

CANADIAN ASTRONAUTICS LIMITED

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Company background. Canadian Astronautics Limited (CAL) is a diversified company engaged in developing and manufacturing a wide range of high-technology products and providing systems engineering services. Founded in 1974, CAL's rapidly growing capability is supported by a 4 994 m² (53 000 sq. ft.) office, laboratory facility and a 2 954 m² (30 000 sq. ft.) production facility.

CAL's expertise in signal processing has made the company the leading supplier of satellite-aided search and rescue (SARSAT) ground stations. The stations operate with the international search and rescue satellites for emergency location of distressed aircraft and vessels.

The laboratories, which include cleanrooms for aerospace hardware assembly, are equipped to support analogue and digital electronic development, antenna and radio frequency (RF) development, and computer facilities for signal processing and process control work. CAL also has access to environmental laboratories, antenna ranges and failure analysis laboratories. Furthermore, CAL provides a full capability for "Mil Spec" drawings, documentation and quality assurance (QA) inspection in support of hardware production.

Products. Among its varied products, the company has the following to offer:

Advanced systems — Signal processing systems include an image processing system for LANDSAT Thematic Mapper satellite images, an acoustic processing system to measure polar ice thickness, a family of radiation measuring dosimeters, and SARSAT ground stations.



Radar systems — CAL is active in the development of airborne synthetic aperture radar (SAR) and side-looking airborne radar (SLAR) for mapping, ice reconnaissance, geophysical exploration and environmental monitoring applications. CAL has developed phased array and microstrip antennas for microwave landing system applications and has capability in thin film microwave integrated circuit components.

Space systems — Cell procurement, battery fabrication, and battery testing are just three areas of CAL's spacecraft power systems capabilities. In other space hardware areas, the company has supplied a high-resolution far ultraviolet solid state camera system which is flying aboard the Swedish Viking satellite. The company has supplied a large deployable helical antenna for the British Skynet 4 series of military communications satellites and a space shuttle scientific payload to be used for scientific investigations of the ionosphere. CAL is also developing an upper atmosphere wind velocity and temperature measuring interferometer.

Real-time hard copy display of CAL's SLAR 100 System operating on board the Canadian Atmospheric Environment Service's de Havilland Dash-7 reconnaissance aircraft.

Military systems — The company has developed a capability in military electronics. Product developments include a software programmable sonobuoy processor, a fast switching millimetre wave source and the TASS threat simulator system.