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CMC Electronics - Archived 1/2008

Outlook

- Company divested its U.S.-based Cincinnati Electronics unit to L-3 Communications in December 2004
- Firm remains well positioned in military radios, avionics, and related aviation electronics
- The firm is looking to grow into the market for systems integration on military aircraft

Sales & Net Income Trends

Information Unavailable

Headquarters

CMC Electronics Inc
600 Dr. Frederik Philips Boulevard
Ville Saint-Laurent, Québec
Canada H4M 2S9
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CMC Electronics was originally incorporated in Canada in 1903 as the Marconi Wireless Telegraph Company of Canada. The company was commissioned by the Canadian government to establish a series of wireless coastal stations as the basis for transatlantic communications capability with Europe. It changed its name to Canadian Marconi Company in 1925.

In 2001, BAE Systems sold its majority stake in Canadian Marconi Company (which at the time was

called BAE Systems Canada) to ONCAP LP, an investment firm located in Toronto, Canada. The firm now conducts business under the name CMC Electronics Inc.

Today, CMC Electronics is one of Canada's leading electronics manufacturers. Chief business areas are avionics, commercial communications, communications systems, components, data communications products, ground navigation aids, and radar systems. Exports of military and commercial products account for 80 percent of the company's sales; its products are in service in over 100 countries worldwide.

CMC Electronics Inc employs approximately 1,015 people, 922 in Canada and 93 in the USA.

Structure and Personnel

Jean-Pierre Mortreux
President and Chief Executive Officer
Gregory A. Yeldon
Chief Financial Officer
Jean Denis Roy
Vice President, Human Resources and Legal Counsel
Cathy Bain
Vice President, Marketing and Sales

François Dorval
Vice President, Quality Assurance and Continuous Improvement
Jean-Michel Comtois
Vice President, Military Aviation
Bruce Bailey
Vice President, Commercial Aviation

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Product Area

CMC Electronics is believed to be organized in the following manner:

1. Commercial Aviation
 - 1.1 Aeronautical Communication Systems
 - 1.2 Enhanced Vision Systems
 - 1.3 Flight Deck Integration
 - 1.4 Electronic Flight Bags
 - 1.5 Other
2. Military Aviation
 - 2.1 Cockpit Systems Integration
 - 2.2 Mission Computing & Processing
 - 2.3 Display & Control Systems
 - 2.4 Navigation
 - 2.5 Enhanced Vision Systems
3. Custom Electronics
 - 3.1 Hybrid Microcircuits
 - 3.2 Display Products

CMC's key subsidiary includes:

1. NovAtel Inc

Commercial and Military Aviation. These units provide civil and military navigation systems such as Doppler radar, Omega/VOR, Microwave Landing System (MLS) receivers, and Global Positioning System (GPS) receivers. These operations have branched out over the years into other avionics products, to include engine monitoring and display

instruments, and performance management products. Additional products include integrated navigation and flight management systems, adaptive antenna systems, and electro-optical sensors. CMC Electronics has forged ahead in the development of cockpit displays using thin-film electroluminescent (TF-EL) liquid crystal displays (LCDs) and cathode ray tube (CRT) display technologies. In addition, these operations produce aircraft data monitoring and processing systems. These display and monitoring/processing products are the basis for CMC Electronics' growing expertise in cockpit management systems.

Custom Electronics. This operation manufactures hybrid microcircuits, night-vision-goggle-compatible display products, microwave components, power supplies, magnetics, and precision-machined parts for advanced avionics, radar, and communication systems. CMC Electronics' Electronic Components Division is a major supplier to many electronics manufacturers, as well as to CMC itself.

NovAtel. This operation produces Global Positioning System receivers and associated products, including OEM, survey and airborne receivers, and ground-based augmentation receivers for wide area augmentation systems.

Facilities

Headquarters, CMC Electronics Inc, 600 Dr. Frederik Philips Boulevard, Ville Saint-Laurent, Québec, Canada H4M 2S9. Telephone: + 1 (514) 748-3148. Following a series of consolidation efforts, this location now houses the corporate administrative offices and the manufacturing facilities for a majority of the company's operations.

CMC Electronics (Ottawa), 415 Legget Drive, PO Box 13330, Ottawa, Ontario, Canada K2K 2B2. Telephone: + 1 (613) 592-6500. Established in 1982, CMC Electronics' Kanata facility houses the R&D functions

and some avionics-related manufacturing facilities. It also provides the manufacturing requirements for the Ground Systems and Datacomm Products divisions.

NovAtel Inc, 1120 68th Avenue NE, Calgary, Alberta, Canada T2E 8S5. Telephone: + 1 (403) 295-4500.

Web site: <http://www.novatel.com>

CMC Electronics (Chicago), 84 North Dugan Rd, PO Box 250, Sugar Grove, IL 60554. Telephone: + 1 (630) 466-4343.

Corporate Overview

CMC Electronics has evolved over the period of almost 100 years from its original business areas of radio communications and commercial broadcasting to global production of sophisticated avionics, components, radar, navigation, and communications systems.

New Products and Services

CMA-4000. In July 2006, CMC Electronics unveiled its new Flight Management and Display System known as the CMA-4000. A derivative of this next-generation

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system has already been selected for the Canadian H-92 Maritime Helicopter Project. The CMA-4000 employs a PCI open system architecture with extensive processing, memory and bus interface capabilities. In addition to operating as a traditional FMS/CDU, it can drive up to 2 external multifunction displays (MFDs). It has a feature-rich portfolio of navigation, communications, database, mission and display software. The result is a powerful and flexible Flight Management and Display System capable of performing a multitude of combat-related missions.

A400M Load Master Displays. In July 2006, CMC Electronics was awarded a contract by Rheinmetall Defence Electronics of Germany for the development and manufacture of Load Master Control Displays for the new A400M aircraft. CMC will design and produce all of the man-machine interface displays in the A400M's cargo hold area.

New Line of Opto-Electronic Components. In June 2005, CMC Electronics launched a new product line focused on opto-electronic components. The opto-electronic products currently available include 1550-nm receiver modules based on low noise, high-gain gallium arsenide avalanche photodiode modules; 905-nm laser pulsers; hermetically sealed fiber pigtailed transceiver/receiver modules for high-reliability aerospace applications; and 1064-nm custom silicon and avalanche photodiode modules for laser designation, laser radar and proximity fuzes.

SatLite. In May 2005, CMC Electronics launched a compact satellite communications (satcom) high-gain antenna system known as SatLite, which supports Inmarsat Aero-H, Aero-H+, Swift64, and the new SwiftBroadband satellite communications services. The design of the top-mounted antenna with an integrated beam steering unit is based on CMC's field-proven proprietary technology and architecture used in its CMA-2102 high-gain antenna system. The new SatLite antenna complements CMC's Satcom antenna product line and has been optimized for bizjet, regional, and narrow body aircraft applications. The SatLite antenna is compatible with new-generation (ARINC 781) and legacy (ARINC 741) terminal equipment.

Plant Expansion/Organization Update

Name and Ownership Changes. In April 2001, following ONCAP LP's acquisition of BAE Systems Canada, it was announced that BAE Systems Canada would conduct business under the new name **CMC Electronics Inc**; its common shares have been delisted from the Toronto Stock Exchange and AMEX.

ONCAP LP is a \$400 million investment partnership established in December 1999 by Onex Corporation and

several of Canada's largest pension funds and financial institutions. ONCAP was established to invest in small- and mid-capital North American-based companies in partnership with their management teams.

Onex Corporation is a diversified company with annual consolidated revenues of \$24.5 billion, consolidated assets of \$19.7 billion, and 97,300 employees. It operates through autonomous subsidiaries that are leaders in their industries. Onex shares trade on the Toronto Stock Exchange under the stock symbol OCX.

Mergers/Acquisitions/Divestitures

L-3 Buys CMC Electronics Cincinnati. In December 2004, CMC Electronics completed the sale of Cincinnati Electronics business unit (also known as CMC Electronics Cincinnati) to L-3 Communications Corporation. The agreement, originally signed on June 15, 2004, is for approximately \$172 million in cash.

Headquartered in Mason, Ohio, Cincinnati Electronics designs and manufactures a range of infrared detectors, imaging sensors, missile warning systems, space launch vehicle products and spacecraft electronics. Since it was acquired in 1988, Cincinnati Electronics has operated largely as a separate business unit, with products and technologies that are distinct from CMC Electronics' core Aviation Electronics business.

As part of the transaction, CMC Electronics entered into a long-term supplier agreement with Cincinnati Electronics for current and next-generation infrared sensors to support CMC Electronics' Enhanced Vision System (EVS). Among other things, the agreement provides CMC Electronics with long-term and exclusive access to Cincinnati Electronics' world-leading technology for the commercial and military EVS aviation markets.

GPS Product Line Transfer. In May 2003, CMC Electronics sold its non-aviation Global Positioning System (GPS) Original Equipment Manufacturer (OEM) product line to its subsidiary, NovAtel Inc. The new product line will extend NovAtel's current high-performance, upgradeable single- and dual-frequency (L1/L2) product line into the mid-level single-frequency market. This will increase NovAtel's total addressable market in core segments, and create entry points into new vertical markets. CMC's existing GPS OEM customers should benefit from NovAtel's broad product line, focused customer support, and dedication to evolving precise positioning technologies. CMC Electronics' GPS OEM product line consists of three GPS engines, known as the Superstar I, the Superstar II, and the Allstar, that use the L1 frequency band. The product line also includes three different enclosures known as the Starbox, Navistar, and Smart Antenna

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series, along with development kits and various accessories. In addition to the hardware variants, the L1 product line offers software variations for wide-area augmentation system corrections, base stations, timing applications, and high-quality L1 carrier phase outputs.

Northstar Divested. In December 2002, CMC Electronics completed the sale of its subsidiary Northstar Technologies to Brunswick Corporation of Lake Forest, Illinois. The transaction is part of CMC Electronics' strategy of divesting certain non-core assets and building the company as a leading aviation electronics, infrared systems, and space electronics business. Terms were not disclosed. Based in Acton, Massachusetts, Northstar Technologies is a premier supplier of marine navigational systems, which fully integrate GPS and advanced chart-plotting capabilities with technologies such as sonar and radar. Northstar was acquired by CMC in 1992.

MilComm Division Sold. In September 2002, CMC Electronics completed the sale of its Military Communications Division to Ultra Electronics Holdings plc of Greenford, England, for \$33.7 million in cash. The transaction is part of CMC Electronics' strategy of divesting certain non-core assets. CMC Electronics' Military Communications Division produced systems for the military communications market – specifically, the GRC-103(V) and GRC-226(V) radios, the GRC-245(V) high-capacity line-of-sight radio, the GRC-512(V) electronic countermeasures (ECM) radio relay, and the GRC-515(V) super high-frequency radio. The deal was first announced in August 2002. The unit now operates as Ultra Electronics TCS.

Flight Visions Acquired. In July 2002, CMC Electronics completed its acquisition of Flight Visions Inc for an undisclosed amount. Flight Visions is a well-

established military aviation company that designs and manufactures a wide range of cockpit systems and products, including head-up displays, mission computers, and control panels for fighter and fighter trainer aircraft and rotary-wing aircraft. The operation in Sugar Grove, Illinois, is made up of approximately 100 employees. The transaction was first announced in June 2002.

BAE Systems Canada Stake Sold. In February 2001, BAE Systems announced that it was selling its approximately 54 percent majority investment in BAE Systems Canada (formerly Canadian Marconi Company) to ONCAP LP, an investment firm located in Toronto, Canada, for \$398.1 million. The deal was consummated in April when ONCAP successfully completed the acquisition of all of the common shares of BAE Systems Canada Inc. BAE Systems Canada now is known as **CMC Electronics Inc.**

Teaming/Competition/Joint Ventures

GAMCO. In December 2003, CMC Electronics formed a marketing alliance with Abu Dhabi-based Gulf Aircraft Maintenance Company (GAMCO) to pursue cockpit avionics upgrade programs of classic commercial and military aircraft. This alliance was launched with the recent selection by the Dubai Air Wing of GAMCO as the prime contractor for their C-130 cockpit upgrade and CMC Electronics as the avionics systems integrator for the project. CMC Electronics will supply its CMA-900 Flight Management System as the core of the upgrade, while GAMCO is responsible for all program depot maintenance requirements and a new cargo handling system, as well as the installation of the aviation upgrade systems.

Financial Results/Corporate Statistics

Note: Following its acquisition by ONCAP, CMC Electronics' financial information is no longer publicly available. Current annual sales are estimated in the \$145-\$200 million range.

Strategic Outlook

Five years after it was sold off by BAE Systems, the former Canadian Marconi Company cum BAE Systems Canada is doing well as CMC Electronics. BAE Systems sold its majority stake in its Canadian operations as part of an overall consolidation effort following its acquisition of GEC-Marconi.

The company's present owners, the investment firm ONCAP, utilize a hands-off management style in regard to its numerous subsidiaries. As long as the operations perform, they remain part of the financial portfolio.

However, as the company is now considered private, detailed financial information is unavailable.

As CMC Electronics looks ahead, its future growth lies in a mix of products aimed at the commercial avionics market. In addition, the company is looking to the niche market of systems integration on military aircraft as another avenue of growth. To further this strategy, the company has embarked on a strategy of divesting units that are no longer considered core in order to fund further complementary acquisitions.

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As part of this strategy, the company acquired Flight Visions and divested its military communications division and its Northstar Technologies subsidiary. Flight Visions manufactures head-up display systems and other avionics equipment suited for the military and paramilitary aviation markets. The target was chosen for the synergies it has with CMC's existing operations.

Following up on this deal was the divestiture of the company's Military Communications Division to Ultra Electronics. With CMC's focus shifting decidedly toward aviation electronics, management decided that tactical military communication systems no longer fit the portfolio.

The divestiture of Northstar Technologies was likewise pursued. With this unit out of the picture, the company

can concentrate its efforts on bolstering its operations in aviation electronics, infrared systems, and space electronics.

Most recently, the company completed its divestiture of its U.S.-based Cincinnati Electronics unit to L-3 Communications. This sale further focuses CMC on its core aviation electronics business, and is expected to help fund strategic acquisitions in this regard.

Following this flurry of activity, CMC Electronics has emerged as a focused producer of aviation electronics, infrared sensing, space, global positioning, and marine electronics. With its operations getting narrower in focus, the company could be put up for sale in the not-too-distant future, if ONCAP decides the time is right to sell.

Prime Award Summary

Department of Defense Top 100 Companies and Their Subsidiaries

Data unavailable, as this company did not place within the top 100. For more information, refer to Appendix 1, *100 Companies Receiving the Largest Dollar Volume of Prime Contract Awards*.

Program Activity

Some important aerospace and government programs currently under way at CMC Electronics are listed below. The briefs are intended to provide a listing of programs that are of major importance to the company. For detailed information or analysis of specific aerospace and defense programs or equipment, please refer to the appropriate Forecast International binder (for example, *Aircraft, Military Vehicles, Warships, Missiles, Electronic Systems, and Gas Turbines*). The following are the company's core business interests.

Electronics Programs

(Airborne Electronics)

Navstar GPS Airborne Terminals

Global Positioning Systems are designed to provide worldwide navigation coverage at sea, on the ground, in the air, or in low-Earth orbit. CMC Electronics has been active in the development of airborne GPS receivers since the mid-1970s.

Flat Panel Displays

Flat panel displays provide an alternative to cathode ray tubes for the electronic display of data. This technology is in the advanced stages of development, and new applications are forthcoming. CMC Electronics uses electroluminescent display technology for its CMA-2048 display system. Display is orange/yellow and NVG-compatible.

CMA-900 FMS/GPS

The CMA-900 is a flight management system (FMS) that utilizes GPS as the primary means of navigation in oceanic/remote areas.

CMA-2000 (ARN-152)

The CMA-2000 is a microwave landing system designed for all-weather precision runway approach and landing. The ARN-152 MLS Airborne Receiver is standard equipment on the U.S. Air Force C-130 and Air Force One.

CMA-2005

The CMA-2005 is a color-LCD engine instrument panel for the display of engine parameters and warnings. Data are color-coded to provide status at a glance.

CMA-2050

The CMA-2050 is a multipurpose, self-contained, color CRT-based display system for cockpit applications. The CMA-2050 features a 5 in x 5 in display screen with a front panel with 22 keys. The display can provide color or monochrome formats.

CMA-2055

The CMA-2055 series is a self-contained design that accepts digital, analog, and discrete inputs from a helicopter's sensors, transducers, and databuses, and converts them into a digital format. Data are then displayed in various formats.

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CMA-2082A

The CMA-2082A flight management system is a self-contained, intelligent, multifunction control and display unit. It integrates and provides centralized control of navigation sensors and radios, communications radios, displays, mission avionics, and aircraft systems. It supports both military subsystems through MIL-STD-1553B interfaces, and commercial subsystems through ARINC 429 interfaces, as well as other non-standard interfaces.

CMA-2082D

The CMA-2082D flight management system is a color multifunction control and display unit with extensive onboard mission processing. It integrates and provides centralized control for navigation sensors and radios, displays, mission avionics, and aircraft avionics.

CMA-2082F

The CMA-2082F is an integrated control and display unit with onboard electronic warfare processing capabilities. Its high-resolution color 4-in x 4-in AMLCD VGA display is sunlight-readable in the most demanding environments. EW processing includes application processing, graphics processing, two dual redundant MIL-STD1553B bus controllers, and signal interfacing.

CMA-2082M

Selected on the UH-60M as part of the U.S. Army's plan to recapitalize its UH-60A/L fleet, the CMA-2082M flight management system is an intelligent, self-contained multifunction control and display unit that integrates and provides centralized control of navigation sensors and radios, communications radios, displays, mission avionics, and aircraft systems.

CMA-2100

The CMA-2100 is a phased-array satellite communications antenna system for commercial aircraft. Designed for use with the INMARSAT constellation of communications satellites, the CMA-2100 will improve air-to-ground communications to include data communications and in-flight telephone service. The system has been selected by Qantas, Air France, and KLM Royal Dutch Airlines.

CMA-2102

The CMA-2102 is a high-gain phased array antenna providing hemispherical coverage in a single, low-profile installation. The system is targeted toward commercial aviation customers.

CMA-2200

The CMA-2200 is an intermediate-gain antenna using a design based on the same proprietary top-mounted technology and architecture used in the CMA-2102 antenna.

CMA-2600

The CMA-2600 is an infrared Enhanced Vision System (EVS-IR) sensor for aircraft.

CMA-3000

The CMA-3000 is a compact flight management/radio management system suited for fixed and rotary wing aircraft with space and weight constraints.

CMA-9000

The CMA-9000 is a flight management system suited for modern digital cockpits in fixed and rotary wing aircraft. It is intended for civil and military transport as well as helicopter FMS applications.

FV-4000

The FV-4000 is an open architecture mission computer offering flexible power and advanced technology in a low-cost mission processing and display generation system. Its modular architecture design features a Compact PCI/PMC technology and a 500 MHz PowerPC G4 processor. It has extensive video switching and graphics generation capability, and includes a 14-Gbyte solid state mass memory card.

PilotView Electronic Flight Bag

CMC's PilotView Electronic Flight Bag (EFB) improves productivity by enabling efficient access to up-to-date aircraft documentation and flight planning information. PilotView provides en-route, approach charts, moving map display, and graphical real time weather information. The PilotView is a compact, lightweight system with a display/processor unit featuring a wireless connection. PilotView is easy to install in a variety of cockpits where space is at a premium. CMC has been delivering units to customers since November 2004.

U.S. Contract Awards

CMC Electronics has received no major contract awards from the United States government in the past two years.

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