Mongoose Library: The Business Case for a Commercial License

Mongoose (mongoose.ws) is a two-file C networking library and Web UI framework for microcontrollers: TCP/IP, HTTP, WebSocket, MQTT, TLS 1.3, OTA firmware updates and device-dashboard infrastructure in one event-driven framework, dual-licensed under GPLv2 and a commercial license. This page summarizes the case for the commercial license - the five questions a budget decision turns on.

1 Cost: the alternative is not free - it is an in-house build the team then owns forever

	Build in-house	License Mongoose
Up-front effort	6-18 months of senior embedded engineering to integrate a TCP/IP stack, TLS, HTTP, WebSocket, MQTT, OTA and dashboard glue - before the first product feature ships.	Integration measured in days: two files, one event loop, working examples. One-time, royalty-free fee per product, product family or company-wide - a fraction of the engineering time it replaces.
Security ownership	The team owns the full CVE surface for the product's lifetime: fuzzing infrastructure, triage, patching, field updates, CRA documentation.	Cesanta's security team does this full-time: daily fuzzing, OSS-Fuzz, CodeQL, sanitizer CI - plus private patches one month before CVEs go public.
Production risk	Fresh code: corner-case bugs surface in the field for years; no track record under load.	In production since 2004 on hundreds of millions of devices, at hundreds of companies large and small.

2 Capability: dashboards built visually or with AI, OTA, and cross-platform reuse

- **Build custom dashboards with AI or use a visual editor.**
  - **Visual editor - Mongoose Wizard.** Arrange dashboard controls and define the REST API in a visual editor, select your target hardware, then generate a ready-to-build Mongoose project. No frontend expertise required; generated source and hardware glue remain editable. mongoose.ws/wizard
  - **AI-assisted custom dashboard.** Use your preferred AI coding assistant to create a fully custom HTML/CSS/JS interface. The small, stable Mongoose Dashboard API gives AI a tested contract for device data, actions, files, authentication, live updates and OTA. mongoose.ws/docs/guides/web-dashboard-guide
- **OTA updates out of the box.** Built into the library, not bolted on: signature verification before flash, automatic rollback on failed health check. Additionally a fleet-scale management via separate backend OTA Manager. mongoose.ws/ota
- **Extremely cross-platform.** Runs on STM32, ESP32, NXP, RP2040/RP2350, Renesas, Microchip, Embedded Linux and desktop Windows/Linux/MacOS - one codebase across product lines. Full feature matrix: mongoose.ws/docs/concepts/supported-hardware

3 License risk: the commercial license removes GPL exposure

The free GPLv2 version is for evaluation and prototyping; shipping it in closed firmware obligates the manufacturer to release firmware source. The commercial license is royalty-free with clean terms - no copyleft in the product, nothing for procurement or legal to flag. Buying before the product launch keeps licensing off the critical path. mongoose.ws/licensing

4 Compliance: EU CRA reporting obligations start September 11, 2026

From that date (full enforcement Dec 11, 2027), products shipped to the EU must have no known exploitable vulnerabilities, secure remote updates, and a documented vulnerability-handling process for the product's lifetime. Mongoose delivers the networking layer of that checklist: built-in TLS 1.3, signed OTA with automatic rollback, daily fuzzing plus OSS-Fuzz, CodeQL and sanitizer CI on every change, and a two-file SBOM (one component, six permissively licensed crypto routines - no dependency graph to audit). **Commercial customers receive private security patches ~one month before public CVE disclosure** - time to update fielded devices before an exploit is public. Mongoose covers the networking stack; application logic and process obligations remain the manufacturer's - but the hardest part of the security surface is handled by a team that does it full-time. mongoose.ws/security/cra-compliance

5 Vendor risk: a 22-year track record, from factory floors to orbit

Mongoose has shipped since 2004, is deployed on hundreds of millions of devices, and is the most popular library in its category (12,000+ GitHub stars). NASA uses it aboard the International Space Station. It is licensed by hundreds of companies including Siemens, Broadcom, Schneider Electric, Bosch, Samsung, Google and Caterpillar. Broadcom's principal engineer: *"well documented, well supported, stable and full of features... support and response time was outstanding."* Support comes directly from the authors, under a published, contractual support schedule (mongoose.ws/support/#sla). Customer stories: mongoose.ws/case-studies

Next step: evaluate free under GPLv2 - two files, drop them into the project. To ship in proprietary firmware, request a commercial license quote at mongoose.ws/quote - answered the same business day, no sales call required.

More information: mongoose.ws · mongoose.ws/comparison · mongoose.ws/security · mongoose.ws/case-studies · mongoose.ws/wizard