WE BUILD QUANTUM CONTROL INFRASTRUCTURE

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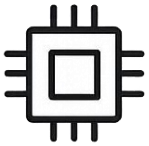
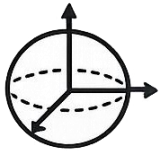
Why Qubit Controller

Applications	 Simulation, Cryptography, Optimization
Algorithms/Calibration	 Calibration, Control software
Control	 Low-power, high-performance control infrastructure for large-scale qubit systems
Qubits	 Physical qubits
Cryogenic Systems	 Ultra-low temperature environment

2026–2030 is the design-in window when the next decade of control systems gets bought.

PUBLIC SECTOR PRE-COMMITTED

$625M

DOE renewed five National Quantum Information Science Research Centers (Nov 2025). NIST authorized $85M/yr through FY2030. Japan committed $7.4B in 2025.

COMMERCIAL DELIVERIES STARTED

1,000+

Keysight shipped the first 1,000+ qubit commercial QCS to AIST in July 2025; Qblox and Zurich Instruments begin US/EU shipping in 2026.

GLOBAL PROCUREMENT WAVE

27.3%

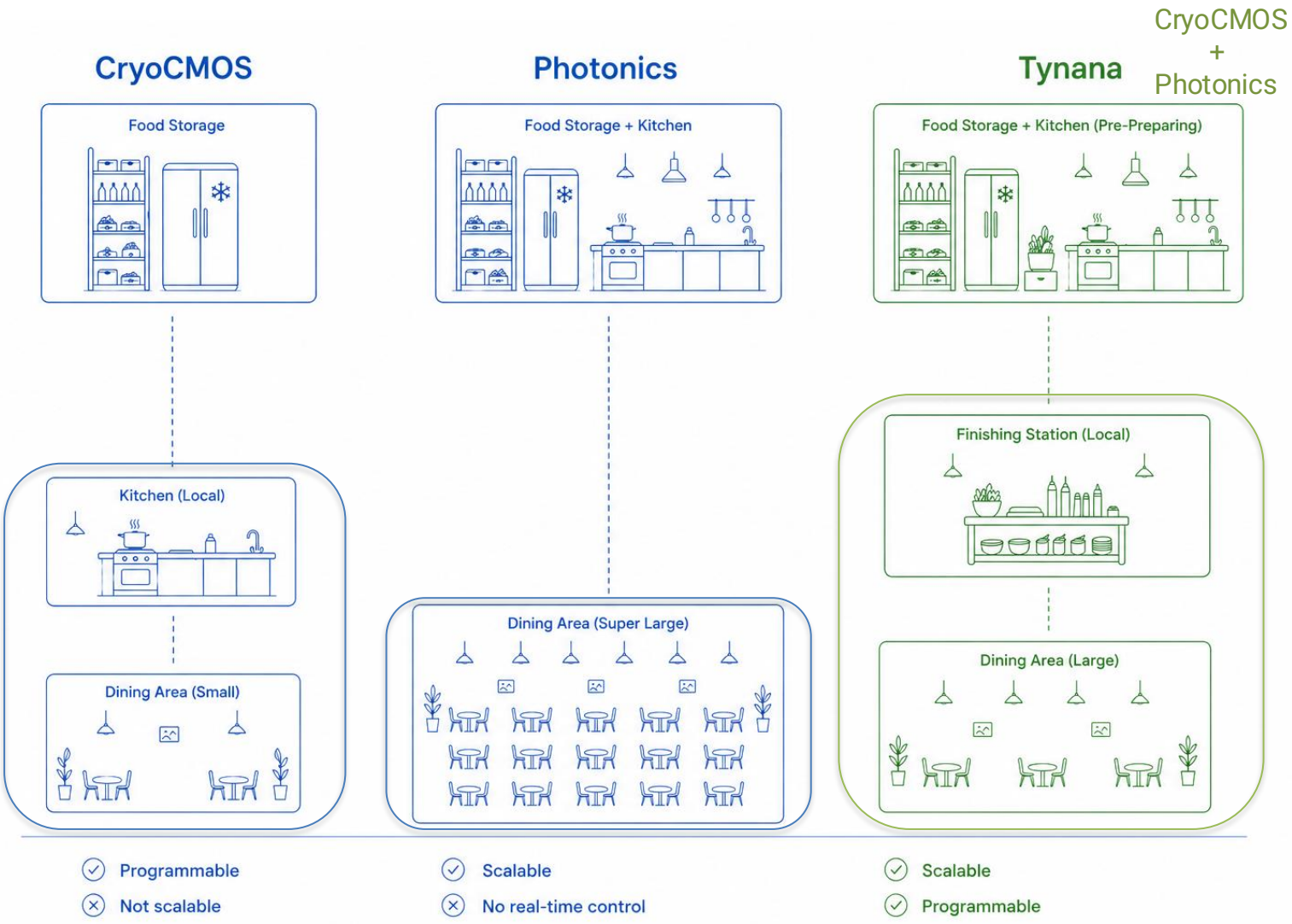
Control-system market CAGR 2026–2031: ~$74M (2024) → ~$384M (2031). Translates to a $50–300M/year procurement wave through 2030.

Sources: DOE press release Nov 2025.

We are building the control layer for quantum computing

What We Build?	Low-power, high-performance control infrastructure
What makes us different?	Works across different qubit technologies Enables scalable quantum systems Removes control as the bottleneck
What this becomes?	Scalable control and cryogenic packaging infrastructure

New Qubit Controller Architecture Analogy



Only Tynana gives both scale and real-time programmability.

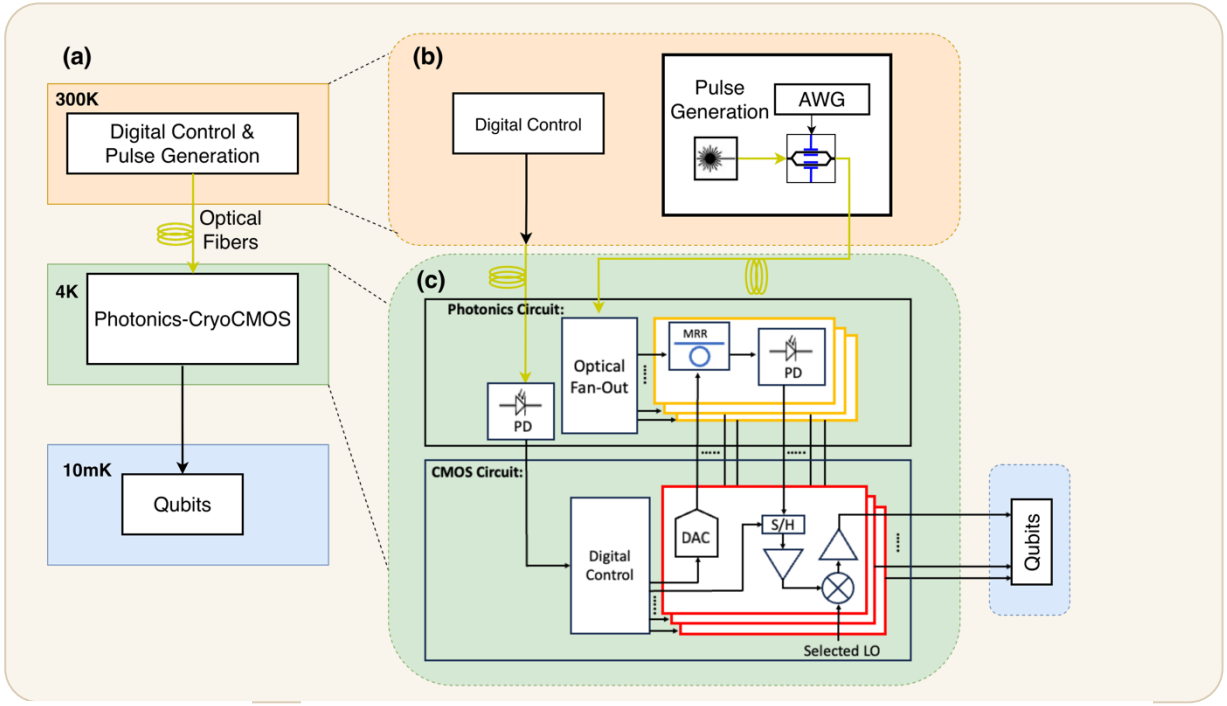
New Qubit Controller Architecture

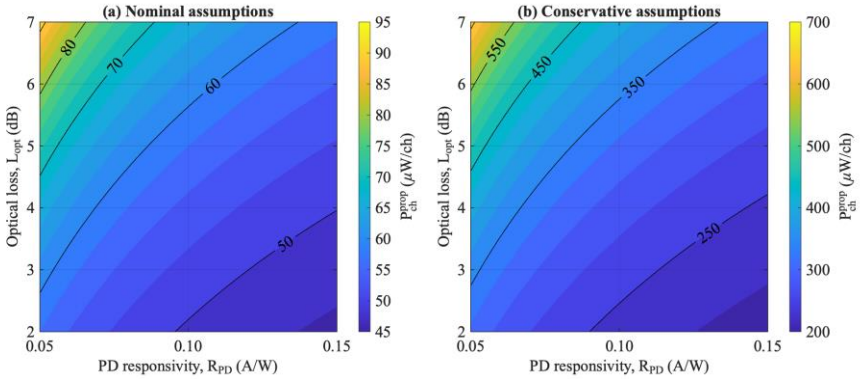
30× — **LOWER ACTIVE POWER**
0.05–0.7 mW per Channel (est.)

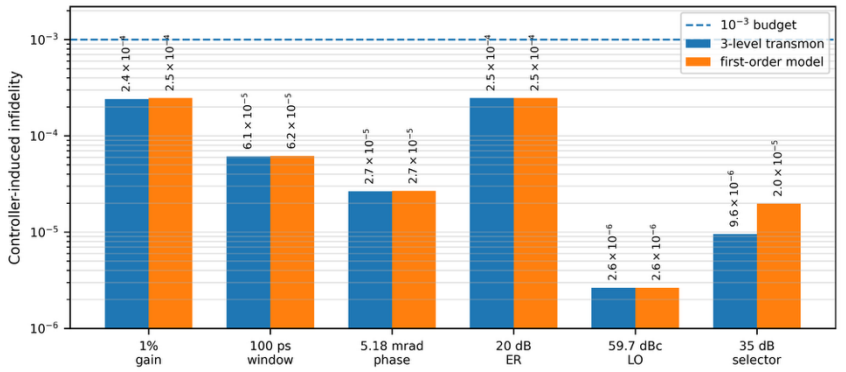
100× — **LESS CRYO MEMORY**
Only parameters, not waveform memory

Higher — **Programmability**
Real-time feedback, programmability

99.9%+ — **Fidelity**
Error budget 99.9%+ Gate fidelity



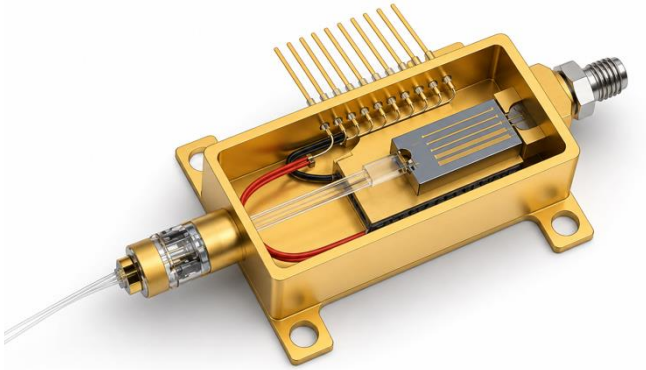




Cryogenic Photonic/RF Packaging Solution

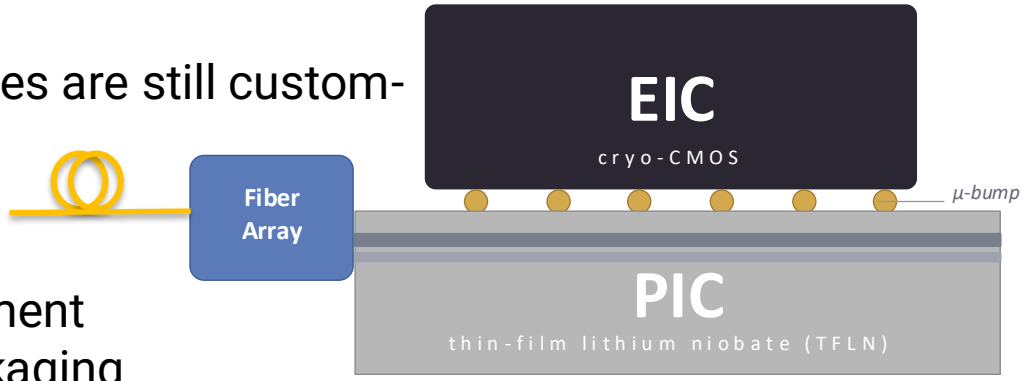
Applications

- Quantum computing
- Space and satellite photonics
- Cryogenic sensors and detectors



Why it is hard?

- Thermal drift and fiber misalignment
- Optical + RF + thermal integration must all work together
- Most cryogenic photonic packages are still custom-built research assemblies



Tynana Direction

- Epoxy-free low-loss fiber attachment
- Cryogenic RF + photonic co-packaging
- Cryogenic PCB and interconnect design
- Heterogeneous integration: TFLN + InGaAs PDs + cryo-CMOS

TYNANA: Infrastructure for Scalable Quantum Systems

Building scalable quantum-control and cryogenic packaging infrastructure

Phase 1: Core Demo

2026 – Mid 2027

- Tape out GF45SPCLO integration prototype in Oct 2026.
- Validate optical pulse delivery, Ge PD recovery, local cryo-CMOS correction, LO selection, and chip performance in a 4K cryostat.
- Use external low-loss fiber-attachment partners for the first cryogenic packaging path.

Phase 2: Control Module Product

Mid 2027 – Mid 2028

- Tape out Tynana's first dedicated qubit controller chip.
- Develop control software for the qubit controller.
- Launch pilot engagements with superconducting-qubit teams
- Bring cryogenic optical packaging in-house and begin offering custom cryogenic photonic/RF packaging solutions.

Phase 3: High-Performance TFLN Quantum-Control Platform

Mid 2028 – 2029

- Move toward TFLN photonics + InGaAs PD + cryo-CMOS for microwave-optical transducer designs for future readout and advanced quantum interconnects.
- Support 100+ qubit-control channels.

Leadership

Chief Executive Officer

Zhengjie Zhang

- Specialized Expertise in Privacy & High-Stakes Transactional Law: Credentialed as a Certified Information Privacy Professional (CIPP/US) with a proven operational track record in corporate law. Brings deep transactional experience to the table, including the successful structuring, execution, and management of complex, eight-figure ($13M+) commercial financing deals.
- Proven Zero-to-One Founder & Institutional Scaling: Co-founder of PBRMAX, successfully driving the company from early-stage inception to securing Series A+ institutional backing from Sequoia Capital. Combines elite legal and compliance acumen with direct, firsthand experience in aggressive startup growth, technical infrastructure development, and venture capital acquisition.

Chief Technology Officer

Bowen Liu

- Co-Founder & CTO: Spearheading Tynana's core IP and hardware development, directly leading the hybrid photonic/CMOS qubit-control architecture and cryogenic photonic/RF packaging.
- Top-Tier Academic Pedigree: Ph.D. researcher at Rensselaer Polytechnic Institute (RPI) focused on integrated photonics and quantum hardware, backed by an M.S. in Electrical Engineering from Columbia University.
- Specialized Quantum & IC Experience: Brings highly relevant technical experience from Cornell (researching cryo-CMOS qubit-controllers) and Montage Technology (designing high-speed electronics and DDR5 memory interface circuits).