantly resizing images or a photographer needing accurate coordinates for print, this tool saves massive amounts of time and keeps your brand consistent.

Social Media Manager

Needs to quickly take one high-res source photo and generate the correct crop dimensions for Instagram feeds, Stories, and YouTube without distorting the subject.

Graphic Designer

Works across multiple marketing assets, needing accurate coordinates to ensure that regardless of the output format (e.g., banner ad vs. flyer), the main visual element remains perfectly framed.

Photographer/Videographer

Requires reliable metadata and cropping tools when preparing a single shoot's worth of footage or photos for varied clients with different aspect ratio needs.

What Changes When You Connect

01 Stop guessing where your subject is. Use the core function to calculate coordinates that guarantee your focal point stays centered, no matter the aspect ratio.

02 Maintain brand consistency across platforms. Get guaranteed pixel-perfect dimensions for YouTube (16:9), Instagram (4:5), and Stories (9:16) from one source image.

03 Understand your output instantly. The MCP provides metadata detailing the scale factor and exactly how much of the original area you are preserving in the new crop.

04 Validate complex formats quickly. Check if a random ratio you need is actually a recognized industry standard using the validator tool.

05 Saves time on tedious adjustments. You eliminate hours spent manually adjusting crops and checking aspect ratios across hundreds of images.

Real-World Applications

Adapting gallery shots for Instagram Stories

A client has a beautiful 4000×3000 photo. They ask their agent to calculate the coordinates needed to crop it to 9:16, making sure the model's face stays centered and doesn't get cut off.

Creating video thumbnails for YouTube

A content creator needs a thumbnail (16:9) from a vertically shot image. The agent uses the MCP to calculate the best crop, maximizing visibility while keeping the main action in the center of the frame.

Preparing print materials with specific ratios

A designer needs to make several assets for different print sizes (e.g., 2:3 vs 1:1). They use the MCP to validate these required aspect ratios against industry standards before starting any work.

Batch resizing a photoshoot portfolio

A photographer needs coordinates for 50 different images. The agent runs through the `calculate_crop` tool repeatedly, generating a manifest of optimal crop points for each image to maintain subject focus across all outputs.

Patterns to Avoid

Cropping based on guesswork

✗ AVOID

Manually cropping an important photo because the subject looks 'good enough' in the center, only to realize later that vital context was cut out.

✓ INSTEAD

Use `calculate_crop` to mathematically determine coordinates. Instead of guessing, let the MCP calculate the optimal crop points based on a defined subject focus area and your required aspect ratio.

Ignoring metadata requirements

✗ AVOID

Using an image that requires a drastic crop (like going from square to 16:9) without knowing how much area you are losing or what the scale factor will be.

✓ INSTEAD

Run `get_crop_metadata` first. This tells you exactly what percentage of the original image area is preserved, so you can manage client expectations.

The Right Fit

Use this MCP if your core problem involves adapting one single source visual asset for multiple, disparate output dimensions (e.g., going from a 4:5 vertical shot to a 16:9 banner). You need precise coordinates that prioritize keeping the main subject centered and visible—it's about geometry control. Don't use it if you simply need basic resizing or cropping without worrying about aspect ratio standards; then, a simple image editor is fine. However, if you find yourself needing to consistently hit specific ratios like 16:9 for YouTube, this MCP is essential because it provides the mathematical foundation and metadata verification that generic tools lack.

Crop Coord Maximizer: Solving Aspect Ratio Problems in Content Creation

Today, content creators waste hours juggling different platforms. You take a single high-resolution photo, but you need it to look perfect on

With this MCP, you tell your agent the source image and the target ratios. The system calculates the exact coordinates needed for every frame size

Instagram Stories (9:16), the website banner (16:9), and even print ads (2:3). This means endless resizing, manual dragging of crop boxes, and constantly worrying if that crucial face or action point is going to get cut off by an arbitrary line. It's tedious, frustrating work.

while making sure your primary subject stays as close to the center as possible. You don't drag anything; the AI just gives you the precise digital boundaries, letting you focus on the creative part of the job.

Crop Coord Maximizer: Ensuring Pixel-Perfect Visuals for Digital Publishing

The manual steps that vanish are checking compatibility. You used to have to stop and ask, 'Is 0.5625 a standard ratio?' or 'How much area is this crop actually preserving?'. These checks interrupt your flow and slow down batch processing for large projects.

Now you get immediate validation on industry standards and full metadata reports. This MCP provides the necessary technical confidence that every output, regardless of size, will meet professional publishing requirements.

Crop Coord Maximizer: 1 Tool for Aspect Ratio Cropping Coordinates

This MCP allows you to calculate precise cropping boundaries and validate image ratios for professional content creation.

#	TOOL	DESCRIPTION
01	calculate_crop	Calculates the precise top-left and bottom-right pixel coordinates required to crop an image based on a defined aspect ratio while centering a specific subject point.

See It in Action

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

U I need a 16:9 crop for this photo. The main focus is near the bottom left corner.

Crop Calculation Results

Based on your image (3840×2160) and target ratio (16:9), here are the optimal coordinates:

- **Top-Left:** (480, 0)
- **Bottom-Right:** (3840, 2160)

The resulting dimensions are 3360×2160 pixels. The algorithm prioritized keeping your subject visible while adhering to the required format.

U Is a ratio of 0.5625 standard for mobile? What does it mean?

Aspect Ratio Validation

Yes, the ratio 0.5625 matches the standard 'portrait_mobile' format (9:16). This is commonly used for social media stories.

- **Standard:** Portrait Mobile (9:16)
- **Compatibility:** High

This means you can confidently use this ratio without worrying about falling outside common platform guidelines.

U Check the metadata if I crop a 1920×1080 image down to 1080×1920.

Crop Metadata Report

Analyzing Source: 1920 × 1080
Target Crop: 1080 × 1920

- **Scale Factor:** 0.5625
- **Area Preservation:** Approximately 56.25% of the original area.

This indicates a significant dimensional shift, which is important to know when planning your final layout.

Frequently Asked Questions

01 **How does Crop Coord Maximizer help me keep my subject centered?**

The MCP calculates the ideal crop boundaries while making sure your primary focal point remains as close to the center of the new image as possible. This prevents important elements from getting cut off, ensuring a professional look every time.

02 **Can I use Crop Coord Maximizer for different social media sizes?**

Yes. You can specify any common ratio—like 1:1 for Instagram posts or 9:16 for Stories—and the MCP will calculate the coordinates needed to adapt your image perfectly for that platform.

03 **What information does Crop Coord Maximizer give me about area loss?**

It provides metadata detailing the scale factor and the exact percentage of the original source area you are keeping in the final crop. This is vital for knowing if a drastic resize will compromise your visual integrity.

04 **Is this better than just using an online photo editor?**

This MCP calculates coordinates mathematically, giving you precise pixel values and metadata reports that generic editors don't offer. It solves the complex geometry problem reliably, especially when adapting for multiple ratios.

05 **Does Crop Coord Maximizer work with all kinds of photos?**

Yes, it handles any source image you provide. Just tell your agent what ratio you need and where your key subject is located within the photo, and it does the rest.

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 `"crop-coord-maximizer": { "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

Crop Coord Maximizer 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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