

LEGAL COMPLIANCE & HARDWARE STANDARDS

PRECORES ARCHITECTURE COUNCIL • SOVEREIGN EDGE HARDWARE SPECIFICATION

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§ 01 TERMS OF SERVICE & PARTIES DEFINITION

LEGALLY BINDING CLAUSE

Comprehensive Legal agreement establishing ownership rights, upstream OEM disclaimers, supervisor license terms, root privileges, acceptable use, and binding dispute resolution.

Article 1. Scope of Agreement & Definition of Parties

1.1. Binding Legal Agreement: This agreement constitutes a binding contract between PRECORES LAB (hereinafter referred to as 'Manufacturer', 'Vendor', or 'PreCores Lab') and any natural or legal person purchasing, holding custody of, or operating the hardware appliance (hereinafter referred to as 'User' or 'Customer').

1.2. Definition of Hardware Appliance: Refers to embedded ARM64 Linux server appliances engineered and assembled by PreCores Lab, including without limitation model series L1, L1-Lite, L1-Plus, L1-Plus-Pro, L2, L2-Apex, and LS1.

1.3. Component OEM Disclaimer & Non-Affiliation: PreCores Lab appliances are crafted utilizing repurposed and upcycled embedded ARM64 hardware platforms. **PRECORES LAB IS AN ENTIRELY INDEPENDENT ENGINEERING ENTERPRISE AND IS NOT AFFILIATED WITH, SPONSORED BY, AUTHORIZED BY, OR ENDORSED BY ANY ORIGINAL EQUIPMENT MANUFACTURER (OEM) OR SEMICONDUCTOR VENDOR**, including Qualcomm, MediaTek, Samsung, Xiaomi, or related consumer brands. All product names, trademarks, and registered trademarks mentioned are the property of their respective owners and are used solely for technical compatibility identification.

1.4. Telecommunication & Internet Service Providers (ISPs): The User remains solely responsible for their upstream network carrier agreements, public IP allocations, and bandwidth policies when interconnecting the appliance with public networks.

Article 2. Hardware Ownership & Supervisor Software License

2.1. Perpetual Hardware Ownership: Upon completion of purchase, THE USER HOLDS 100% UNENCUMBERED PHYSICAL OWNERSHIP OF THE HARDWARE. PRECORES LAB DOES NOT IMPOSE REMOTE ACTIVATION LOCKS, SUBSCRIPTION PAYWALLS, OR FORCED CLOUD DEPENDENCIES TO MAINTAIN BASE SYSTEM UTILITY.

2.2. Software License: The Manufacturer grants the User a non-exclusive, perpetual license to execute the pre-installed PreCores Platform Core software. The User may not reverse engineer, decompile, or commercialize proprietary supervisor binaries for unauthorized commercial distribution.

Article 3. Root Privilege Handover & Operational Custody

3.1. Full administrative privileges (Root / UID 0) and Master SSH access are provisioned directly to the User during initial Setup Wizard provisioning.

3.2. As the custodian of root authority, THE USER ASSUMES TOTAL RESPONSIBILITY FOR ACCESS CREDENTIALS, CRYPTOGRAPHIC KEYS, FIREWALL POLICIES, AND WORKLOADS EXECUTING WITHIN THEIR PRIVATE NETWORK.

Article 4. Acceptable Use Policy & Prohibited Conduct

THE USER EXPRESSLY AGREES NOT TO UTILIZE THE APPLIANCE FOR ANY OF THE FOLLOWING PROHIBITED ACTIVITIES:

- a Conducting distributed denial-of-service (DoS/DDoS) attacks, unauthorized network vulnerability scanning, or deploying ransomware, malware, or spyware;
- b Participating in botnets, unauthorized cryptocurrency mining, or exploiting third-party network infrastructure;
- c Hosting or transmitting illegal material or content infringing third-party intellectual property rights.

Article 5. Indemnification & Hold Harmless

The User agrees to defend, indemnify, and hold harmless PreCores Lab, its engineers, directors, and agents against any claims, liabilities, damages, losses, and reasonable legal expenses arising out of the User's breach of this agreement, unlawful server operation, or violation of third-party rights.

Article 6. Governing Law & Mandatory Dispute Resolution

6.1. Mandatory Informal Negotiation: Prior to initiating legal proceedings, both Parties agree to engage in good-faith informal negotiations for a minimum period of 30 (thirty) business days following written notice of any dispute.

6.2. Jurisdiction: If informal resolution is unsuccessful, the dispute shall be resolved before the competent courts or arbitration tribunal located in the jurisdiction of PreCores Lab principal operations.

Article 7. Severability

If any provision of this agreement is determined by a court of competent jurisdiction to be invalid or unenforceable, such provision shall be severed or modified to the minimum extent necessary, and all remaining provisions shall remain in full force and effect.

ENTERPRISE COMMITMENT: ALL PRECORES LAB HARDWARE OPERATES UNDER PERPETUAL OFFLINE EDGE SOVEREIGNTY. ZERO RECURRING MAINTENANCE FEES, ZERO FORCED INTERNET CONNECTIVITY REQUIREMENTS.

§ 02 DISCLAIMER & LIMITATION OF LIABILITY

LEGALLY BINDING CLAUSE

Comprehensive legal disclaimers regarding third-party services, local backup requirements, liability caps, and force majeure events.

Article 1. Third-Party Software & FOSS Disclaimers

1.1. The appliance incorporates containerization environments and 1-click catalogs featuring community-developed software (e.g., Home Assistant, Pi-hole, Nextcloud, WireGuard, Portainer). All such software is developed independently by upstream open-source communities.

1.2. **PRECORES LAB DOES NOT DEVELOP, OWN, OR WARRANT THIRD-PARTY PACKAGES AND EXPLICITLY DISCLAIMS LIABILITY FOR:**

- a Zero-day security vulnerabilities, bugs, or software defects in third-party containers;
- b Service interruptions, version incompatibilities, or breaking upstream software changes;
- c Direct or consequential damages resulting from user misconfiguration of third-party packages.

Article 2. Data Loss Disclaimer & Mandatory Self-Backup Obligation

2.1. **IN ADHERENCE TO THE 100% OFFLINE EDGE SOVEREIGNTY INVARIANT, THE APPLIANCE NEVER TRANSMITS OR SYNCHRONIZES USER DATABASES OR CONFIGURATIONS TO CENTRAL CLOUD STORAGE. USER DATA RESIDES EXCLUSIVELY ON LOCAL FLASH STORAGE.**

2.2. **THE USER BEARS THE AFFIRMATIVE DUTY TO EXECUTE REGULAR ENCRYPTED LOCAL BACKUPS (.PCL-BAK) VIA WEB PORTAL OR USB OTG STORAGE.**

2.3. **PRECORES LAB EXPLICITLY DISCLAIMS ALL LIABILITY FOR DATA CORRUPTION, INADVERTENT DELETION, HARDWARE DEGRADATION, OR BUSINESS INTERRUPTION ARISING FROM ABSENCE OF PROPER USER BACKUPS.**

Article 3. Electrical Incidents & Unauthorized Modification Disclaimer

3.1. The hardware is certified exclusively for direct DC power supplies within 9V to 24V ($\geq 2A$). PreCores Lab is fully exempt from liability for incidents caused by:

- a Improper electrical supply (AC mains connection, DC exceeding 24V, or sub-spec amperage);
- b Electrical surges originating from non-surge-protected utility grids or unshielded Ethernet cables;
- c Use of uncertified power adapters lacking overvoltage protection and EMI filtering.

3.2. UNAUTHORIZED BOARD SOLDERING, TRACE JUMPERS, REMOVAL OF SAFETY COMPONENTS, OR FLASHING UNVERIFIED CUSTOM BOOTLOADERS IMMEDIATELY VOIDS ALL WARRANTY AND MANUFACTURER LIABILITY.

Article 4. Exclusion of High-Risk & Life-Critical Applications

PRECORES LAB HARDWARE IS DESIGNED AND INTENDED FOR PRIVATE EDGE COMPUTING, PERSONAL CLOUDS, SMART HOME AUTOMATION, AND NETWORK LABORATORIES. THE APPLIANCE IS NOT DESIGNED, TESTED, OR CERTIFIED FOR USE IN HIGH-RISK ENVIRONMENTS REQUIRING FAIL-SAFE PERFORMANCE, INCLUDING MEDICAL LIFE-SUPPORT SYSTEMS, AIR TRAFFIC CONTROL, NUCLEAR FACILITIES, OR MILITARY WEAPONS. PRECORES LAB DISCLAIMS ANY WARRANTY OF FITNESS FOR SUCH APPLICATIONS.

Article 5. Maximum Aggregate Financial Liability Cap

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL PRECORES LAB'S TOTAL AGGREGATE LIABILITY ARISING OUT OF OR RELATING TO THIS HARDWARE EXCEED THE ACTUAL PURCHASE AMOUNT PAID BY THE CUSTOMER FOR THE SPECIFIC HARDWARE UNIT GIVING RISE TO THE CLAIM.

PreCores Lab shall not be liable for lost profits, loss of business goodwill, data loss, or indirect, incidental, punitive, or consequential damages.

Article 6. Force Majeure

PreCores Lab is excused from performance and warranty obligations in events beyond reasonable control, including natural disasters, catastrophic weather, grid failures, global telecommunication disruptions, armed conflict, civil unrest, or sovereign regulatory interventions.



CORE LEGAL PRINCIPLE: PRECORES LAB MAINTAINS ZERO USER TELEMETRY AND ZERO CENTRAL STORAGE. THE USER MAINTAINS SOLE CUSTODY OF ROOT CREDENTIALS AND DATA THROUGH REGULAR LOCAL BACKUP PRACTICES.

Architectural privacy guarantee: 100% autonomous offline operations, zero phone-home telemetry, zero hardware backdoors, and complete operational decoupling from customer support channels.

Article 1. Absolute Edge Sovereignty & Zero Phone-Home Telemetry

1.1. PRECORES LAB APPLIANCES OPERATE WITH FULL AUTONOMY ON THE LOCAL LAN. THE FIRMWARE CONTAINS ZERO PHONE-HOME TELEMETRY ROUTINES, ZERO CENTRALIZED FLEET TRACKING, AND ZERO VENDOR MAINTENANCE BACKDOORS.

1.2. 100% LOCAL: SYSTEM BACKUPS AND RESTORES (.PCL-BAK) OPERATE STRICTLY IN LOCAL MEMORY WITH HARDWARE ENCRYPTION. UPLOADING USER BACKUPS TO CLOUD BUCKETS OR REMOTE SERVERS IS ARCHITECTURALLY BARRED.

Article 2. Complete Decoupling of Customer Support Bots

2.1. The official Customer Support Bot (PreCores Bot) operates exclusively as an external customer engagement tool (warranty lookups, FAQ queries, technician live chat relays).

2.2. HARDWARE APPLIANCES NEVER COMMUNICATE WITH OR DISPATCH TELEMETRY ALERTS TO EXTERNAL MESSAGING BOTS, PRESERVING ABSOLUTE OPERATIONAL ISOLATION.

Article 3. Minimal Ephemeral State at PreCores Edge Gateway

The distributed PreCores Edge Gateway processes only minimal technical data necessary for warranty verification and portless domain routing:

- a One-way cryptographic hash of hardware serial number for warranty eligibility checks;
- b Dynamic DNS endpoint coordinates enabling Portless Subdomain Routing when explicitly enabled by user.

SOVEREIGN PRIVACY INVARIANT: PRIVACY IS TREATED AS AN INVIOABLE TECHNICAL INVARIANT. ZERO TRACKING COOKIES, ZERO CAMERA SCANS, ZERO CLOUD SURVEILLANCE.

Serial-verified hardware warranty backed by the PreCores Cloud Engine, guaranteeing 1-to-1 board replacement within standard warranty periods.

Article 1. Warranty Coverage & 1-to-1 Replacement Commitment

1.1. Authentic PreCores Lab appliances include standard 1-to-1 hardware replacement coverage (12 to 24 months by model tier) from the activation timestamp recorded in the PreCores Cloud Engine.

1.2. HARDWARE DEFECTS RESULTING FROM MANUFACTURING FLAWS QUALIFY FOR 1-TO-1 REPLACEMENT WITHIN 7 WORKING DAYS FOLLOWING DIAGNOSTIC INTAKE AND BENCH QUALIFICATION.

Article 2. Covered Hardware Defect Classifications

The 1-to-1 RMA policy covers the following hardware failure categories:

- ☒ Internal DC-DC voltage regulator failures;
- ☒ Internal eMMC/UFS flash storage read-only lockouts or controller mortality;
- ☒ LPDDR RAM hardware bit-errors causing persistent kernel panics;
- ☒ Industrial PWM cooling fan motor bearing failure or stall;
- ☒ Integrated Wi-Fi / Bluetooth transceiver hardware failure.

Article 3. Absolute Exclusions from Warranty

WARRANTY COVERAGE IS STRICTLY VOID UNDER THE FOLLOWING CONDITIONS:

- ☐ a Mechanical impact, chassis deformation, sheared DC jacks, or cracked PCBs;
- ☐ b Liquid ingress, corrosion, or foreign object contamination;
- ☐ c Overvoltage or electrical misuse (AC power injection, voltage exceeding 24V DC);
- ☐ d Board modifications, solder traces, or unverified bootloader firmware flashes.

Article 4. RMA Request & Claim Procedure

Users may verify warranty status by entering their Serial Number (PCL-...) via the Support portal. RMA tickets are submitted online for automated dispatch qualification and return shipping instructions. Diagnostic evaluation is conducted within 7 working days.

GLOBAL SERIAL VERIFIER: HARDWARE SERIAL NUMBERS ARE CRYPTOGRAPHICALLY AUTHENTICATED VIA THE PRECORES EDGE GATEWAY FOR TRANSPARENT WARRANTY VERIFICATION.

§ 05 OPEN SOURCE COMPLIANCE & ATTRIBUTIONS

FOSS COMPLIANCE

Honoring open-source upstream foundations: Linux Kernel, Debian Project, Docker CE, and Go Runtime.

Article 1. Linux Kernel & GNU GPLv2

PreCores Lab platforms operate on the Linux Kernel in strict adherence to GNU General Public License v2.0 (GPLv2). Kernel patches and driver source modules developed by PreCores Lab are made available in compliance with GPLv2 reciprocity terms.

Article 2. Debian GNU/Linux Distribution

The appliance userland incorporates minimal base distribution files from Debian GNU/Linux, adhering to the Debian Free Software Guidelines (DFSG).

Article 3. Docker CE, Go Runtime & Components

Docker Community Edition components are licensed under Apache-2.0. The Go compiler runtime is licensed under BSD-3-Clause. Respective copyrights and trademarks belong to their respective creators.

OPEN SOURCE COMPONENTS & RECIPROCAL LICENSES:

Linux Kernel (ARM64 SoC Tree): GPL-2.0 License

Debian Base Distribution: DFSG Compliant

Docker CE (Engine & CLI): Apache-2.0 License

Go Compiler & Runtime: BSD-3-Clause License

FOSS GRATITUDE: PRECORES LAB STANDS ON THE SHOULDERS OF THE GLOBAL OPEN-SOURCE COMMUNITY, COMMITTED TO OPEN COMPUTING AND DEVELOPER FREEDOM.

§ 06 ELECTRICAL SAFETY STANDARDS & 24/7 OPERATION

HARDWARE SPEC

Direct DC 9V-24V $\geq 2A$ 5.5x2.1mm standard, monolithic CNC aluminum heatsinks, and elimination of Lithium battery hazards.

Article 1. Direct DC 9V-24V Standards (100% Battery-Less)

1.1. COMPLETE BATTERY ELIMINATION: 100% OF LITHIUM-ION CHEMICAL CELLS AND CHARGING ICS ARE REMOVED DURING FABRICATION, PERMANENTLY ELIMINATING SWELLING, THERMAL RUNAWAY, AND COMBUSTION RISKS.

1.2. INDUSTRIAL POWER CIRCUITRY: STANDARD 5.5X2.1MM DC BARREL CONNECTOR COMPATIBLE WITH 9V TO 24V SUPPLIES ($\geq 2A$), EQUIPPED WITH EMI CHOKES, SELF-RESETTING FUSES, REVERSE POLARITY PROTECTION, AND OVERVOLTAGE CLAMPS.

Article 2. Aerodynamic Thermal Engineering & 72-Hour Burn-In

2.1. CNC aluminum heatsink block with high-conductivity thermal interface material (>8.5 W/mK) paired with a dual-ball-bearing PWM fan maintains SoC core temperatures between 38°C and 48°C under typical ambient conditions.

2.2. 72-Hour Qualification: Each production appliance undergoes a 72-hour continuous 100% all-core thermal burn-in test prior to packaging.

Article 3. Headless Suppression & Energy Efficiency

The Headless Suppression Matrix deactivates display hardware and graphics pipelines, yielding an idle power draw of only 1.8W - 2.5W and peak full-load draw of 5.0W - 7.5W, consuming 85% less energy than conventional x86 servers.

CERTIFIED RELIABILITY: 100% LITHIUM-FREE. INDUSTRIAL 9V-24V DC INPUT DESIGNED FOR CONTINUOUS, ENERGY-EFFICIENT 24/7/365 SERVER OPERATIONS.



OFFICIAL SEAL

SOVEREIGN ARCHITECTURE SPECIFICATION SEAL

OFFICIALLY RATIFIED SOVEREIGN HARDWARE SPECIFICATION • PRECORES
LAB ARCHITECTURAL COUNCIL

BOARD OF ARCHITECTURE & COMPLIANCE

SPECIFICATION EPOCH

PRECORES ARCHITECTURE & COMPLIANCE BOARD

2026.10-SOVEREIGN

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