CANADIAN ADVANCED ELECTRONICS MANUFACTURING AND SUSTAINMENT FOR DEFENCE AND MISSION-CRITICAL SYSTEMS

THE PRIME CONTRACTOR CHALLENGE

Defence, aerospace, maritime, and security programs increasingly depend on electronic systems that must remain operational, supportable, and adaptable throughout lifecycles that often exceed 20 to 40 years.
As electronic components become obsolete and global supply chains remain heavily concentrated offshore, organizations face growing challenges related to production continuity, repairability, sustainment, modernization, and long-term supportability.
At the same time, prime contractors must strengthen Canadian supply chains, increase domestic industrial participation, and demonstrate meaningful Industrial and Technological Benefits (ITB) outcomes.
These realities are driving demand for trusted Canadian manufacturing and sustainment partners capable of supporting both production and lifecycle requirements.

THE MISSION NEED

Canadian Armed Forces (CAF), Canadian Coast Guard (CCG), National Shipbuilding Strategy (NSS), NORAD modernization, and allied programs require Canadian partners capable of:

- Manufacturing high-reliability electronic assemblies and subsystems
- Supporting rapid transition from prototype to production
- Providing testing, validation, and production readiness support
- Reducing supply chain and obsolescence risks
- Repairing and sustaining deployed electronic systems
- Supporting long-life platforms and modernization programs
- Contributing to Canadian Content Value (CCV) and ITB objectives

THE GUIDE: M2S ÉLECTRONIQUE

Founded in 1981, M2S Électronique is a Canadian Electronics Manufacturing Services (EMS) company specializing in the manufacturing, integration, testing, repair, refurbishment, and lifecycle sustainment of high-reliability electronic systems.
Operating from Québec, M2S provides an integrated operational capability that combines:

- Printed Circuit Board Assembly (PCBA)
- Electronic subsystem integration
- Functional and environmental testing
- Automated testing and X-ray inspection
- Repair and refurbishment
- Reverse engineering
- Obsolescence management
- Supply chain and lifecycle support

Unlike organizations focused solely on production, M2S combines manufacturing and sustainment capabilities within a single Canadian operational framework

What M2S Enables

M2S supports defence and dual-use programs by:

- Delivering rapid prototyping (NPI) and seamless transition to scalable production
- Providing PCB assembly, system integration, and full manufacturing services
- Designing and implementing advanced testing solutions (ATE, functional, environmental)
- Reducing risk through Design for Manufacturability (DFM), Test (DFT), and Assembly (DFA)
- Managing supply chains with proactive sourcing and real-time adaptability
- Extending system life through repair, reverse engineering, and obsolescence management

Where M2S Creates Value

Manufacturing & Integration

Support for electronic assemblies and subsystems used in aerospace, maritime, communications, sensing, industrial, and defence-related systems.

In-Service Support (ISS)

Repair, refurbishment, reverse engineering, and lifecycle sustainment capabilities supporting long-life platforms and deployed systems.

Obsolescence Management

Component lifecycle support, sourcing strategies, and production continuity solutions that reduce operational and sustainment risk.

Supply Chain Resilience

Canadian-based manufacturing and sustainment capabilities that reduce dependence on offshore electronics supply chains.

Defence-Relevant Applications

- Aerospace and avionics systems
- Marine ship-borne mission and platform systems

- Communications and command systems
- Electro-Optical / Infrared (EO/IR) systems
- Autonomous and remotely piloted systems
- Training and simulation systems
- Long-life platform sustainment and modernization programs

ITB-Ready, Prime-Friendly Value

M2S supports Industrial and Technological Benefits (ITB) objectives through:

- Approximately 77% Canadian Content Value (CCV)
- Canadian-based manufacturing, testing, and sustainment activities
- Canadian supplier development
- Advanced manufacturing capability
- Long-term In-Service Support (ISS)
- Supply chain resilience
- Workforce development and technical expertise
- Sovereign industrial capability

Why This Matters

Without a capable Canadian electronics manufacturing and sustainment partner, primes face:

- Increased production and supply chain risk
- Higher lifecycle sustainment costs
- Greater exposure to component obsolescence
- Reduced flexibility supporting long-life platforms
- Increased pressure to achieve Canadian Content Value (CCV) and ITB commitments

M2S provides a practical Canadian pathway for manufacturing, sustaining, repairing, and modernizing mission-critical electronic systems while strengthening Canadian industrial participation and long-term operational readiness.

Call to Action

Engage M2S Électronique early when developing manufacturing, sustainment, modernization, and ITB strategies for defence, aerospace, maritime, and mission-critical electronic systems.

Key Themes

Canadian Manufacturing | In-Service Support (ISS) | Obsolescence Management | Supply Chain Resilience | Defence Systems Integration | Canadian Content Value (CCV)