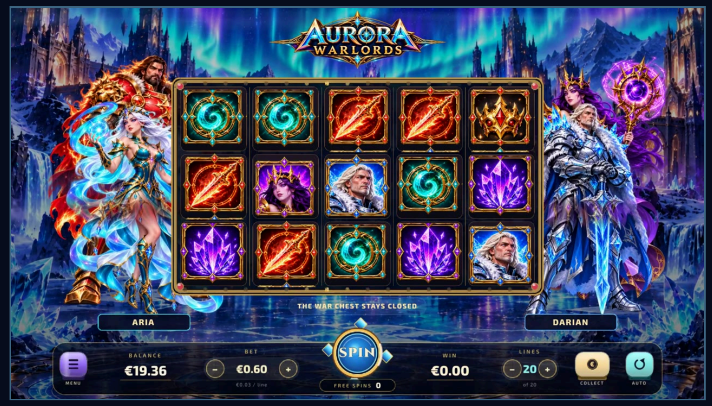
TECHNICAL GAME SHEET · V2 · 2 OCTOBER 2026

Aurora Warlords

Specification of the current release candidate for partner evaluation. The mathematics is frozen and exact; the regulatory profile is the Great Britain category B1 pre-certification target. Nothing here is a claim of certification or regulatory approval.



THEME	Fantasy warlords: Kael (Wild), Selene (Scatter), Aria and Darian (premium symbols), illustrated character stage and cinematic feature sequences
FORMAT	5 reels × 3 rows, 16-stop strips, 1,048,576 equally likely stop combinations
PAYLINES	20 fixed patterns, **1–20 selectable**; wins left to right from reel 1, highest win per line
SYMBOLS	7 line symbols (Inferno Blade, Aurora Crest, Void Crystal, Darian Frost Knight, War Crown, Aria Stormbringer, Kael Wild) + Selene Scatter
STAKE	Bet per line £0.01 – £5.00 on a 14-step ladder; total bet £0.05 – £5.00; every line carries the same whole-penny bet, so no award is rounded
THEORETICAL RTP	**97.108387 %**, exact enumeration, identical for every active-line count; displayed as 97.10 %. Base game 54.17 %, free-spin feature 42.94 %
HIT FREQUENCY	71.67 % of base spins pay (20 lines); feature triggers on 4.88 % of spins; expected free spins per spin 0.315
VOLATILITY	Single-spin payout standard deviation 1.25× bet; full-session 3.54× bet (1,000,000-session simulation). Medium profile
MAXIMUM WIN	52× total bet on a base spin, 54× on a free spin; game cycle (paid spin + all its free spins) capped at **£10,000** (2,000× maximum bet)
FREE SPINS	3 / 4 / 5 Scatters pay 2× / 10× / 50× total bet and award 6 / 10 / 15 free spins at the triggering bet and lines; line wins ×2; retrigger with the same rules
CONTROLS	SPIN, BET per line −/+, LINES −/+, MENU (paylines, paytable, rules), COLLECT, AUTO (base game only; withheld in the UK B1 profile), attendant key, main door
CURRENT STATE	Release candidate · game SDK build **AW-UKB1-1.0.0-LAB3**, ruleset UKB1-RULESET-2 · 46 automated test suites green on Ubuntu 24.04 and Windows

INTEGRATION AND COMPLIANCE

What is built, what a partner adds

ARCHITECTURE

C++20. The game rules and feature state are a separate static library (*aurora_game_sdk*) with no Qt, cabinet, payment, meter or balance dependency: the host supplies a random source and owns accounting; the game returns debit and award in integer pence. Presentation: Qt 6 Quick on a 1280 × 800 stage (GPU scene graph), a legacy Qt Widgets window, and an HTML5/JavaScript adaptation of the same rules used for the public browser demo.

MATHEMATICS EVIDENCE

- Exact enumeration of all outcomes × 20 paylines, cross-checked by an independent re-implementation that shares no code with the game (1,000,000,000 simulated games: 97.1095 % ± 0.0112 %).
- 100,000,000 paid games through the production code for 1, 7 and 20 lines: RTP 97.130–97.137 %, all $|z| < 2$, no cycle reached the ceiling.
- Paid RTP re-derived for every valid stake and line option: equals the theoretical figure exactly.
- Golden vectors, RNG-consumption evidence, SHA-256 manifest and a packaged lab bundle (*AURORA-WARLORDS-UK-B1-GAME-1.0.0-LAB3*).

REGULATORY PROFILE

Target: Great Britain category B1 (Gaming Machine Technical Standards). Stakes £0.05–£5.00, £10,000 prize per game cycle, 2.5 s minimum cycle, mandatory player notices on the help screen, last-game recall, meters, program authentication. Submission checklist and requirements matrix maintained in the repository. No test house has been engaged yet.

RNG AND GAME SERVER

The SDK consumes five uniform 64-bit values per spin; consumption is documented by replay vectors. The host profile uses the operating-system entropy source (*getrandom(2)* on Linux, *BCryptGenRandom* on Windows) with statistical pre-checks. No certified RNG or production RGS is claimed: an online release would run on the partner's RGS and RNG, a cabinet release on the certified machine platform.

MACHINE INTEGRITY (CABINET PROFILE)

- Program authentication at start-up: SHA-256 of every program file against a manifest; any mismatch refuses to start.
- Critical memory: each play is saved before it is shown (recall, meters, state, in journal order); CRC-32 files cross-checked at every power-up; an interrupted save is completed from the recall.
- Eleven machine meters, last-game recall of at least 5 game cycles and 50 plays, attendant menu with events, program identity and a test mode; door and key-switch inputs; 2.5 s minimum game cycle; machine-error lock with attendant release.
- Vendor-neutral cabinet HAL: simulated cabinet, serial/USB CDC line protocol, I/O bridge, Linux GPIO adapter (libgpiod 2).

STILL REQUIRED FOR A CERTIFIED RELEASE

- **Online:** port of the presentation to the partner's client framework, RGS integration, jurisdiction-specific configuration, laboratory certification of the game under the partner's licence.
- **Cabinet:** physical key-switch and door wiring, independent hard meters, validated non-volatile memory and power-fail testing, payment and payout devices, signed program image or secure boot, approved test-house report, regulatory notices on the final artwork.

Deliverables for due diligence: playable browser demo, Qt cabinet build, source review under controlled access, mathematics document with reel strips and paytable, evidence CSVs and test logs, lab bundle, asset inventory, roadmap.