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Embedded Engineering Services since 1997

RTC provides **full life-cycle** complex engineering labor and solutions for **Safety Critical Embedded Systems and Software**. Whether you're needing updates on a legacy system or support on an innovative program, the RTC team is ready to support & deliver.

Core Capabilities

- Systems & Software Development
- Program & Project Management
- Certification Support
- Verification & Validation



Service Delivery Options

- Contract Labor/ Staff Augmentation Services (SOW)
- Project Management Services (SOW)
- Subcontract Labor/ Contingent workforce

Certifications

- Certified Small Business (NAICS)
- Export Control – EAR capable and ITAR Registered
- AS9100D/ISO9001:2015 Certified



ITAR/EAR Facility

- ITAR Compliant Workspace and Lab
- 24/7 Badge Entry, Security
- Secure Servers

RTC Expertise

- Program Management of Single function projects and Full system programs
- RTC Engineers Average 15-25 Years Experience
- 2018, 2022, 2023, 2024 Best Places to Work in AZ Awardee
- 2025 Best Places to Work in Consulting

Industries Served

RTC works with numerous industries specializing in embedded engineering projects which include:



- Analysis & Architecture
- System & Software Design
- Code Development & Integration
- Verification & Validation



Our aerospace applications legacy is applicable to related industries utilizing similar functions of design, critical systems, certification, validation, and/or go-to-market readiness.

Core Industries

- Aerospace
- Space/Satellites
- Defense
- Unmanned Systems
- Vertical Flight
- Advanced Air Mobility



Other Embedded Industries

- Medical
- Automotive
- Nuclear Controls
- Industrial Automation



Systems Engineering Services

- Multiple industry system processes
- Safety Processes including FMEA & FHA
- Human Factors Analysis/Effectiveness
- Requirements Analysis, Capture & Trace
- System & Functional Integration
- Model Based Development
- Architectural Definition
- Acceptance Test Criteria
- Use Case Scenario
- Reliability Analyses
- System Level Integration Testing



>>> Core Capability <<<

Software Engineering Services

- Software Architecture
- Requirements (High & Low Level)
- Software Design & Allocation
- Multiple Software Languages
- Code Generation
- Documentation with Tracing
- Software/Hardware Integration
- Multiple Industry Development Processes
 - All Criticality Levels
- Embedded, Windows, BSPs, & Drivers



>>> Core Capability <<<

Verification & Validation Services

- Certification Planning
- Reviews & Audits
- Test Plans & Procedure Creation
- Test Execution & Results Analysis
- Tool Qualification (DO-330/ED-215)
- Customer & Cert Authority Meetings
- Certification Document Submittals
- Trace Matrix Review
- Code Coverage & MC/DC Reviews



>>> Core Capability <<<

Program Management Services

- In addition to staff augmentation, RTC offers expertise to fully manage technical programs. Program management expertise includes:
 - Project planning
 - Necessary skillset identification, resource selection, and assembly of development team
 - Human resource management
 - Scope management
 - Schedule management
 - Budget management
 - Risk management & mitigation
 - Quality management
 - Metrics and Progress reporting
 - Recovery planning



>>> Core Capability <<<

Program Management Services

- Program Management of Single function projects and Full system programs
- Program Types
 - New development programs
 - Legacy programs
 - Software Tool Development Programs
 - Programs utilizing Client Processes or RTC Processes
 - Small to Large Programs
 - Short to Long Duration Programs
 - Remote Programs

>>> Core Capability <<<

Certification Support Services

- Project Certification Documents
 - Project Start
 - PSAC/PHAC, SCM, SQA, SDP, VTP
 - Project End
 - SAS/HAS & VTPR
 - Configuration Index Document (CID)
 - Version Description Document (VDD)
 - Open/Closed Problem Reports & Justifications
 - Trace Matrix
 - All Deliverable Artifacts
- Audit Support
 - Project Artifact Audits
 - Project/Client/Cert Authority
 - Stage of Involvement (SOI) Audits



>>> Core Capability <<<

Additional Capabilities

Add'l Technical Services

- Lab Development & Hosting
- Safety Assessments & Analysis
- Control Design
- Testing & Simulation
- Software Tools Development
- Software Tool Qualification
- Rapid Prototyping

Functional Expertise

- Full Life-Cycle Development
- Technical Leadership
- Risk Management
- Project Realignment
- Progress & Metrics Reporting
- Model Based Design & Support
- Agile Methods
- Multiple CM Tools



Embedded Systems

- Flight Management Systems
- All Surveillance Equipment
- Displays – PFD, MFD
- MCDU
- Central Maintenance Computer
- Communication Systems - Radios
- Autopilot
- Fly by Wire - Flight Controls
- Platforms (IMA)
- Fuel Controls
- Flight Recorder – Voice and Data
- Engine & APU Controls
- Fuel Cell Controller
- Medical Software Tools
- Satellite Communications
- Military UAVs
- Aircraft Specific Databases (ASDB)

Industry Specifications

- ARINC 429
- ARINC 573/717
- ARINC 573
- ARINC 629
- ARINC 647A
- ARINC 664
- ARINC 717
- ARINC 767
- ARINC 825
- ARP 4754
- ARP 4761
- CAN bus
- DO-178
- DO-254
- DO-330
- DO-331
- DoD 4120.3-M
- IEC 60601
- IEC 62304
- IEEE 1355
- IEEE 1394
- IEEE 802.3
- ISO 12207
- ISO 13485
- ISO 14971
- ISO 26262
- ISO 27001
- ISO 29119
- MIL-STD-1553
- MIL-STD-1679
- MIL-STD-498
- MIS
- NASA 7150.2
- NASA/SP-6105
- NASA-STD-8719
- NASA-STD-8739.8
- NID 7120.122
- NID 7120.130
- NPR 7120.5E
- SpaceWire
- Avionics Full Duplex Switched Ethernet (AFDX)
- Time Sensitive Networking (TSN)
- Time-Triggered Ethernet (TTE)