

M C P S E R V E R

N O C O D E

C L O U D H O S T E D

Ceiling Area Calculator MCP

Get precise architectural measurements for construction planning.

Ceiling Area Calculator MCP handles the math for your architectural area calculations. Your AI client uses this to find rectangular surface areas, switch between metric and imperial units, and check if your measurements actually make sense for a real building.

A+

Quality Score 100/100

area

measurement

conversion

construction

math



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.

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.

Ceiling Area Calculator MCP

4 tools available

Cloud-hosted on Vinkius

You can stop manually calculating surface areas and unit conversions. This MCP gives your AI client the specific tools needed for construction and interior design math. Whether you are estimating materials for a new build or checking dimensions for a renovation, your agent can now perform these calculations with precision. It handles the heavy lifting of converting between different measurement systems and provides a safety check to ensure your dimensions aren't physically impossible. Instead of doing the math yourself, you just give your agent the raw numbers and let it handle the conversion and validation.

Core Capabilities

01 — Area Calculation

Your agent calculates the total surface area for rectangular spaces.

03 — Dimension Validation

Your client checks if measurements are physically realistic for a building.

02 — Unit Conversion

The AI switches measurements between metric and imperial systems.

04 — Conversion Factors

The agent retrieves specific multipliers for linear unit changes.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/ceiling-area-calculator — connect your AI agent in three steps.

- 01 Connect the MCP to Claude, Cursor, or Windsurf via Vinkius.
- 02 Provide your raw dimensions or area values to your AI client.
- 03 The agent calls the necessary tool to calculate or convert the data.
- 04 Your agent delivers the final, validated measurement to you.

Connect the MCP to your AI client and start asking for measurements.

Built For

This MCP is built for professionals working in the built environment who need quick, accurate math for spatial planning.

Interior Designers

They hand off room dimensions to the AI to calculate ceiling or floor coverage.

Construction Estimators

They use the agent to quickly convert units and validate material needs.

Architectural Technicians

They rely on the tool to verify that room dimensions stay within realistic bounds.

What Changes When You Connect

- 01 Eliminates manual unit conversion errors.
- 02 Prevents impossible dimension entries through validation.
- 03 Speeds up material estimation for rectangular surfaces.
- 04 Provides instant metric to imperial translations.

Real-World Applications

Material Estimation

Calculate the exact ceiling area to determine how much paint or acoustic tile you need.

Dimension Auditing

Check if a set of entered dimensions is physically possible for a standard residential room.

Unit Switching

Convert imperial measurements from a blueprint into metric for international project planning.

Rapid Calculations

Get the area of a rectangular space immediately without using a handheld calculator.

Patterns to Avoid

Manual unit conversion math

❌ AVOID

You try to multiply feet by inches and then manually divide by 12 to get square feet.

✓ INSTEAD

Let your agent handle the math directly using `convert_area_units` to avoid simple arithmetic mistakes.

Ignoring physical reality

❌ AVOID

You enter a room dimension that is 500 feet wide for a tiny residential bathroom.

✓ INSTEAD

Run your numbers through `validate_dimensions` first to ensure the measurements make sense for a real building.

Guessing conversion multipliers

❌ AVOID

You assume you know the exact decimal for a specific metric to imperial conversion.

✓ INSTEAD

Use `get_unit_conversion_factor` to pull the precise multiplier needed for your specific linear units.

The Right Fit

Connect this MCP if you work in construction, interior design, or architectural tech and need to move between metric and imperial systems. Do not connect it if your work involves non-rectangular spaces or complex organic shapes. The decision rests on whether your primary spatial math involves rectangular surfaces.

Ceiling Area Calculator: 4 Specialized Math Tools

These tools handle rectangular area math, unit conversions, and physical dimension checks for construction projects.

#	TOOL	DESCRIPTION
01	calculate_rectangular_area	This tool finds the surface area for a single rectangular ceiling.
02	convert_area_units	Use this to switch a calculated area from one unit system to another.
03	get_unit_conversion_factor	This tool retrieves the specific multiplier needed to convert between different linear units.
04	validate_dimensions	Your agent uses this to check if provided dimensions fall within realistic physical bounds.

See It in Action

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

U What is the area of a ceiling that is 5 meters long and 4 meters wide?



The area of the ceiling is 20 square meters.

U Convert 50 square feet to square meters.



50 square feet is approximately 4.645 square meters.

U Is a ceiling with a length of 100 meters and a width of 100 meters realistic?



No, those dimensions exceed maximum feasible building size for a standard room.

Frequently Asked Questions

01 What can this MCP calculate?

It calculates the surface area of rectangular ceilings and handles unit conversions.

02 Can it check if my measurements are realistic?

Yes, the `validate_dimensions` tool checks if your measurements fall within realistic physical bounds.

03 Does it support metric and imperial units?

Yes, you can use the `convert_area_units` tool to switch between these systems.

04 Which AI clients can use this MCP?

You can use this with any MCP-compatible client like Claude, Cursor, or Windsurf.

05 Do I need to host this myself?

No, Vinkius hosts and manages the MCP so it is ready to use immediately.

06 What shapes can I calculate?

This tool is specifically designed for rectangular or square ceiling profiles using the ``calculate_rectangular_area`` tool.

07 Can I convert square meters to square feet?

Yes, you can use the ``convert_area_units`` tool to translate area values between different unit systems.

08 How do I know if my dimensions are realistic?

You can use the ``validate_dimensions`` tool to check if your length and width are within acceptable architectural limits.

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>"ceiling-area-calculator": { "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

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

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