In the fiercely competitive global Aerospace and Defence marketplace, companies must continually direct their key resources to the development and roll-out of innovative new systems - systems that challenge the bounds of technology and that lead the market in functionality, performance and price competitiveness.

At the same time, there is continuing demand for legacy systems, more mature products that these companies must continue to support to meet the needs of their growing customer base on an on-going basis.

These two necessities - the need to develop and produce new products and the need for on-going production and support for existing ones - place demands on the company that can over-extend facilities, equipment, personnel, and management attention.

Contracting manufacturing support for new products, and outsourcing the production and support of mature products are mechanisms to help alleviate these capacity constraints.

SED Systems (Calian SED) is pleased to submit this White Paper describing our Aerospace and Defence capabilities and expertise.
Calian SED has the proven project management, engineering, manufacturing & quality assurance capabilities to successfully manage & complete your project.

Project Management
- Strong, experienced project managers with full responsibility, accountability and authority for all aspects of their projects.
- Dedicated project teams providing expertise and continuity.
- Regular technical and progress reviews and reporting, internally and with the customer.
- Extensive experience assembling and managing subcontractor teams.
- Sophisticated support systems for scheduling, planning and cost control.

Engineering
- Exceptionally strong systems engineering skills with particular expertise in communications, test, control and operations oriented applications
- RF engineering in digital and analog domains.
- Hardware engineering including circuit cards, units, racks and facility design.
- Real-time & control software supporting virtually all languages, databases, operating systems & platforms.
- Embedded software and high-speed logic design and implementation.
- Complete technical services including document production and data management.

Manufacturing
- Production control/scheduling to ensure a smooth flow of work.
- Material management.
- Manufacturing engineering providing detailed processes for high production efficiency.
- Production for surface mount technology (SMT) and through-hole PCB’s, units, cable harnesses, as well as, rack assembly and integration
- Test and environmental screening using our extensive in-house inventory of test equipment and facilities.
- Customer service providing timely repair/refurbishment of fielded products and systems.

Quality Assurance
- Established and proven quality assurance system, registered to ISO-9001:2015.

Benefits
Our competencies and experience enables Calin SED to offer a solution with unique benefits including:
- Ability to design, implement, manufacture and test demanding RF and digital system applications.
- Proven capability of build-to-print manufacturing for small to medium volume high reliability electronic equipment.
- Proven approach to successfully executing projects for commercial, government and defence customers.
- Canadian Controlled Goods Registered and experienced with ITAR/TAAR issues.
- Western Canadian based business offering excellent ITB Value Proposition.
- Proven ability to generate compelling value in long-term business relationships.
- Long-term support including dedicated customer service group, on-site repair & technical support, 3rd Line R&O services, custom refurbishment programs, and inventory support including inventory & obsolescence management.
- A solid, reliable business partner you can count on to deliver.
Aerospace and Defence
We design and build high reliability systems and equipment for the critical and harsh environment of the aerospace and defence industry.

- Engineering design services
- RF & microwave modules
- Electronic & passive switchboxes & enclosures
- Automated test systems
- Subsystem and system integration
- Environmental stress screening

Satcom Ground Systems
We build sophisticated ground-based systems used to communicate with commercial satellites.

- Complex RF earth stations
- In-orbit test systems
- Digital radio uplink systems
- Baseband encoding systems
- Communications products
- Terrestrial repeaters

Satellite Control Systems & Services
We design, build and operate complex ground control and communications systems for commercial and government satellite programs.

- Deep space antenna systems
- TT&C systems
- Mission control systems
- Satellite operations services
- Earth station operations services

Network Management Systems
We provide a wide range of software-based systems and products that help satellite operators and service providers maximize network efficiency.

- Conditional access & gateway systems
- Network coordination systems
- Monitor and control systems
- Carrier/spectrum monitoring systems
- Resource management systems
- Mobility management systems
- Frequency planning tools
Calian SED has the core capabilities relevant to successfully manage the production and delivery of a variety of product lines:

- Our aerospace and defence expertise encompasses design, manufacturing and test of a wide range of product lines, from custom switchboxes and enclosures to high-grade cable assemblies and harnesses, RF amplifiers, and radar systems.

- We’ve developed procedures and processes to enable us to successfully complete complex and demanding projects on time and on budget.

- We have the full infrastructure in place to manage the production and support of varied product lines. From parts procurement and material handling, through assembly, integration and test to long-term support, SED has the facilities, equipment, personnel and experience at our immediate disposal.

- Our manufacturing capabilities include production, engineering. We are confident in our ability to improve production efficiency and reduce production costs.

- We have the communications and RF engineering expertise and support resources to design, tune and test RF circuits; to solve problems such as parts obsolescence; and to provide product enhancements.

- Our access to technically competent people in the region, and the open-architecture of our facility allow for rapid expansion of production capacity as your requirements grow. We have access to considerable real estate around our building to host temporary integration facilities as required.

- Our own systems are operating on six continents and many are supported by Calian SED under long-term maintenance agreements. We have the infrastructure and processes in place to support deployed systems over the long term. We routinely commit to supporting operational lifetimes of 15 years or more.

- We have been in business for over 50 years and we’ve generated many mutually beneficial long-term business relationships.

Calian SED consistently delivers what we promise, on schedule and on budget. Our track record is solid.

Over a number of successful programs, Calian SED has developed the experience relevant to your requirements:

- Under contract to Paramax Electronics (now Lockheed Martin Canada) in the late 80’s and early 90’s, we designed, integrated and installed the external communication and meteorological systems for the Canadian Patrol Frigate program.

- Under original contract to SEI, and now DRS Technologies Inc., we continue to build-to-print manufacture the man-portable ground surveillance radar (MSTAR) system in use by a number of countries including Canada, Britain, the United States, Poland and Australia. There are in excess of 1600 of these units in service by various militaries throughout the world today.

- We design and build Power Control Modules (PCM) for General Dynamic Land Systems-Canada.

- For the TCCS/Iris program, we produced and delivered more than 100,000 high-grade cable assemblies, and more than 6,000 complex RF amplifiers.

- We enjoy an ongoing relationship with Kidde Aero space, for whom we build-to-print manufacture various components of the Automatic Fire Sensing and Suppression system that is installed in a variety of armoured vehicles.

- Calian SED offers long-term on-going support, a dedicated customer service group, onsite repair and technical support, plus we’re experienced in providing 3rd Line R&O services for many of our existing customers. We also offer spare support, including inventory and obsolescence management.

We would be pleased to provide further details on our relevant experience, contact Calian SED today.