iQore Advanced Technology Stack

(Conference-Safe Overview – Public Use)

iQore's **iQD** platform is powered by a suite of advanced, physics-augmented models designed to maximize quantum performance. While the exact implementations remain proprietary, here's how the stack works at a high level:

⚡ **QFA™ – Quantum Flux Alignment**
Continuously fine-tunes quantum gate timing to offset environmental and hardware-induced flux variations. Maintains precise execution timing even in unstable backend conditions, ensuring phase integrity in long and complex circuits.

🛡 **TFA™ – Topological Field Anchoring**
Employs proprietary field-anchoring techniques to strengthen entanglement and protect qubit clusters from decoherence. Ensures robust logical coupling across distant or heavily-interacting qubits.

🧠 **NQOE™ – Nonlinear Quantum Optimized Execution**
An adaptive execution engine that restructures circuits on the fly for maximum fidelity. Reduces noise, compresses gates, and aligns execution to the live coherence profile of the target QPU.

🔀 **QCM™ – Quantum-Classical Merge Logic**
A seamless hybrid interface that transforms classical inputs into stabilized quantum representations (iQubits) and returns results without loss. Enables fluid, deterministic transitions between simulation, CPU fallback, and QPU execution.

🌐 **TQE™ – TopoQubit Expansion**
Maps a single logical qubit to multiple coordinated physical qubits for redundancy and fault tolerance. Maintains operational stability even if localized decoherence affects part of the qubit set.

📉 **GEM™ – Gate Entropy Minimization**
Suppresses noise at the gate level by selecting or replacing operations to minimize entropy injection. Improves success rates for deep and complex workloads such as Shor's, Grover's, and quantum chemistry simulations.

Public Value Statement:
Together, these six proprietary models allow iQD to execute deeper circuits, extend coherence time, improve fidelity, and run faster — all without requiring any modifications to the underlying hardware. The result is a more powerful, reliable, and scalable quantum computing experience.