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Ghost Shell Mining System — Hardware Safety & Operating Terms

Applicable to All Supported Z-Series Equihash ASIC Hardware (Z15 · Z15 Pro · Z15j · Z15e · Z15k · Z11 · Z9 · Z9 Mini)

IMPORTANT SAFETY NOTICE: Equihash ASIC miners are high-current industrial machines. By booting, configuring, or operating Ghost Shell mining software on your hardware, you acknowledge and accept the electrical, thermal, and operational responsibilities below.

1. Electrical Infrastructure, PSU Derating & 200–240V AC Requirements

- **80% Continuous Load Derating (NEC Standard):** Always keep continuous wall power draw at or below 80% of the rated capacity of your power supply unit (PSU), power cords, PDU outlets, and branch circuit breakers.
- **PSU Sizing on Z15-Series Hardware:** On 1,600 W rated PSUs (such as APW3++ on 200–240V AC), sustained overclocking above 815–825 MHz pushes PSU load above 94%. For high-frequency profiles (830–900 MHz drawing 1,530–1,660 W), use an 1,800 W+ rated 200–240V PSU (APW7, APW9+, APW12, or enterprise server PSU).
- **Connector & Harness Inspection:** Inspect PCIe 6-pin power connectors and busbars before elevating clock or voltage targets. Never operate a hashboard with discolored, loose, or oxidized power terminals.

2. Thermal Envelope & Autonomous Guardrails

- **Recommended Silicon Temperature Band:** Maintain ASIC chip temperatures between **65 °C and 72 °C** (and PCB temperatures below 55 °C) during continuous 24/7 operation.
- **Best-Effort Software Protections:** Ghost Shell incorporates closed-loop fan control, per-chip frequency step-downs on hardware-error spikes, and an **85 °C emergency thermal cutoff latch**. These software controls supplement—and never replace—physical facility circuit breakers, intake filtration, and ambient cooling.

3. Transparent Developer Fee & Open-Source Compliance

- **Developer Fee Disclosure:** Ghost Shell operates with a transparent **2.50% (250 bps)** standard developer fee (or lower with an active partner/fleet entitlement), keeping ASIC clocks and core voltages continuous without thermal cycling.
- **Open-Source Components:** Ghost Shell interacts via standard system interfaces with open-source packages (including Linux kernel, U-Boot, BusyBox, and cgminer) governed by their respective GPL/LGPL/MIT/BSD licenses.
- **Disclaimer of Warranty ("AS IS"):** Ghost Shell software and technical documentation are provided "AS IS" without warranty of any kind. In no event shall GHOST Inc. be liable for hardware wear, PSU failure, or lost mining revenue arising from custom frequency or voltage operation.