

Technology and Product Development: Focus on Ultrasound



Science. Engineering. Business.

Triple Ring Technologies is a team of experienced engineers, physicists, and chemists who know how to collaborate. Our services span early-stage applied research, product development, pilot manufacturing, and entrepreneurial business development. These services **reduce risk, reduce costs, and shorten time to market.**

Understand. Simplify. Accelerate.

System Solutions

Triple Ring helps ultrasound product companies solve key technical problems, covering system architecture to transducer specification, beamformer design, and image formation. Our solutions for high-bandwidth beamforming, image construction, and total system optimization, enable real-time or post-processed imaging for an array of diagnostic, therapeutic, or non-medical applications.

Data Acquisition and Image Processing

Triple Ring uses scalable massively parallel processor arrays (MPPA) for high-speed computation, data archival, retrieval, and transmission to DICOM and other standards. We offer customized PCIe protocol ATCA-compliant components and systems for scalable high-speed data and image acquisition, processing, and analysis.

Clinical and Regulatory Solutions

Our clinical and regulatory team has extensive experience in clinical strategy and development, clinical trial design, IRB submissions, regulatory filings, and direct interfacing with the FDA and industry thought leaders.

Ideas. Prototypes. Production.

Triple Ring has offices serving Silicon Valley and Boston. The headquarters in Newark, CA are housed in a 41,000 sq. ft. facility that includes dedicated laboratories for electronics, optics, radiation source development, and mechanical prototyping; a machine shop; client office space; and a pilot manufacturing facility. Our quality management system is compliant with ISO 13485.

What We Deliver

Technology Development

- Feasibility Analysis
 - System architecture definition
 - Modeling and simulations
 - Risk analysis
- Engineering
 - Transducer specification and testing
 - High-bandwidth beamformer design
 - Beamformer driven ultrasound image analysis and optimization
 - Complex electromechanical designs
 - Proof-of-concept prototypes to pilot manufacturing
- High-end imaging, reconstruction and analysis
 - Gigab/sec data acquisition
 - TeraOps/sec image processing
 - Applications engineering for Nethra Am2000™ MPPA products

Product Development

- Product requirements documents (PRDs)
- Product engineering
 - Human factors design
 - Industrial design
 - Product design
- Complete risk management
- Validation and verification
- Manufacturing process control
- Pilot manufacturing

Clinical and Regulatory Affairs

- Regulatory strategy and certifications
- Clinical trial design

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