Overview

Commonwealth Technology, Inc. (CTI), a MacAulay-Brown, Inc. company, has served our customers for more than 50 years, delivering technical tradecraft inspired solutions supported by our experience in analysis, design, reverse engineering, fabrication, assembly, testing and operational training. CTI facilities, in Alexandria, offer combined engineering and lab spaces to support a wide range of prototyping, manufacturing, testing and mission support activities. Our Integrated Technology Center (ITC), in Sterling, VA, is uniquely equipped to accommodate larger scale systems development. With multiple SCIF and SAPF spaces, we manage simultaneous projects across security levels to TS and beyond.

CTI’s three secure facilities in the National Capital Region are specially configured to facilitate rapid product design, manufacturing, integration and testing from small electronic circuits to large machinery.

- Multiple SCIF and SAPF Spaces
- Electronics and Assembly Labs
- Secure Storage Areas
- Engineering Areas/Conference Rooms
- Machine, Model and Wood Shop
- Plastics/Composites Fabrication Areas
- Environmental Testing Lab
- High Bay Areas
- Administrative Offices

Advanced Electronic Systems

- Integrated SIGINT Platforms
- Hybrid Cyber Solutions
- Antenna Systems
- Information Management and Visualization

Mission and Logistics Solutions

- Denied Area Access and Persistence
- Material Acquisition and FME
- QRC Design to Deployment
- Training

Sensor Integration Solutions

- Surveillance and Collection Systems
- C4ISR
- Engineered Finishes and Camouflage
- Environmental Testing

Tagging, Tracking and Locating

- Tracking High Value Assets
- Personnel/Force Protection
- Information Management and Networking
- Data Display
### Laboratory Space
More than half of our nearly 70,000 sq. ft., TS cleared, facility is dedicated to prototyping, manufacturing, testing and training labs which are optimized to support our core lines of business.

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<th>Lab Function</th>
<th>Supporting Tools and Infrastructure</th>
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| **Prototyping**       | • Engineering CAD tools for modeling, simulating and virtualization:  
                          - Systems (Matlab)  
                          - 3D mechanical systems (Inventor and SolidWorks)  
                          - Electronics (Altium)  
                          - Finite Element Analysis (Ansys)  
                          - Fluid Dynamics (CFD)  
                          - Electromagnetics (HFSS)  
                          • Reverse Engineering with FARO arm, XRAY inspection and optical comparators  
                          • PCB prototyping tools (LPKF) for circuit and antenna prototypes  
                          • 3D printers (multiple technologies and materials)  
                          • Laser cutters and etchers, WaterJet  |
| **Manufacturing**     | • Comprehensive machine shop (milling, turning, EDM)  
                          • Automated PCB population, wire harnesses, RF cables and lithium battery packs  
                          • Composite materials from wood to carbon fiber  
                          • Injection molded and vacuum cast plastics  
                          • Finishing including paint, powder coat and accelerated aging  |
| **Testing**           | • Metrology lab for quality control  
                          • Temperature, humidity and salt fog chambers, ESD  
                          • Shock, drop and vibration systems  
                          • Accelerated UV testing, submersion and altitude simulation  
                          • 40 GHz RF network analyzers, high bandwidth scopes, automated test systems (National Instruments)  |
| **Training**          | • Flexible high bay spaces to create mockups and observe operator performance  |