

# QKD DoS Hardening Checklist (ABE/Phase-Noise Aware)

Deploy these controls to mitigate phase/LO/interferometer attacks that emulate ABE-style perturbations.

Domain	Controls
Protocol	MDI/TF where feasible; strict parameter estimation; change-point detection; randomized phase di
Clocks/Pilots	GPSDO/Rb references; dual-clock voting; multi-tone pilots; monitor Allan deviation; alarm on phas
Optics/Interferometers	Thermo-acoustic enclosures; $\mu$ -metal where relevant; rigid mounts; fiber coils isolated from vibrati
Electronics	Star grounds; LC/RC filtering on modulator & detector bias; fiber control links to avoid ground loop
Monitoring	Magnetometer & accelerometer sentries; spectral sentinels on pilots; canary interferometer; corre
IR/Incidents	Define thresholds; SIEM integration; retain environmental logs; playbooks for excess-noise/QBER

*Tip: Keep a dark, unused interferometer path as a canary. Any disturbance there implies environmental or deliberate phase injection.*