MCP SERVER | NO CODE | CLOUD HOSTED

Nearmap MCP

Query Geospatial Data & AI Insights by Conversation

Nearmap gives you full control over high-resolution aerial imagery and geospatial insights right through your agent. You can retrieve sub-15cm vertical images, automatically detect vector geometries for buildings or solar panels, model terrain elevation, and audit survey coverage without ever leaving your chat window.

A+ Quality Score 100/100

aerial-imagery | geospatial-ai | location-intelligence | computer-vision | site-verification | topographic-models

MAINTAINED BY VINKIUS CLOUD FOR AI AGENTS · JUNE 2026
vinkius.com/mcp/nearmap-high-res-aerial-imagery-ai

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.

Nearmap (High-Res Aerial Imagery & AI) MCP

10 tools available
Cloud-hosted on Vinkius

Tired of opening ten different GIS layers just to check a property? This MCP connects your AI client directly to Nearmap's world-class geospatial data. You can ask natural questions—like 'Show me the roof condition for this building and tell me if there are any solar arrays visible.' Your agent handles the rest, pulling together vertical imagery tiles, structural measurements, and AI-detected features instantly. Instead of downloading multiple complex datasets, you get a single conversation that synthesizes everything from topographic models to oblique views. Because Vinkius hosts this MCP, all your specialized geospatial tools live in one place, accessible through any compatible client.

Core Capabilities

01 — Check site conditions with high-res imagery

You can pull vertical aerial tiles down to sub-15cm resolution using coordinates to verify exactly what's happening on a specific piece of land.

02 — Extract structures and features automatically

The tool scans the imagery and pulls out vector shapes for common elements like buildings, pools, solar panels, and vegetation so you don't have to trace them manually.

03 — Analyze building facades from multiple angles

Access 3D-angled views pointing North, South, East, or West. This is perfect for auditing structural details or measuring building height without site visits.

04 — Audit survey history and coverage

Verify if imagery exists across a specific point or complex polygon, and pull up the dates of previous surveys to track changes over time.

05 — Model ground elevation and terrain volume

Extract Digital Surface Model (DSM) tiles that let you analyze building height, surface peaks, and overall topographic volumes.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/nearmap-high-res-aerial-imagery-ai** — connect your AI agent in three steps.

01 Subscribe to this MCP and enter your Nearmap API Key.

02 Start by directing your AI client with a natural query, such as asking for the elevation data or checking coverage boundaries.

03 Your agent processes the request, retrieving specific tiles—be it true ortho views or oblique perspectives—and presents the actionable geospatial data.

The bottom line is you get to use complex mapping and AI analysis via simple chat prompts.

Built For

This MCP is built for professionals who rely on precise, measurable details about property conditions. Think insurance adjusters needing to document roof damage without flying a drone, or architects verifying site dimensions before drawing up schematics.

Insurance Adjuster

You use this MCP to audit property damage and detect specific roof features conversationally, bypassing the need for manual on-site inspection trips.

Urban Planner/Architect

You verify site dimensions, analyze topographic elevations, and pull high-res imagery directly into your planning workflow to check feasibility.

Solar Installer/EPC Engineer

You identify existing solar arrays and extract roof geometries from the imagery, optimizing placement and resource allocation for new installations.

What Changes When You Connect

01 Stop guessing about site dimensions. With this MCP, you can retrieve high-resolution vertical imagery tiles using the `get_vertical_tile` tool to verify exact conditions at a specific location.

02 Skip manual feature mapping. The `get_ai_detected_features` tool automatically extracts vector geometries for buildings and solar panels, saving hours of manual tracing work.

03 Get full structural context without leaving your desk. Use the `get_oblique_tile` tool to pull 3D-angled views from all cardinal directions (N, S, E, W) for comprehensive building audits.

04 Never wonder if a site was surveyed correctly again. You can use `check_coverage_polygon` and `list_survey_dates` to audit imagery availability across complex areas and track historical changes.

05 Analyze elevation instantly. By calling the `get_dsm_elevation_tile` tool, your agent provides Digital Surface Model data needed for calculating terrain peaks or volume shifts.

Real-World Applications

Assessing a potential insurance claim

The adjuster needs to check roof damage and structural integrity on an old house. They ask their agent, 'Show me the North oblique view for these coordinates.' The MCP responds instantly with the correct tile, allowing them to document facade damage without needing to physically visit.

Optimizing solar panel placement

The installer needs to know exactly where existing arrays are and what the roof geometry is. They run `get_ai_detected_features` around the site, which pulls out high-confidence vector data for all visible panels, allowing them to plan resource allocation efficiently.

Verifying construction blueprints

The architect needs to confirm a client's property lines match the survey. They use `check_coverage_polygon` on their master map boundaries; if any area is blank, they know exactly where more data is needed before finalizing plans.

Comparing site conditions over time

The planner needs to prove that a wetland boundary has been encroached upon. They use `list_survey_dates` and then pull the specific imagery from two different dates, providing concrete evidence of change.

Patterns to Avoid

Treating it like a simple map lookup

✗ AVOID

Just typing 'Show me the coordinates' and getting only a basic image. This wastes time because you don't get the necessary depth of data.

✓ INSTEAD

Instead, ask your agent to perform complex tasks: 'Get the true ortho tile for this area and then use `get_ai_detected_features` to specifically isolate all visible swimming pools.' This forces a deep analysis.

Downloading raw GIS files

✗ AVOID

Manually downloading multiple GeoTIFFs, DSM layers, and metadata sheets into separate folders. It's tedious, version-control hell, and takes forever.

✓ INSTEAD

Let the agent handle it. Ask for a specific analysis: 'Pull me the Digital Surface Model elevation tile and tell me the peak height of the central building.' You get the answer without juggling file types.

Ignoring historical context

✗ AVOID

Assuming that because you have an image today, it shows all data points. Sometimes the survey is old or incomplete.

✓ INSTEAD

Always check the metadata first. Use `get_survey_metadata` to find the Ground Sample Distance (GSD) and ensure the optical capture details match your required precision.

The Right Fit

Use this MCP if your job requires comparing multiple layers of highly specialized, measurable data from aerial sources—like elevation models alongside structural outlines. You need to know *why* a structure exists there, not just *that* it exists. This is for verifying compliance, calculating volume, or documenting physical changes over time. Don't use this if you only need general street views or

simple satellite photos; those services are fine. If your need is purely comparative (e.g., comparing two different colored PNGs side-by-side), a basic image processor will work. But if the job requires advanced geometry, elevation analysis (`get_dsm_elevation_tile`), or AI feature extraction (`get_ai_detected_features`), this MCP is essential.

The problem with manual geospatial auditing

Today, checking a site's full context means opening at least three different applications: the base map, the structural overlay, and the elevation profile. You spend time clicking between tabs, cross-referencing dates in spreadsheets, and manually compiling what looks like one cohesive picture.

With this MCP, your agent handles the data stitching for you. Instead of juggling layers, you ask a single question—like 'What was the roof condition last year?'—and get an answer synthesized from multiple sources: historical imagery, structural detection, and survey metadata.

Nearmap (High-Res Aerial Imagery & AI) MCP

You no longer have to manually query for specific data types. You don't need to open the dedicated tool just to see solar panels, or another tool just to check elevation.

Now you ask your agent one comprehensive question—for example, 'Show me the true ortho tile and detect all pools.' The system executes both analyses simultaneously, giving you a single, actionable result.

Nearmap (High-Res Aerial Imagery & AI) - 10 Tools

These tools allow you to query geospatial data for everything from building footprints to topographic elevations, all managed through one conversational interface.

#	TOOL	DESCRIPTION
01	`list_ai_feature_classes`	Looks up all internal AI categories used to map things like rooftop arrays.
02	`get_ai_detected_features`	Pulls out vector shapes for buildings, pools, vegetation, and solar panels using automated computer vision.
03	`check_coverage_point`	Verifies if Nearmap captured imagery exists at a specific latitude/longitude point while checking its historical record.
04	`check_coverage_polygon`	Confirms if the aerial survey covered an entire mapped area or polygon, checking for gaps in the imagery boundaries.
05	`get_dsm_elevation_tile`	Extracts pixelated Digital Surface Model data to map terrain and building height measurements.
06	`get_oblique_tile`	Retrieves 3D-angled imagery tiles from the North, South, East, or West directions for structural targets.
07	`list_survey_dates`	Shows a list of all dates that have captured data crossing your target location.
08	`get_survey_metadata`	Queries specific flight details, including the Ground Sample Distance (GSD) and optical capture settings for an aerial flyover.
09	`get_true_ortho_tile`	Retrieves top-down layers that are corrected for geometric lean, ensuring zero parallax alignment for mapping.
10	`get_vertical_tile`	Gets high-resolution vertical imagery tiles taken straight down (nadir) over the captured boundaries.

See It in Action

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

U Get the latest high-res vertical imagery for coordinates '34.0522,-118.2437'

Retrieving imagery... I've identified the tile coordinates for downtown Los Angeles at zoom level 20. The most recent survey was captured on Feb 12, 2026. Here is the vertical imagery URL for your inspection. Would you like me to check for AI-detected features at this location?

U Detect all solar panels within a 100m radius of this point: [lat,lon]

Running AI feature extraction... I've identified 3 solar arrays within the specified radius. The detected features include high-confidence vector geometries. Array 1 covers approximately 45 sq meters. I can provide the full GeoJSON for these detections if you'd like.

U Show me the oblique view from the North for this building coordinate

Retrieving oblique perspective... I've fetched the perspective tile looking North for your target. This view clearly shows the structural facade and roof orientation. Would you like me to retrieve the South or East perspectives for a complete comparison?

Frequently Asked Questions

01 **How do I check if my coordinates are covered by Nearmap imagery?**

You use the `check_coverage_point` tool. This verifies if Nearmap captured data exists at your exact latitude and longitude, and it provides temporal history for that point.

02 **Can I detect solar panels using the Nearmap MCP?**

Yes, use `get_ai_detected_features`. This tool automatically extracts vector geometries specifically for identifying solar arrays and other roof components within a given radius.

03 **What is the difference between true ortho and vertical imagery tiles in Nearmap?**

True Ortho (`get_true_ortho_tile`) provides top-down, geometric alignment for perfect mapping. Vertical tiles (`get_vertical_tile`) provide a straight-down view of the captured boundaries.

04 **Do I need to worry about structural facades when auditing buildings?**

Use `get_oblique_tile`. This retrieves 3D-angled imagery that lets you look at the side and front of a building, giving you clear views of the structural facade and roof orientation.

05 **How can I get elevation data for a site?**

You call `get_dsm_elevation_tile`. This extracts the Digital Surface Model (DSM) tiles needed to analyze terrain peaks, building heights, and surface volumes.

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 `"nearmap-high-res-aerial-imagery-ai": { "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

Nearmap (High-Res Aerial Imagery & AI) 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

Generated	June 2026
MCP Server	Nearmap (High-Res Aerial Imagery & AI) MCP
Server ID	`019d75dc-1677-70fd-8861-2d0d8c909ed7`
Platform	Vinkius Cloud for AI Agents
Endpoint	`https://edge.vinkius.com/{token}/mcp`

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