



**Développement  
économique  
et régional**

**Québec** 

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Every effort has been made to include all companies offering subcontracting services in electronic and photonic. The information in this guide is assumed to be accurate, but we cannot be held responsible for any error or omission. For any correction, addition or more information, please contact:

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## Sector profile

As we initiate the 21<sup>st</sup> century, the social and economic impact of high technology is more and more prevalent. Indeed, developed nations are migrating towards a knowledge-based economy. The continued development of new technologies is mandatory to remain competitive and create wealth.

The information technology market growth is cyclical, generating strong expansionary periods and adjustments based on the capacity of the sector to absorb new technologies.

This document lists companies that offer subcontracting services for the development and the assembly of computing, telecommunication and instrumentation equipment. Also included are microelectronic and photonic companies that develop new processes and manufacturing equipment.

Electronic components are semiconductors (microcircuits, power transistors, diodes, etc.), hybrid and printed circuit boards, connectors, condensers, resistors, switches, relays and transformers.

Photonic components are laser diodes, emitters-receptors, modulators, Bragg networks, filters, isolators, compensators, attenuators, fibers, splicers and connectors.

In this document, companies are classified in the following six categories:

- Design of electronic systems and components – Companies and research entities offering services on a sub-contracting basis for the development of photonic components, electronic circuits, printed circuit board, integrated circuits and design tools;
- Active components or semiconductors - Integrated circuits manufacturers, fabless (companies that subcontract the production of their integrated circuits), chipless (companies that develop and market virtual components to be integrated in systems-on-chips), integrated circuits packaging facilities, laser diodes manufacturers, and producers of hybrid circuits, masks, design tools and process;
- Passive components – Manufacturers of fiber optic cable, splicers, connectors, electronic cables, transformers, switches, etc.;
- Printed circuit boards;
- Electronic and photonic manufacturing services (EMS);
- Microelectronic and photonic production and test equipment, including chemicals required within the production process.

The telecommunication market grew at a very rapid pace from 1995 to 2000, based on deregulation, the development of the Internet and the widespread availability of venture capital. This exceptional growth led to the entry of numerous new players in the industry.

In 2001 and 2002, long haul overcapacity, a highly competitive environment and the high leverage of service providers all contributed to aggravate the financial problems of the industry. Despite this situation, the traffic over Internet protocol networks has increased 130 % in 2000 and 100 % in 2001. However, this increase in traffic has generated only 17% in incremental revenues due to a highly competitive environment. Audio and video

applications over the Internet are the main drivers that have created additional demand for bandwidth.

In Canada, Nortel has always been considered the engine behind the development of the printed circuit boards and electronic manufacturing services industries. But, Nortel and many others in the telecommunications field such as Lucent, Alcatel and Siemens have been deeply affected in recent years.

The situation of service providers has improved greatly since 2001, following numerous bankruptcies of companies such as Level 3 and Worldcom. However, this improvement has not reached equipment manufacturers, causing a price war detrimental to component manufacturers. For instance, the employment level of these companies is much lower in 2003 than in 2000, as shown in table 1.

**Table 1 : Employment Level of Major Telecommunication Companies**

<b>Companies</b>	<b>Number of employees in 2000</b>	<b>Number of employees in 2003</b>	<b>Difference</b>
Cisco	43 000	35 000	-18,6 %
Ericsson	105 000	71 000	-32,4 %
Lucent	106 000	47 000	-55,7 %
Nortel	94 500	39 000	-58,7 %
Siemens	54 300	39 000	-28,2 %

**Sources :** Financial statements and press releases

In the future, the demand for APN (Agile Photonic Networks), DSL (Digital Subscriber Lines), Cable Modem and FTTH (Fibre to the Home) networks, Wi-Fi , HDTV (High Definition TV), real time internet interactive video for the gaming market, SONET and DWDM metropolitan networks should fuel the requirement for new telecommunication equipment.

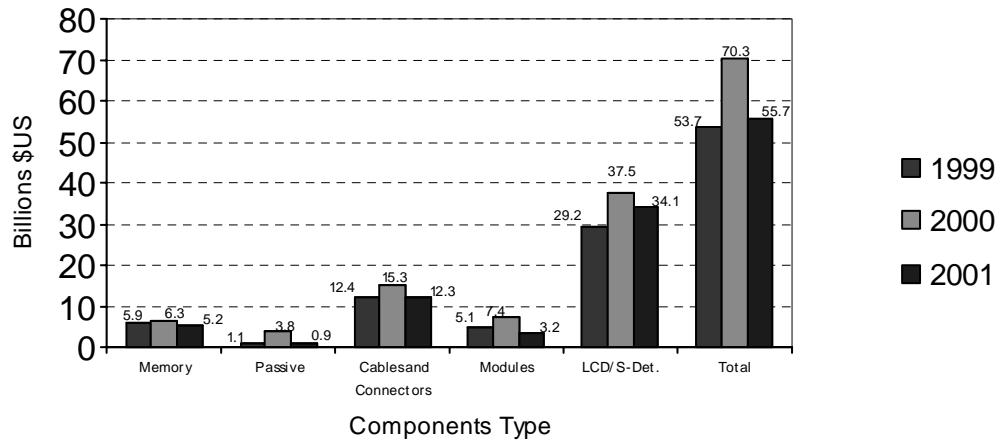
The information technology industry was based on the manufacturing and marketing of products built from electronic components. This business model has evolved towards a structure based on intellectual property built from Systems on Chips (SOC) and software.

This directory encompasses companies in photonics, semiconductors and components assembly services. Globally, these markets have experienced a strong growth until 2000. However, due to weak demand in telecommunication and computing, these markets have shrunk in 2001 and 2002.

### **Photonic components market**

According to the Optoelectronic Industry Development Association (OIDA), the global market for photonic components has increased from US\$70.3 billions in 2000 to US\$55.7 billions in 2001, a decrease of 20 % after many years of sustained double digits growth. Figure 1 shows that the hardest hit sectors are passive components and telecommunication applications dedicated modules.

**Figure 1 : Worldwide Photonic Components Market**

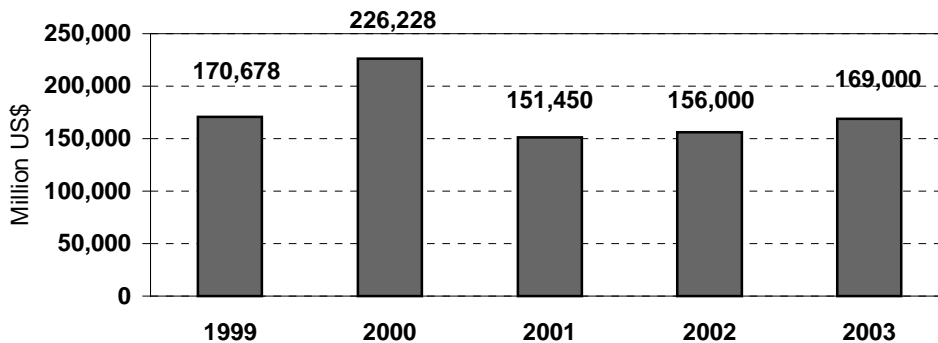


Source : OIDA

**Semiconductor market**

According to Dataquest, the world semiconductor market was estimated at US\$226 billions in 2000, an increase of 32.9 % over the US\$170 billions of 1999. This strong increase was compensated by a decrease of 33.2 % in 2001 to US\$151 billions. Dataquest estimates revenues at US\$156 billions for 2002, an increase of 3 %, as shown in figure 2.

**Figure 2 : Worlwide Semiconductor Market**



Source: Dataquest

Even though the market is improving for foundry service providers, total revenues are almost the same in 2002 compared to 2001 for semiconductor manufacturers.

Table 2 shows the progression of the eight largest semiconductor manufacturers from 1999 to 2002.

**Table 2 : Eight Largest Semiconductor Manufacturers**  
(Million of US\$)

Rank	Company name	1999	2000	2001	2002
1	Intel	29 389	33 726	26 539	26 764
2	Toshiba	7 590	10 430	6 070	8 081
3	Samsung	7 090	8 940	5 230	7 420
4	Texas Instruments	7 090	10 284	6 784	6 944
5	ST Micro	5 056	7 813	6 356	6 269
6	NEC	9 220	8 210	4 790	5 395
7	Infineon	5 010	6 740	4 560	5 300
8	Motorola	6 420	7 876	4 936	4 818

Source : SIA and financial reports

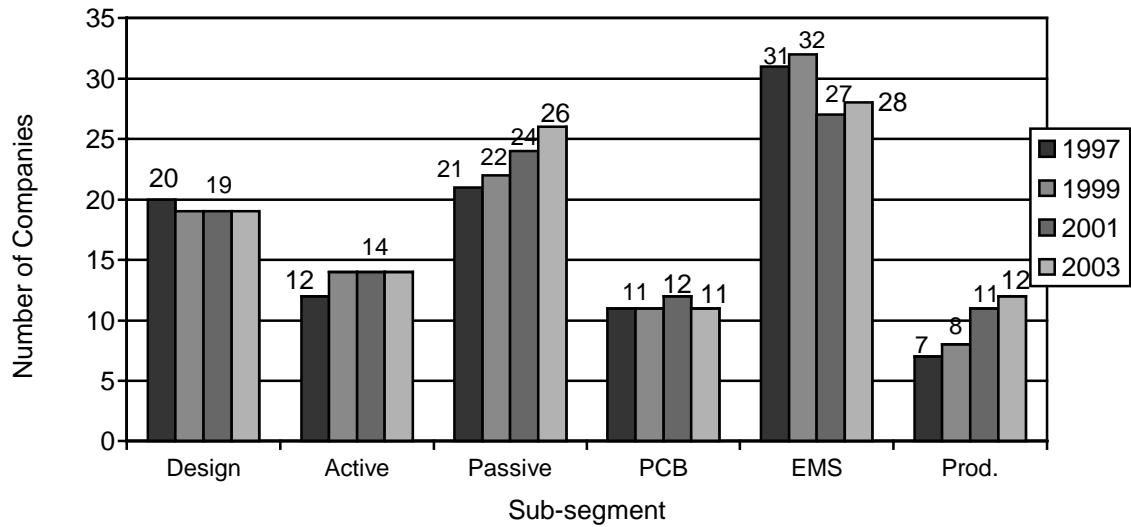
According to the Semiconductor Industry Association (SIA), the world market for semiconductors was US\$11.8 billions in February 2003, a decrease of 3.3 % compared to the US\$12.2 billions of January 2003 and an increase of 18 % compared to the US\$10.0 billions of February 2002. The level of utilization of state-of-the-art silicon foundries, 130 and 90 nanometer resolutions was 89 %. In volume, the increase was approximately 18 % since July 2002.

The Chinese electronic market was estimated at US\$130 billions in 2002 and should quadruple to US\$252 billions in 2006. The Chinese semiconductor market should grow from US\$35 billions in 2002 to US\$100 billions in 2006.

### **Situation in Quebec**

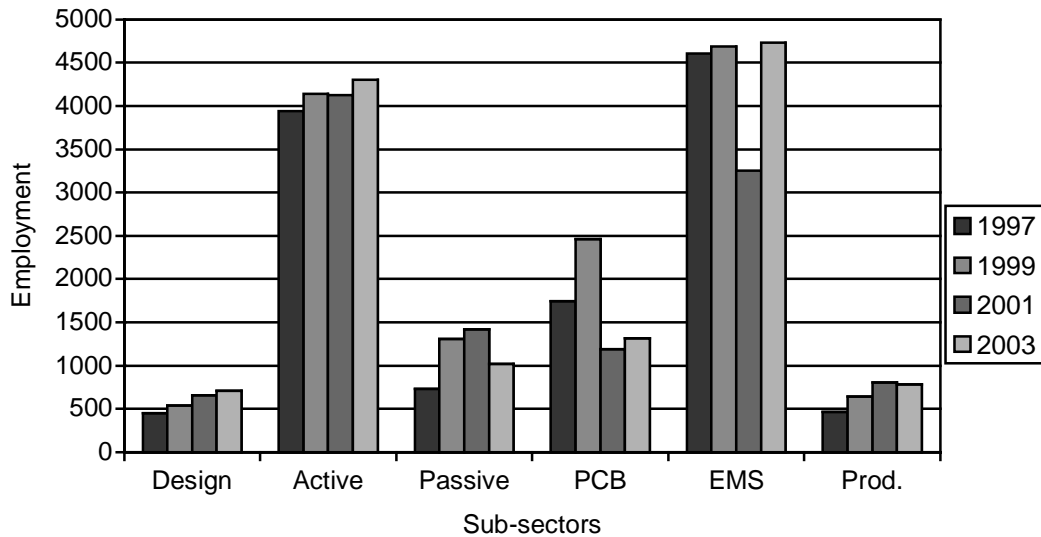
In Quebec, the subcontracting industry for the design and manufacture of electronic and photonic components was comprised of 110 companies in 2003, compared to 107 in 2001, 106 in 1999 and 102 in 1997. These companies are involved in the development of circuits, in the manufacture of electronic and photonic components, the assembly of components, the development of design software, of chemical products and of production and test equipment. Globally, this industry provided employment to 12,927 people in 2003, compared to 11,507 in 2001, 13,774 in 1999 and 11,932 in 1997. Figures 3 and 4 show the concentration and the growth of that industry according to the number of companies and employees.

**Figure 3 : Companies by Sub-Segment**



Approximately 10 companies shut down operations since 1999. The principal bankruptcies are Aadastra, Électro Digital and FCI Électronique in Montreal, AGL Technologies in Blainville and Focam in Laval. This situation has been mitigated by the creation of new companies like Cogiscan in Bromont, LTRIM in Laval, Microbridge in Montreal, Quantiscript in Sherbrooke, Solvision in Longueuil and Trioniq in Chicoutimi.

**Figure 4: Employment by Sub-Sectors**



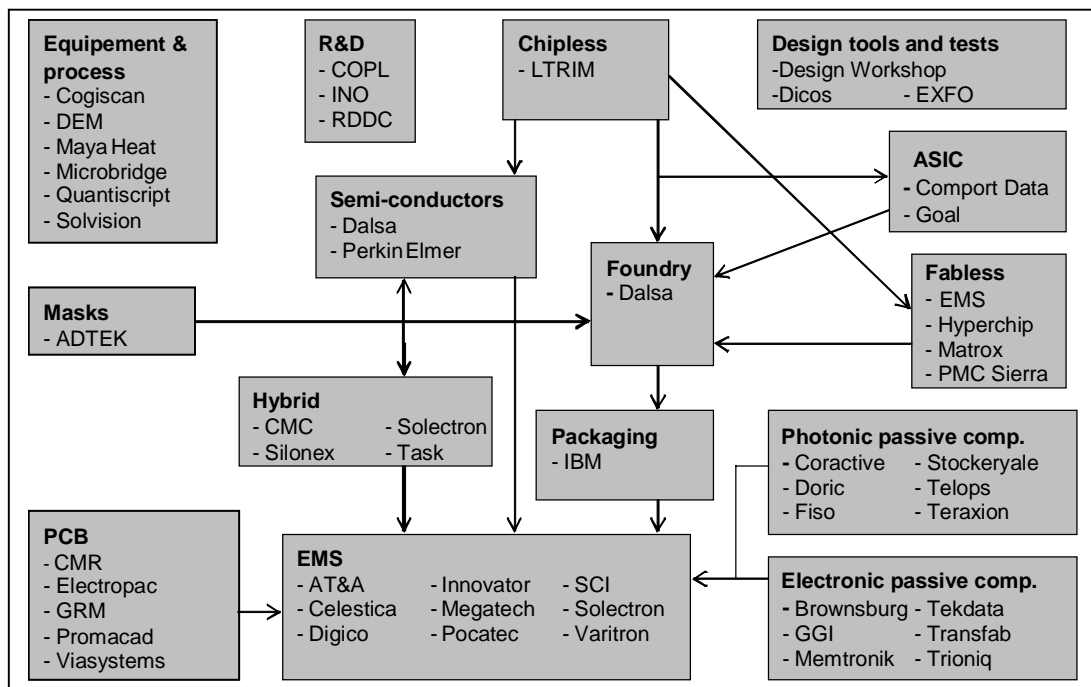
Almost two third of all the jobs are generated by 10 companies which represent 10% of the total number of companies, as shown in table 3.

**Table 3 : 10 Most Significant Employers**

Companies	Electronic sector	Location
IBM	Semiconductor packaging	Bromont
Solectron	EMS	Sherbrooke
SCI	EMS	Montreal
VIA Systems	Printed circuit boards	Montreal
Celestica	EMS	Montreal
EXFO	Test equipment	Quebec
Matrox	Graphic processors	Montreal
Dalsa	Silicon foundry	Bromont
Mégatech	EMS	Grand-Mere
Triton	EMS	St-Eustache

The Quebec industrial cluster in microelectronic and photonic is shown in figure 5. Companies are not all represented due to space constraints.

**Figure 5 : Quebec Microelectronic and Photonic Industrial Cluster**



The EMS industry is the usual way to manufacture a product. However, due to the use of specific components such as FPGAs, ASICs and SoCs, they are frequently delivered to the assembler as a production kit.

There are 28 companies that provide EMS assembly, many offering turnkey solutions. This industry provides employment to 4,734 people. Many of these companies are offering state-of-the-art technologies like Surface Mount Technologies (SMT) and Ball Grid Arrays (BGA).

Celestica, SCl and Solectron are multinationals focusing on providing complete EMS solutions. In Quebec, the EMS industry provides the most jobs, closely followed by the active components providers.

For active components, Hyperchip, Matrox, EMS Technologies, MPB and PMC-Sierra are fabless involved in the development of telecommunication and digital imaging processors.

IBM in Bromont has gained a worldwide reputation for the packaging of chips. This plant uses wire soldering, ball grid arrays or thermo-compression to assemble chips on sockets. This plant also offers various interconnects for card assembly, such as copper, Kovar, CuSil, J-leaded and Gullwing.

Dalsa Semiconductor operates a silicon foundry to process integrated circuits mostly for mix mode application (Analog and Digital), image sensors and MEMS (Micro Electro Mechanical Systems). This plant is the most important silicon foundry in Canada.

The active components segment in Quebec is comprised of 14 companies. They are responsible for 4,359 jobs. This segment has seen the creation of new companies, such as Microbridge and Quantiscript, that use nanotechnologies to offer high performance lithographic solutions.

There are 11 companies specializing in printed circuit boards (PCB) in Quebec. They collectively employ 1,314 people. VIAsystems of Montreal is the most important Canadian PCB manufacturer.

For passive components manufacturers, 26 companies provide employment to 1,029 people. These companies are active principally in the manufacturing of photonic components, transformers, connectors and cables.

Nineteen companies and research entities are offering services for the development of integrated circuits, printed circuit boards and electronic and photonic systems, representing 698 jobs. They market their services to the electronic and photonic industries interested in subcontracting the development of their products and systems.

Twelve companies are involved in the development and marketing of manufacturing and test equipments, including development tools and chemicals for the microelectronic and photonic industry. This sector provides employment to 783 persons.

These companies are generating revenues in the order of CA\$3.5 billions and export approximately two third of their production.







# ADTEK Photomask

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Address: 4950 Fisher Street  
Montreal (Quebec) H4T 1J6  
CANADA

Telephone: (514) 737-7030  
Fax: (514) 737-9893  
Web Site: [www.adtekphotomask.com](http://www.adtekphotomask.com)

Contact: Mr. Alexander Kalil  
President  
E-mail: [info@adtekphotomask.com](mailto:info@adtekphotomask.com)

Year of foundation: 1977  
Number of employees: 25

## **Description of activities**

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For more than 26 years, ADTEK Photomask provided masks for a broad range of applications in semiconductors, from microelectronic to optic, photonic, optoelectronic and MEMS.

ADTEK has acquired a solid reputation based on the quality of their products and their efficient customer relationship. 85 % of the production is exported in North and South America, in Europe, in Middle-East and Pacific Rim.

ADTEK is using E-Beam, Laserwrite and Optical equipment, including inspection tools to guarantee high quality photo masks down to 0.5 micron resolution.

ADTEK's mission is to offer a quality product, just in time at competitive prices. To achieve this objective, ADTEK is using a proactive approach in its customer relationship. ADTEK is ISO 9001 certified since 2000.

# AmeriSys

---

Address: 17 Bellerose Road  
Dollard-des-Ormeaux (Quebec) H9G 2A7  
CANADA

Telephone: (514) 620-8522  
Fax: (514) 620-3900  
Web Site: [www.amerisys.com](http://www.amerisys.com)

Contact: Mr. Yvan Reede  
President  
E-mail: [info@amerisys.com](mailto:info@amerisys.com)

Year of foundation: 1991

## **Description of activities**

---

AmeriSys is a consulting firm specialized in problem solving where "high-tech" solutions are of assistance. Consulting Services include needs assessment, research, development, system design and technology transfer.

AmeriSys has several years of experience in the design and manufacturing of electronic systems and software. This experience allows the customers to prosper in the rapidly changing fields of digital and analog electronics, including FR, antennas, broadband telecommunications, computers, micro-controllers and software.

The company has also acquired international experience by their ground breaking presentations in the IEEE/ISO 8802.3 (Ethernet), 8802.5 (Token Ring) and 8802.14 (Hybrid Fiber Coax) network committees.

AmeriSys also offers turn-key electronic manufacturing services (EMS).

## AT & A Inc.

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Address: 64 Brunswick Street  
Dollard-des-Ormeaux (Quebec) H9B 2L3  
CANADA

Telephone: (514) 421-4445  
Fax: (514) 421-2355

Contact: Mr. Kenneth Joe  
President  
E-mail : [kennethjoe@atacanada.ca](mailto:kennethjoe@atacanada.ca)

Year of foundation: 1987

### **Description of activities**

---

AT&A (Advanced technology and assembly) provides electronic manufacturing services (EMS).

In order to offer very high quality products, the company applied MIL-STD-105D. This standard has been approved by the Department of Defense in Washington and is used by the Army, Navy, Air Force and the Defense Supply Agency. The company is also IPC - 610 and ISO 9002 certified.

AT&A provides plated through-hole assembly services as well as surface-mount assemblies (SMT).

The company handles small, medium and large production quantities as well as prototypes. If required, complete printed circuit board assemblies may be packed in individual anti-static bags as well as in partitioned cartons to ensure damage free delivery.

# Bragg Photonics Inc.

---

Address: 2270 Saint-François Road  
Dorval (Quebec) H9P 1K2  
CANADA

Telephone: (514) 428-6766  
Fax: (514) 428-0560  
Web site: [www.braggphotonics.com](http://www.braggphotonics.com)

Contact: Mr. Peter Kung  
President

E-mail: [contact@braggphotonics.com](mailto:contact@braggphotonics.com)

Year of foundation: 1988  
Number of employees: 30

## **Description of activities**

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Bragg Photonics is specialized in the design and manufacture of high quality photonic components used in optical communication networks. Their products are used in a broad range of applications, DWDM (Dense Wavelength Division Multiplexing), OADM (Optical Add Drop Multiplexing), laser wavelength stabilization, optical signal dispersion compensation, signal stabilization of erbium doped optical fiber amplifiers and OXC (Optical Cross Connect Switches).

The company's products are components that use Bragg grating technology to compress more data in erbium doped fiber amplifiers, while improving performance and cost efficiency for broadband network service providers.

The company is offering the following products and services.

- Phase masks
- Fiber Bragg technology filters
- WaveSelector fiber networks- for 100 and 200 gigahertz applications
- WaveLock fiber networks- 980 and 1480 nanometers laser stabilization
- EqualGain fiber networks- for gain equalization of erbium doped fiber amplifiers
- WaveSync fiber networks- dispersion broadband networks
- SpecView fiber networks- diffractive networks for WDM applications in the 1 300 to 1 500 nanometer spectrum

# Brownsburg Elektronik Inc.

---

Address: 346 Hamford Street  
Lachute (Quebec) J8H 3P6  
CANADA

Telephone: (450) 562-5211  
Fax: (450) 562-1296  
Web Site : [www.bei.net](http://www.bei.net)

Contact: Mr. Bernard Cyr  
President  
E-mail : [bernard@bei.net](mailto:bernard@bei.net)

Year of foundation: 1976

## **Description of activities**

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Brownsburg Elektronik Inc. designs and manufactures transformers for the electronic industry.

The company is also involved in electronic manufacturing services (EMS).

Brownsburg is ISO 9002, CSA and UL certified.

# Bystat International Inc.

---

Address: 2630 Sabourin Street  
Saint-Laurent (Quebec) H4S 1M2  
CANADA

Telephone: (514) 333-8880  
Fax: (514) 333-8885  
Web Site : [www.bystat.com](http://www.bystat.com)

Contact: Mr. Réjean Dion  
E-mail : [Static@bystat.com](mailto:Static@bystat.com)

Year of foundation: 1982  
Number of employees: 14

## Description of activities

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### Major activities

Bystat is a manufacturer and distributor of electrostatic control products.

### Major products

The product line is divided in nine families:

- Personal protection : wrist straps, foot grounders, lab coats
- Packaging : shielding bags, conductive foam, packaging box;
- Workstation : dissipative PVC and rubber table mats, anti-tiring grounding systems;
- Floor : conductive and dissipative tiles and membranes (clean room, elevated floor, production floor)
- Ionization : blowers, ionic bars and pistols, ionic room, conductive brush;
- Measurement instruments : wrist straps tester, audit kit, field meter
- Chemicals : floor finishes, cleaners, conductive and dissipative paints
- Ergonomics : ESD workbench, cabinet, dissipative laminate surface;
- Office products: dissipative PVC and rubber mats, sheet protector, label.

### Major markets

The antistatic electronic division is represented by a distributor and OEM network in Canada, the United States and Asia.

The office product division is also covering non electronic markets.

# Caladena, Group

---

Address: 63A Donegani Street  
Montreal (Quebec) H9R 2V9  
CANADA

Telephone: (514) 426-3359  
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Web Site: [www.caladena.com](http://www.caladena.com)

Contact: Mr. Marc Préfontaine  
E-mail: [mprefontaine@caladena.com](mailto:mprefontaine@caladena.com)

Year of foundation: 1989

## **Description of activities**

---

Caladena Group is a one stop shop for any and all electronic / electro mechanical product design requirements. The company has the flexibility to design printed circuit boards as well as metal enclosures or wire harnessing. Caladena assembles through-hole and surface-mount printed circuit boards, either from consigned kits or their own procurement of components, as well as mounting into mechanically assembled enclosures. All units are inspected and tested for functionality prior to shipping. The company even offers conformal coating and special packaging, if required, as well as shipping to end customer.

Caladena believes in the development of partnerships with customers and will spend whatever time is necessary to fully understand their needs and requirements.

The company is specialized in offering turn-key solution to their clients but is willing to offer complementary services.

# Cancino Technologies Corporation Ltd.

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Address: 535 Lepine Street  
Dorval (Quebec) H9P 2S9  
CANADA

Telephone: (514) 631-7667  
Fax: (514) 631-6786  
Web Site: [www.cancinotechnologies.com](http://www.cancinotechnologies.com)

Contact: Mr. Ron Legault  
E-mail: [info@cancinotechnologies.com](mailto:info@cancinotechnologies.com)

Year of foundation: 1988  
Number of employees: 30

## **Description of activities**

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Cancino Technologies Corporation offers electronic manufacturing services (EMS). Production capability includes a broad range of services including surface-mount (SMT) and through-hole assembly, ball grid arrays (BGA), final assembly and test services. The company is specialized in prototypes to large volume assembly.

# Celestica

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Address: 18107 Trans Canada Highway  
Kirkland (Quebec) H9J 3K1  
CANADA

Telephone: (514) 693-1030  
Fax: (514) 697-0080  
Web Site: [www.celestica.com](http://www.celestica.com)

Contact: Ms. Carole Tessier  
E-mail: [ctessie@celestica.com](mailto:ctessie@celestica.com)

## Description of activities

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Celestica is one of the largest providers of electronics manufacturing services (EMS) in the world. The company's products and services are primarily marketed to leading OEMs in the telecom and computing industries.

Celestica's broad range of services includes: EMS services for LAN, data communication, TDMA systems, real time software development, portable instrumentation for electromechanical systems, power line high voltage protection equipments, power supply assemblies, consumer electronic and medical electronic.

Also, the company offers design services for the development of instrumentation based on ASIC including through-hole and surface-mount (SMT) technologies.

The company is registered ISO 9002.

# Circuit Foil

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Address: 625 Du Luxembourg Street  
Granby (Quebec) J2J 2S9  
CANADA

Telephone: (450) 770-8558  
Fax: (450) 770-8697

Contact: Mr. André Fournier

E-mail: [andré.fournier@circuitfoil.com](mailto:andré.fournier@circuitfoil.com)

Year of foundation : 1999  
Number of employees : 57

## **Description of activities**

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Circuit Foil manufactures thin copper foils using an electrolytic process. These foils are used in the manufacturing process of printed circuit boards. Their product is marketed in North America.

## Circuits Avro Inc.

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Address: 207 Labrosse Street  
Pointe-Claire (Quebec) H9R 1A3  
CANADA

Telephone: (514) 630-6028  
Fax: (514) 630-0140  
Web site: [www.avro.ca](http://www.avro.ca)

Contact: Mr. Walter Wolowicz  
General Manager  
E-mail: [avro@avro.ca](mailto:avro@avro.ca)

Year of foundation: 1985  
Number of employees: 29

### **Description of activities**

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Avro Circuits Inc. is specialized in the production of printed circuit boards of two layers, multilayer, flexible and PCMCIA.

Markets served are: aerospace, automotive and medical.

The company offers engineering services and dynamic testing of PCBs.

The company is ISO 9002 certified.

# Circuits Imprimés de la Capitale Inc.

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Address: 105 - 925 Newton Avenue  
Quebec (Quebec) G1P 4M2  
CANADA

Telephone: (418) 877-9047  
Fax: (418) 877-9047

Contact: Mr. François Bouchard  
Engineer

Year of foundation: 1986  
Number of employees: 8

## **Description of activities**

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Circuits Imprimés de la Capitale manufactures single sided and double sided printed circuit boards.

The company is specialized in the production of prototypes as well as small and medium volume requirements. Engineering services are also available.

## Circuits Imprimés Galin

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Address: 1838 Des Laurentides Boulevard  
Laval (Quebec) H7M 2P6  
CANADA

Telephone: (450) 662-6428  
Fax: (450) 662-1639  
Web site : [www.galin.ca](http://www.galin.ca)

Contact: Mr. Gaétan Fortier  
President  
E-mail : [gfortier@galin.ca](mailto:gfortier@galin.ca)

Year of foundation: 1987  
Number of employees: 7

### **Description of activities**

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Galín designs all kind of printed circuit boards for digital, analog and RF circuits, including power supply applications.

The company is using the following tools: Padswh, P-cad, Protel, Orcad and Designworks.

## Cité Logique Drummond Inc.

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Address: 2075 Sigouin Street  
Drummondville (Quebec) J2C 6P8  
CANADA

Telephone: (819) 477-3266  
Fax: (819) 477-2099

Contact: Mr. Jean-Charles Lagacé  
President

E-mail: [jclagace@cld.qc.ca](mailto:jclagace@cld.qc.ca)

Year of foundation: 1992

### **Description of activities**

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The company offers through-hole and surface-mount electronic manufacturing services (EMS), including development services for microcontrollers. All phases from prototype to production are handled by the company in order to offer turn-key services.

# CMC Electronics

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Address: 600 Dr-Frederik-Philips Boulevard  
Saint-Laurent (Quebec) H4M 2S9  
CANADA

Telephone: (514) 748-3000  
Fax: (514) 748-3100  
Web Site: [www.cmcelectronics.ca](http://www.cmcelectronics.ca)

Contact: Mr. Saverio di Tommaso  
Manager, hybrid circuits  
E-mail: [saverio.ditommaso@cmcelectronics.ca](mailto:saverio.ditommaso@cmcelectronics.ca)

Year of foundation: 1903  
Number of employees: 1 600 worldwide,  
884 in Montreal (50 in hybrid microcircuits division)

## Description of activities

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Formerly Canadian Marconi and BAE Systems Canada, CMC Electronics is a world leader for the design, manufacture, and marketing of electronic systems, including technical support for the aerospace and communication markets. The hybrid microcircuit group is located in Montreal.

The hybrid microcircuit division was created in 1964 and offers design and manufacturing services for the following components :

- Hybrid microcircuits;
- Multichip modules (MCM - Multichip);
- Optic fiber
- Power conversion and magnetic products

The company is ISO 9001-2000 and MIL-PRF-38534 (class H) certified.

## CMR Circuits Ltd.

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Address: 850 Selkirk Street  
Pointe-Claire (Quebec) H9R 3S2  
CANADA

Telephone: (514) 426-5525  
Fax: (514) 426-5524

Contact Mr. Luciano Rossi  
President

E-mail: [lrossi@cmrcircuits.qc.ca](mailto:lrossi@cmrcircuits.qc.ca)

Year of foundation: 1984

Number of employees: 49

### **Description of activities**

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CMR Circuits Ltd is specialized in prototype printed circuit boards manufacturing on a quick-time basis between 24 hours to 10 days.

The product line includes rigid and flexible printed circuit boards using materials such as FR4, Duroid, Polymide, Kapton, Nelco, Teflon, copper or aluminum. They can accommodate two to 32 layers.

The quality team combined to state-of-the-art functional and in-circuit test processes offer a high quality product, cost effective supply and on-time delivery.

Their clients are located mainly in North America, but also in Asia. Markets served are OEMs in the aerospace, telecom, avionic, medical and microelectronic related industries.

The company is ISO 9002 and MIL-55110 certified.

# Cogiscan

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Address : A 5 - 50 De Gaspé Street  
Bromont (Quebec) J2L 2N8  
CANADA

Telephone : (450) 534-2644  
Fax : (450) 534-0092  
Web Site : [www.cogiscan.com](http://www.cogiscan.com)

Contact : Mr. Vincent Dubois  
President  
E-mail : [vdubois@cogiscan.com](mailto:vdubois@cogiscan.com)

Year of foundation : 1999  
Number of employees : 11

## **Description of activities**

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Cogiscan is focused on automating material control for electronics manufacturing and semiconductor packaging. The Cogiscan platform utilizes RF tags, local control units, and proprietary software to create a unique and reliable material tracking solution.

Together, these tools make automated material tracking, quality and inventory control a reality.

# Comport Data Inc.

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Address: 200 - 150 Authier Street  
Montreal (Quebec) H4M 2C6  
CANADA

Telephone: (514) 340-1550  
Fax: (514) 340-1126  
Web Site: [www.comport-data.com](http://www.comport-data.com)

Contact: Mr. Jacob Davidson  
President  
E-mail : [Jacob.Davidson@comport-data.com](mailto:Jacob.Davidson@comport-data.com)

Year of foundation: 1984  
Number of employees: 10

## **Description of activities**

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Comport Data is a microelectronics engineering design company offering analog, mixed-signal and digital IC design, layout, testing, manufacturing and consulting services, using CMOS, Bipolar, and BiCMOS technologies and processes.

The company specializes in advanced mixed-signal design and layout, basic microelectronics research, systems development, and related microelectronics support services. Markets served are telecom, optoelectronic, telephony and signal processing including low power, high voltage and high frequency applications. Comport Data engineers provide microelectronics design and services to foundries and companies developing applications and standard cell libraries.

# COPL

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Address: Faculty of Science and Engineering  
1448 Alexandre-Vachon Pavilion  
Quebec (Quebec) G1K 7P4  
CANADA

Telephone: (418) 656-2454  
Fax: (418) 656-2623  
E-mail: [copl@phy.ulaval.ca](mailto:copl@phy.ulaval.ca)  
Web site: [www.copl.laval.ca](http://www.copl.laval.ca)  
Director: Mr. Réal Vallée, ([rvallee@phy.ulaval.ca](mailto:rvallee@phy.ulaval.ca))  
Assistant: Mr. Marcel Denis ([mdenis@phy.ulaval.ca](mailto:mdenis@phy.ulaval.ca))  
Responsible of communications: Mrs. Andrée Lagacé ([alagace@phy.ulaval.ca](mailto:alagace@phy.ulaval.ca))

Year of foundation: 1989  
Number of students: Around 120, with 50 at Ph.D. level  
Number of associate-researchers: 20  
Number of professors-researchers: 16  
Number of employees: 11

## Description of activities

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The COPL (Centre for Optics, Photonics, and Lasers) objectives are research and the training of highly qualified specialists in optic, photonic and laser related sectors. The involvement in research is for leading edge projects and applied industrial and commercial technology development. The COPL structure facilitates member networking, highlights individual research activities and encourages industrial and research relationships.

The COPL brings together graduate students of M.SC. and Ph.D. levels, professors-researchers and associated-researchers from four Departments of the Faculty of Science and Engineering at Laval University:

- Physic, physic and optic engineering;
- Electrical and software engineering;
- Mechanical engineering;
- Chemical.

COPL researchers are very active in several research groups from Quebec like the networks NanoQuebec and Femtotech to name only a few. The Center has also been involved in the creation of the Canadian Institute for Photonic Innovation (ICIP/CIPI), which is financed by the Canadian network of Centers of Excellence, and headed at Laval University.

## CorActive High-Tech Inc.

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Address: 121 - 2700 Jean-Perrin Street  
Quebec (Quebec) J2C 1S9  
CANADA

Telephone: (418) 845-2466  
Fax : (418) 845-2609  
Web site : [www.coractive.com](http://www.coractive.com)

Contact: Mr. Claude-Adrien Noël  
President and General Manager  
E-mail: [info@coractive.com](mailto:info@coractive.com)

Year of foundation: 1998  
Number of employees: 7

### **Description of activities**

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CorActive High-Tech is a manufacturer wholly dedicated to specialty optical fibers. The company designs and manufactures fibers mainly for the telecommunications market.

The company offers erbium doped fiber, high attenuating fibers, UV sensitive fibers, customized fibers and R&D special project services.

# Corfin Automation Canada Inc.

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Address: 2001 Patrick-Farrar Street  
Chambly (Quebec) J3L 4W8  
CANADA

Telephone: (450) 658-9900  
Fax: (450) 658-6800

Web site : [www.corfinautomation.com](http://www.corfinautomation.com)

Contact: Mr. Michael Mittag  
President

E-mail : [Mmittag@corfinautomation.com](mailto:Mmittag@corfinautomation.com)

Year of foundation: 1985  
Number of employees: 15

## **Description of activities**

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Corfin Automation Canada Inc. is a manufacturer of thinning equipment for electronic components and offers automation solutions to the industry. This equipment is used to improve the soldering quality of electronic components on printed circuit boards. The market is many large multinational corporations involved in the assembly of complex electronic products and systems.

### **Component thinning**

Conveyorized and robotic leads finish systems. Vision alignment, lead scanning and precision trim and form tooling can be integrated with finishing processes in robotic systems. Processes can include pre-clean and post-clean operations in both robotic and inline systems. Custom tooling and automated handling equipment provide efficient, hands-free processing. Continuous feed inline systems provide cost effective, high throughput lead finishing for a wide range of electronic components.

### **Automation, handling and singulation equipment**

System integration, custom automated handling equipment, (handling automation, feeding, unloading and selection of components from tube, bowl, magazine, cassettes ...)

Water jet cutting, singulation, handling and sorting systems for QFN/MLF/BGA

## D.E.C. Manufacturing

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Address: 693 Meloche Avenue  
Dorval (Quebec) H9P 2S4  
CANADA

Telephone: (514) 631-4341, ext. 205  
Fax: (514) 631-4128  
Web site: [www.fabricationdec.com](http://www.fabricationdec.com)

Contact: Mr. Mark Mansour  
Manager, Business development  
E-mail: [mmansour@fabricationdec.com](mailto:mmansour@fabricationdec.com)

Year of foundation: 1989

### Description of activities

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DEC Manufacturing is an electronic custom design and fabrication company.

The company offers the following services:

- Printed circuit board assembly;
- Several assembly lines – small and large volume (40 000 000 component placement monthly);
- Mechanical assembly;
- R-D electronic – engineering services, circuit design and PCB design;
- Cables and harnesses;
- Turnkey solutions with strong buying power;
- Through Hole, Surface Mount and LEDs;
- ISO certified and highest industry standards.

## D.E.M. Controls

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Address: 13 495 Huntington Street  
Pierrefonds (Quebec) H8Z 1G3  
CANADA

Telephone: (514) 725-2401  
Fax: (514) 725-5219  
Web site : [www.dem-resco.com](http://www.dem-resco.com)

Contact: Mr. Morgan D'Amato  
President  
E-mail : [morgan@dem-resco.com](mailto:morgan@dem-resco.com)

Year of foundation: 1968

### **Description of activities**

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D.E.M. is a manufacturer of wet process equipment for the production of printed circuit boards.

The product line is suitable for small to very large producers of printed circuit boards. Major components are conveyors covered with PCV material, centrifugal-type pumps, ceramic-tip nozzles and manifolds engineered for constant pressure and volume at all spray points, for better uniformity.

## Dabby & Associates Inc.

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Address: 4615 Madison Avenue  
Montreal (Quebec) H4B 2V5  
CANADA

Telephone: (514) 488-0047/1 877 488-0047  
Fax: (514) 482-3310  
Web Site: [www.dabbyassociates.com](http://www.dabbyassociates.com)

Contact: Mr. Joseph Dabby  
E-mail: [info@dabbyassociates.com](mailto:info@dabbyassociates.com)

Year of foundation: 1991  
Number of employees: 6 associates

### Description of activities

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Dabby & Associates is offering the following services to their clients:

- Act as their own engineering team;
- Assistance to an existing R&D department;
- Specific tasks involvement to improve the performance of their own R&D team;
- Assistance to accelerate time to market performance for the development of new products.

Consulting and engineering services of Dabby & Associates are available on a per hour basis or cost per project basis, as required by the client.

The expertise is for the following products:

- Computer systems : portable and integrated;
- Industrial products and control systems;
- ACL displays and their interfaces;
- Medical products;
- Robotic systems and engine control;
- Video products;
- Phone system and interfaces;
- Battery chargers and small power supplies;
- Telecommunications.

# DALSA Semiconductor

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Address: 18 De l'Aéroport Boulevard  
Bromont (Quebec) J2L 1S7  
CANADA

Telephone: (450) 534-2321  
Fax: 450) 534-3201  
Web Site : [www.dalsasemi.com](http://www.dalsasemi.com)

Contact: Mr. Donald Robert  
Sales and Marketing Director  
E-mail : [donald.robert@dalsasemi.com](mailto:donald.robert@dalsasemi.com)

Year of foundation: 1976  
Number of employees: 360

## Description of activities

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DALSA Semiconductor offers wafer foundry services for integrated circuits. Services offered are as follow:

- CMOS (0.5um - 9um)
- CMOS High Voltage (<600V)
- MEMS (photonic, microfluid, automotive, industrial, etc.)
- CCD

The plant is ISO 9000, QS 9000 and ISO 14000 certified and is Canada's largest semiconductor foundry. The company is a world leader in MEMS (*Micro-Electro-Mechanical Systems*). DALSA is specialized in Intelligent MEMS by integrating MEMS and CMOS technologies.

## Delastek Inc.

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Address : 2699 5<sup>e</sup> Avenue  
Grand-Mère (Quebec) G9T 5K7  
CANADA

Telephone : (819) 533-5788, poste 233  
Fax : (819) 533-3494  
Web Site : [www.delastek.com](http://www.delastek.com)

Contact : Mr. Claude Lessard  
President  
E-mail : [clessard@delastek.com](mailto:clessard@delastek.com)

Year of foundation : 1984

### **Description of activities**

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Delastek is specialized in the development of electrical, mechanical, computer, and electronic products using computer aided design (CAD) equipment. The company accommodates various production volumes. The assembly is done using through-hole and surface-mount technologies.

Delastek provides a flexible service that can handle components procurement, different production steps and technical support.

## DEPRO Electronique Inc.

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Address : 101 - 755 Cure-Boivin Boulevard  
Boisbriand (Quebec) J7G 2J2  
CANADA

Telephone : (450) 430-6251  
Fax : (450) 430-6203  
Web Site : [www.depro.qc.ca](http://www.depro.qc.ca)

Contact : Mr. Claude Boivert  
President

E-mail : [info@depro.qc.ca](mailto:info@depro.qc.ca)

Year of foundation : 1988

### **Description of activities**

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DEPRO Electronique inc. offers electronic design and manufacturing services (EMS) that are used mainly in industrial automation systems.

# DiCOS Technologies Inc.

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Address : 200 - 1400 Du Parc-Technologique Boulevard  
Quebec (Quebec) G1P 4R7  
CANADA

Telephone: (418) 266-6660  
Fax : (418) 266-9999  
Web site : [www.dicostech.com](http://www.dicostech.com)

Contact : Mr. Jean-François Cauchon  
Vice-president, Sales and Marketing  
E-mail: [info@dicostech.com](mailto:info@dicostech.com)

Year of foundation: 2000  
Number of employees: 18

## Description of activities

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DiCOS Technologies develops and manufactures opto-electronic modules providing highly accurate and reliable frequency calibration for tunable lasers and test and measurement instrumentation in the telecommunications industry. Their products include optical and opto-electronic modules enabling calibration and frequency referencing for tunable lasers, optical spectrum analyzers and other test and measurement instruments. The company's technology stems from a patent relating to an absolute frequency calibration of variable optical sources.

# Digico Ltd.

---

Address: 950 Bergar Street  
Laval (Quebec) H7L 5A1  
CANADA

Telephone: (514) 967-7100  
Fax: (514) 967-7444  
Web Site : [www.digico.cc](http://www.digico.cc)

Contact: Mr. Michel Côté  
President  
E-mail : [adm@digico.cc](mailto:adm@digico.cc)

Year of foundation: 1980  
Number of employees: 100

## **Description of activities**

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Digico designs and develops technical solutions for their clients. Once a technical approach is chosen, Digico produces a prototype for technical audit and functionality. After that phase, tests are performed using a preproduction unit to demonstrate the prototype efficiency. Finally, the company is going through the production phase.

Digico is equipped with semi-automatic and automatic placement equipment, surface-mount production units and wave soldering equipment.

Digico is specialized in the following sectors: electronic control module production for X-rays generators, security imaging systems design and production, access control systems design and production, and many other applications.

Electronic manufacturing services offered are:

- Printed circuits and cables assemblies
- Turn key services
- Software and prototype development
- Design, engineering and test services
- Material procurement
- Mechanical assembly

The company is ISO 9002 certified.

# DOCOM Technologies

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Address: P.O. Box 88017  
Longueuil (Quebec) J4H 4C8  
CANADA

Telephone : (450) 448-8791  
Fax: (450) 995-2899

Contact : Mr. François Cloutier  
E-mail : [info@docom.ca](mailto:info@docom.ca)

Year of foundation: 1998

## Description of activities

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Docom Technologies offers specialized services, including:

- Custom cables and cable harnesses assemblies
- Electronic products integration

## Doric Lenses Inc.

---

Address: 1298 St-Paul Street  
Ancienne-Lorette (Quebec) G2E 1Z3  
CANADA

Telephone: (418) 877-5600  
Fax: (418) 877-5600  
Web site: [www.doriclenses.com](http://www.doriclenses.com)

Contact: Mr. Sead Doric  
President  
E-mail : [sales@doriclenses.com](mailto:sales@doriclenses.com)

Year of foundation: 1995  
Number of employees: 20

### **Description of activities**

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The company was founded by Dr. Sead Doric with the aim to market a new type of patented gradient-index cylindrical lens. The lenses received two "best product" awards from influential photonics trade magazines in 1996. The company relocated in 1998 to a 5,000 square feet facility, raising the company profile and providing space for expansion.

Continuous streams of new optical components and modern contract photonics manufacturing services have been fuelling the company's steady growth. As the company approaches its ten-year anniversary, it has established itself as a global leader in the field of micro-optics components, and seeks ways to expand its contract manufacturing services.

## Electronique S.E.M. Inc.

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Address: 1074 Chemin Industriel  
Saint-Nicolas (Quebec) G7A 1B3  
CANADA

Telephone: (418) 836-7000  
Fax: (418) 836-7007  
Free: 1-888-831-6612  
Web Site: [www.semelectronique.com](http://www.semelectronique.com)

Contact: Mr. Denis Carrier  
President

E-mail: [info@semelectronique.com](mailto:info@semelectronique.com)

Year of foundation: 1984  
Number of employees: 84

### **Description of activities**

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Électronique S.E.M. offers services for:

- Through-hole and surface-mount electronic manufacturing services (EMS);
- Ball grid arrays (BGA) assembly and replacement with inspection equipment (Ersascope);
- Subcontracting services, from assembly to turn-key solutions.

The company is ISO 9001:2000 certified and is IPC ANSI-610B compliant.

## **Electropac (Canada) Inc.**

---

Address: 3500 Trans Canada Highway  
Pointe-Claire (Quebec) H9R 1B1  
CANADA

Telephone: (514) 695-1575  
Fax: (514) 695-6826  
Web Site: [www.electropac.com](http://www.electropac.com)

Contact: Mr. Raymond Boissoneau  
President

E-mail: [raymondb@electropac.ca](mailto:raymondb@electropac.ca)

Year of foundation: 1989

### **Description of activities**

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Electropac is a multinational specialized in the manufacture of advanced printed circuit boards. The head office is located in Manchester, New Hampshire (US).

In Quebec, the company operates a brand new plant in Pointe-Claire with state of the art equipment for the production of printed circuit boards with up to 14 layers of metallization.

The plant in Pointe-Claire is ISO 9002 certified.

## EMS Technologies Inc.

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Address: 21025 Tran Canada Highway  
Sainte-Anne-de-Bellevue (Quebec) H9X 3R2  
CANADA

Telephone: (514) 425-3063  
Fax: (514) 425-3005  
Web Site: [www.ems-t.com](http://www.ems-t.com)

Contact: Mr. Walter Reichert  
Vice-president, Product development  
E-mail: [reichert.w@ems-t.ca](mailto:reichert.w@ems-t.ca)

Year of foundation: 1968

### **Description of activities**

---

EMS Technologies (NASDAQ : ELMG) is a wireless satellite communication solutions provider. Headquarters are located in Atlanta with facilities in Montreal and Ottawa. The company provides employment to 1 600 persons worldwide. The microelectronic group is located in Montreal.

The microelectronic group in Montreal develops solutions for the following applications:

- Broadband antenna products SATCOM;
- Cellular base stations and SCP
- Payload systems and satellite bus
- Local and extended area wireless networks
- Mobile terminals SATCOM;
- Defense electronic for integrated wireless networks

## Enigma Interconnect Inc.

---

Address: 6969 Transcanada Highway  
Dorval (Quebec) H4T 1V8  
CANADA

Telephone: (514) 856-8022  
Fax: (514) 856-3711

Web site: [www.enigmacorp.com](http://www.enigmacorp.com)

Contact: Mr. Matteo Vicario  
Vice-president, Sales and Marketing

E-mail : [Mvicario@enigmacorp.com](mailto:Mvicario@enigmacorp.com)

### **Description of activities**

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Enigma Interconnect offers a broad range of engineering services to the electronic industry. They include: printed circuit boards design, documentation, tooling, laser plotting and through-hole and surface-mount electronic manufacturing services (EMS). The company offers turn key solution to their customers.

# EXFO EO Engineering

---

Address: 465 Godin Ave  
Vanier (Quebec) G1M 3G7  
CANADA

Telephone : (418) 683-0211  
Fax : (418) 683-2170  
Web site : [www.exfo.com](http://www.exfo.com)

Contact: Mr. Germain Lamonde  
President  
E-mail : [info@exfo.com](mailto:info@exfo.com)

Year of foundation: 1985  
Number of employees: 900 (550 in Quebec)

## Description of activities

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EXFO is a recognized expert in the global optical communications industry through the design and manufacture of advanced and innovative test and measurement solutions. The company offers over 90 product's families to 2 000 clients which are network service providers, system vendors and component manufacturers in approximately 70 countries.

EXFO and its subsidiaries design products for two main markets. The **surveillance portable products division** offers modular test instruments for operators and network service providers. The **industrial and scientific division** designs a broad range of high performance instruments, automated test systems and manufacturing equipment for transmission system providers, optical components manufacturers and research and development laboratories.

EXFO is a leader in microscopy illumination with high-powered light sources that offer unparalleled performance. These systems address the needs of the new and existing microscope users by leveraging key relationships with all major microscope manufacturers to provide features such as simple lamp replacement and alignment in addition to superior performance over incumbent technologies. As a pioneer in that industry, the company has many light adhesive polymerization system patents, including one « intelligent lamp », used in the X-Cite 120.

EXFO manufactures a broad range of fiber optic measurement instruments: wattmeter, electroluminescent and laser diode source, variable attenuators, reflection test bench, functionality detectors, double wavelengths measurement systems, single fiber communication system, real-time optical reflectometers on a personal computer cards, real-time miniature optical reflectometer, live fiber detector, etc.

# EXPLORA Technologies

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Address: 20 - 360 Franquet Street  
Sainte-Foy (Quebec) G1P 4N3  
CANADA

Telephone: (418) 658-5556, ext. 320

Fax: (418) 263-5160

Web site: [www.explora-tech.com](http://www.explora-tech.com)

Contact: Mr. Denis Bernard

E-mail: [d.bernard@explora-tech.com](mailto:d.bernard@explora-tech.com)

Year of foundation: 2002

Number of employees: 6

## Description of activities

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Explora Technologies is specialized in the development of portable products and embedded systems based on electronic, software, and mechanical and industrial design expertise.

Explora Technologies can bring an idea to production or assist in the development of a product. The company provides product development expertise based on state of the art solutions. The team has a broad range of expertise in software (operating systems adaptation (OS) Win CE, Linux, pilot project development), in electronics design (low energy circuits, high level of integration), and mechanical expertise (design, 3D modelization, plastic, injection molding). The company also offers project management expertise and production expertise (test procedure, production constraints and assembly).

# FISO Technologies Inc.

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Address: 195 - 500 Saint-Jean-Baptiste Avenue  
Quebec (Quebec) G2E 5R9  
CANADA

Telephone: (418) 688-8065  
Fax: (418) 688-8067  
Web site: [www.fiso.com](http://www.fiso.com)

Contact: Mr. Claude Belleville  
President  
E-mail: [sales@fiso.com](mailto:sales@fiso.com)

Year of foundation: 1994

## **Description of activities**

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FISO develops manufactures and markets a complete line of high-quality fiber-optic sensors (constraint, displacement, temperature, and force & load.) based on a transfer of technology from INO. The technology is protected by Canadian and US patents. Over 70% of sales are exported worldwide.

## **Gemvis Inc.**

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Address: 8480 Darnley Street  
Mont-Royal (Quebec) H4T 1M4  
CANADA

Telephone: (514) 738-6009  
Fax: (514) 738-1497  
Web site: [www.gemvis.com](http://www.gemvis.com)

Contact: Mrs. Gemma Bernabe  
President  
E-mail: [laser@gemvis.com](mailto:laser@gemvis.com)

Year of foundation: 1993

### **Description of activities**

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Gemvis is a provider of electronic manufacturing services (EMS).

The company's expertise lies in small and medium volume assemblies.

## Gentec Inc.

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Address: 2625 Dalton Avenue  
Sainte-Foy (Quebec) G1P 3S9  
CANADA

Telephone: (418) 651-8000  
Fax: (418) 651-6695  
Web Site: [www.gentec.ca](http://www.gentec.ca)

Contact: Mr. Michel Cloutier  
Vice-President, Automation & Control

E-mail: [mcloutier@gentec.ca](mailto:mcloutier@gentec.ca)

Year of foundation: 1959  
Number of employees: 95

### **Description of activities**

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Gentec is a privately held Canadian company with \$12 million in revenues. The headquarters and production facilities are located in Sainte-Foy. The plant includes an automated assembly line for surface-mount (SMT) components, which can accommodate small and medium volume production. Gentec is committed to developing long-term strategic relationships with customers who involve ongoing process and relationship improvement.

Gentec is ISO 9001 certified since 2001 and can perform many environmental tests: heat, high voltage, interference, etc.

Gentec is also involved electronic circuit development and complex electronic product integration.

Finally, Gentec offers full turnkey shipping to the end customer.

## Gentec Electro-Optics Inc.

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Address: 160 - 445 Saint-Jean-Baptiste Street  
Quebec (Quebec) G2E 5N7  
CANADA

Telephone: (418) 651-8003  
Fax : (418) 651-1174  
Web Site : [www.gentec-eo.com](http://www.gentec-eo.com)

Contact: Mr. Michel Giroux  
President and Chief Director  
E-mail: [mgiroux@gentec-eo.com](mailto:mgiroux@gentec-eo.com)

Year of foundation: 2000

### **Description of activities**

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Gentec Electro-Optics is well established in the field of laser power and energy measurement. Gentec-EO's products are primarily components marketed to OEMs for integration in laser systems and equipments that are used in laboratories.

Gentec-EO designed and manufactureed laser energy measurement and analysis products for almost 30 years. Gentec-EO markets a broad line of joulemeters and thermopile wattmeter including client specific calorimeters.

The company's products are sold worldwide in approximately thirty countries by a network of distributors. A marketing office is located in Palo Alto, California.

## **GGI International (Groupe Graham International Inc.)**

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Address: 6615 Abrams Street  
Saint-Laurent (Quebec) H4S 1X9  
CANADA

Telephone: (514) 332-6960  
Fax: 1 800 332-6960

Contact: Mr. Peter Graham  
Co-President

E-mail: [p.graham@ggi-international.com](mailto:p.graham@ggi-international.com)

Year of foundation: 1981  
Number of employees: 120

### **Description of activities**

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GGI International specializes in the design and manufacturing of membrane switches and graphic overlays for the electronic industry. In late December of 2001, GGI signed an exclusive Canadian licensee agreement for Duraswitch technology, allowing GGI to manufacture, market and distribute next –generation switch technologies such as High-Impact PushGate, PushGate, thiNcoder RT and MagnaMouse™.

The product line is as follow:

- Membrane switches;
- Graphic overlays;
- Integrated LEDs;
- Raised symbols;
- UV texture;
- Switches on printed circuits;
- Screenprinted legends;
- Labels;
- Other related products.

Turnaround for prototype boards is ten working days.

## Goal Semiconductor Inc.

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Address: 900 - 1134 Sainte-Catherine West Street  
Montreal (Quebec) H3B 1H4  
CANADA

Telephone: (514) 871-2447  
Fax : (514) 394-0661  
Web site : [www.goalsemi.com](http://www.goalsemi.com)

Contact : Mr. Irv Lustingman  
President  
E-mail : [info@goalsemi.com](mailto:info@goalsemi.com)

Year of foundation: 1992  
Number of employees: 25

### **Description of activities**

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Goal Semiconductor is an innovative semiconductor company that designs, develops and markets highly integrated, performance driven, affordable, mixed-signal integrated circuits for use in embedded data acquisition systems.

Goal's strategy is to migrate from a design center offering turnkey analog and digital ASIC solutions to its customers to a company offering their own line of products. In 2001, Goal has marketed its first proprietary product, the VERSA 1, which is a fully integrated microcontroller based data acquisition system that includes a set of non-traditional on-chip components such as a programmable constant current source driver and a MAC block. The company currently offers a broad range of products based on the VERSA concept.

The company's team has a state of the art expertise in integrated circuit design and processing. This expertise is behind the creation of many standard cells libraries and integrated circuit design from small analog filter circuits to 16 bits digital signal accelerators. The CMOS cells library is compliant to 0.25 to 4 micron lithographic processes.

Goal also offers application specific integrated circuits (ASIC) design services.

## GRM Circuits Enr. (Division of Circuits Astro Inc.)

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Address: 4960 Courval Street  
Saint-Laurent (Quebec) H4T 1L4  
CANADA

Telephone: (514) 344-5333  
Fax: (514) 344-5334

Contact: Mr. Marcel Vigneault  
President  
E-mail: [eng@grmcircuits.com](mailto:eng@grmcircuits.com)

Year of foundation: 1975  
Number of employees: 45

### Description of activities

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GRM Circuits offers its customers the following products and services:

- Single and double sided printed circuit boards (PCB);
- Multilayer PCB (up to 20 layers);
- Blind and buried vias;
- Surface mount technology ;
- Immersion plating;
- Connectors gold plating;
- Carbon ink

The quality assurance program is ISO 9000-2000 certified.

The following printed documentation is available on request:

- Compliance report (always provided);
- Cross sectional picture;
- Plated metals thickness measurement;
- Electrical test results.

Services include prototyping (three to seven days), including medium to large volume productions.

## Groupe Tekdata Inc.

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Address: 2600 Matte Boulevard  
Brossard (Quebec) J4Y 2P6  
CANADA

Telephone: (450) 444-2222  
Fax: (450) 444-0929  
Web Site: [www.grouptekdata.com](http://www.grouptekdata.com)

Contact: Mr. Magdy A. Rizk  
President  
E-mail: [magdy@grouptekdata.com](mailto:magdy@grouptekdata.com)

Year of foundation: 1990

### **Description of activities**

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Tekdata designs, develops and manufactures metal prototypes.

The company manufactures small to full dimension metal pieces (Electronic components enclosures to train doors, including many components and mechanisms of varied dimensions). Four engineers are involved in product development and project monitoring.

Tekdada is handling the following metals: carbon steel, inox steel and aluminum. Equipped with state of the art machinery and tools, including a paint room and serigraphy equipment, Tekdata can manufacture the most intricate and diversified pieces.

The company is working metal foils up to the following dimensions:  
48" of with, 12' of length and ¼" of thickness.

Tekdata serves clients in automotive, medical equipment, and industrial electronic.

# Hardent Inc.

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Address: 700 - 417 Saint-Pierre Street  
Montreal (Quebec) H2Y 2M4  
CANADA

Telephone: (514) 282-4118, post 31  
Fax: (514) 288-0033  
Web Site: [www.hardent.com](http://www.hardent.com)  
Contact: Mr. Simon Robin  
E-mail: [srobin@hardent.com](mailto:srobin@hardent.com)  
Year of foundation: 2002  
Number of employees: 5

## **Description of activities**

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Hardent offers turnkey electronic product design that provides state of the art solutions. Hardent's designers are skilled professionals with a record of accomplishment in developing complex designs on schedule and within established budgets. The company provides a wide range of services, from complete turnkey electronic product design, to subsystem design and ASIC/FPGA design to create and improve your products by leveraging leading-edge technology.

Hardent is specialized in ASIC (Application specific integrated circuits) design and high density FPGA (Field programmable gate arrays) development for telecommunications, multimedia, consumer control and industrial applications.

Integrated and programmable circuits services are the following:

- Architecture and specification;
- Coding (VHDL and Verilog);
- Synthesis;
- Static delay analysis;
- Test structure insertion (JTAG, ATPG and BIST);
- Functionality testing.

The following complementary services are also offered:

Electronic circuit design:

- High level design and specification ;
- Logic layout;
- PCB layout.

Software design:

- Real time systems;
- Embedded software;
- Linux integration.

## Hyperchip Inc.

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Address : 1800 Rene-Levesque West Boulevard  
Montreal (Quebec) H3H 2H2  
CANADA

Telephone: (514) 906-2447  
Fax: (514) 906-2484  
Web Site : [www.hyperchip.com](http://www.hyperchip.com)

Contact: Mr. Richard Norman  
President  
E-mail: [rnorman@hyperchip.com](mailto:rnorman@hyperchip.com)

Year of foundation: 1997  
Number of employees: 193

### **Description of activities**

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Hyperchip develops and markets on a worldwide basis a new generation of Internet Protocol (IP) routing technology systems that are purpose-built for today's global data infrastructures. Their products guarantee a high quality of services (QoS) which is mandatory for an efficient deployment of new and profitable services over the Internet.

## IBM Canada Ltd.

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Address : 23 De l'Aeroport Boulevard  
Bromont (Quebec) J0E 1L0  
CANADA

Telephone: (450) 534-6215  
Fax: (450) 534-6880  
Web Site: [www.can.ibm.com/bromont](http://www.can.ibm.com/bromont)

Contact: Mr. Erik Michaelsen  
Manager, OEM products and new commercial sectors

E-mail : [emichael@ca.ibm.com](mailto:emichael@ca.ibm.com)

Year of foundation: 1972  
Number of employees: 2 500

### **Description of activities**

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IBM Bromont is a semiconductor packaging facility that operates in a 75 000 square meter premise. As a service provider of IBM semiconductor packaging solutions, the plant use leading edge technology. The packaging technology is compliant to CMOS, BI-CMOS, GaAs and SiGe semiconductors for memory products, ASIC, and imaging processor applications. IBM Bromont product line includes conventional ceramic modules thermally enhanced and BGA. IBM Bromont's technologies are thin film sputtering on ceramic or glass, plating on ceramic or cards, especially electroless gold for high-density applications and high-volume wirebond. Modules are fully tested before shipping to customers on plates or reels.

Technology leadership is an IBM priority and every effort is deployed to achieve that goal. A highly qualify expert team has been created for the plant to remain in its leadership position. That team is working in close relationship with the various research and development laboratories of IBM. The employees are members of technical associations and attend Conferences to evaluate the potential of leading edge technology. Since its creation 1972, almost one billion dollar has been invested for leading edge equipment and process acquisition. The plant is ISO 9002 certified since 1993.

## IGG Electronic Canada Inc.

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Address: 14163 Cure-Labelle Boulevard  
Mirabel (Quebec) J7J 1M3  
CANADA

Telephone: (450) 979-7070  
Fax: (450) 979-7111  
Web Site : [www.marasuca.com/igg](http://www.marasuca.com/igg)

Contact: Mr. Ronald Gauthier  
General Manager  
E-mail: [igg@marasuca.com](mailto:igg@marasuca.com)

Year of foundation: 1985

### **Description of activities**

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IGG Electronic offers a variety of electronic services. The production capability includes specialized equipments in order to provide the following services.

- Packaging
- Research and development
- Cable assemblies (fiber optic, conventional cable and coaxial);
- Electronic manufacturing services (EMS), including surface-mount (SMT)
- Interconnect products

## Innovator Electronic Assembly Inc.

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Address: 2530 Alphonse-Gariépy Street  
Lachine (Quebec) H8T 3M2  
CANADA

Telephone: (514) 636-3000  
Fax: (514) 636-7575  
Web site: [www.innovator-inc.com](http://www.innovator-inc.com)

Contact: Mr. Brian Mink  
E-mail: [bmink@innovator-inc.com](mailto:bmink@innovator-inc.com)

Year of foundation: 1999  
Number of employees: 48

### **Description of activities**

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Innovator is specialized in electronic manufacturing services (EMS). The state of the art production facility offers high workmanship standards and quality with excellent customer service.

Innovator offers a broad range of value added services. They include surface-mount and through-hole assembly, X-rays, packaging and test. Innovator's leadership is based on their expertise in high density BGA and micro BGA packaging and their state of the art equipment.

Innovator offers the following competitive advantages:

- The technical expertise and experience of the management team ensure a high level of quality expected from the industry.
- The production equipment is specialized and adapted to their target market.
- The company is ISO 9002 certified.

# Innovox Inc.

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Address: 270 - 6770 Jarry East Street  
Montreal (Quebec) H1P 1W3  
CANADA

Telephone: (514) 329-4417  
Fax: (514) 329-0349  
Web Site: [www.innovox.com](http://www.innovox.com)

Contact: Mr. Michel Ponton  
President  
E-mail: [ponton@innovox.com](mailto:ponton@innovox.com)

Year of foundation: 1988  
Number of employees: 20

## Description of activities

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Innovox designs and produces state of the art electronic products for the benefit of their clients.

Company's expertise in electronics, in applied programming and in mechanics allows the company to build complete products. These products include the following.

- Medical electronic and instrumentation
- Telecommunications
- Instrumentation and control
- Automation
- Digital signal processing

## INO (Institut national d'optique)

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Address: 2740 Einstein Street  
Sainte-Foy (Quebec) G1P 4S4  
CANADA

Telephone: (418) 657-7006  
Fax: (418) 657-7009  
Web site: [www.ino.qc.ca](http://www.ino.qc.ca)

External revenues: \$ 15,000,000

Contact: Mr. Jean-Guy Paquet, President  
Mr. Robert Corriveau, Executive Vice-President

E-mail: [info@ino.qc.ca](mailto:info@ino.qc.ca)

Year of foundation: 1988  
Number of employees: 220

### Description of activities

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INO is a world class center of expertise in optics and photonics that assists companies in improving their competitive edge and developing their business. It conducts research and development on state-of-the-art technology and products that strengthen the country's economy.

INO ensures its growth by creating intellectual property and drawing value from it through research and development contracts, prototype production, technology transfer, and the promotion of innovative projects that create jobs.

To help sustain its scientific research and activities, INO provides computer support, a team of optical and optomechanical engineers and designers, and engineering and electronics workshops. The scientific team is supported by leading edge technology equipment, INO laboratories include preform fabrication facilities, two fiber drawing towers, writing and grating systems and state-of-the-art clean rooms,

INO's development activities are grouped in three sectors:

- Photonics, fibers and lasers;
- Micro optics and microsystems;
- Applied optical systems.

# Interface-Graphique

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Address: 100 A - 855 Chemin Grand-Bernier  
Saint-Jean-sur-Richelieu (Quebec) J3B 8H8  
CANADA

Telephone: (450) 219-1899  
Fax: (450) 542-9427  
Web Site : [www.interface-graphique.com](http://www.interface-graphique.com)

Contact: Mr. François Bienvenue  
President  
E-mail : [fb@interface-graphique.com](mailto:fb@interface-graphique.com)

Year of foundation: 2001

## **Description of activities**

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Mr. Bienvenue, with 20 years of experience in serigraphy (12 in membrane switches and graphic overlay), is committed to a close relationship with its clients. Products and services offered are as follow:

- Membrane switches;
- Graphic overlay;
- Decalcomany;
- Serigraphy.

# Intronic Semiconductor Inc.

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Address: 230 - 15 Buteau Street  
Hull (Quebec) J8Z 1V4  
CANADA

Telephone: (819) 770-1468  
Fax: (819) 770-1573  
Web Site : [www.intronic-semiconductor.com](http://www.intronic-semiconductor.com)

Contact: Mr. Donald McCarthy  
President

E-mail : [dmccarthy@intronic-semiconductor.com](mailto:dmccarthy@intronic-semiconductor.com)

Year of foundation: 1991

## **Description of activities**

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Intronic Semiconductor offers application specific integrated circuits (ASIC) design services.

Intronic provides technical services such as standard cell and gate array design, system partitioning, alternate source netlist and test vector translation, custom cell/ASSP development, and VHDL/HDL ASIC synthesis.

# ITF Optical Technologies

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Address: 400 Montpellier Boulevard  
Montreal (Quebec) H4N 2G3  
CANADA

Telephone: (514) 744-1044  
Fax: (514) 744-4044  
Web site: [www.itfoptical.com](http://www.itfoptical.com)

Contact: Mr. Mervat Faltas  
President  
E-mail: [info@itfoptical.com](mailto:info@itfoptical.com)

Year of foundation: 1997

## **Description of activities**

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ITF Optical Technologies is a privately-held photonic company that develops and markets components that multiply the number of optical signals that can be transmitted into one optical fiber.

ITF products provide telecommunications and data system operators with the opportunity to fully exploit new opportunities created by Internet and Multimedia services, thanks to their unique fiber optic fusion technology. Based on the potential of that technology, up to 80 communication signals can be transmitted simultaneously and independently by one optical fiber, which greatly improves transmission capacity of optical systems.

ITF has been honored by receiving the "Grand Prize for Young Entrepreneurs and Technological Innovation" from the Canadian Economic Development Department in September 1998 and the "*Nouvel Exportateur de l'année*" Award from the Quebec Department of Industry and Commerce in September 1999.

## JF Tech Inc.

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Address: 919 Bergeron Street  
Sainte-Thérèse (Quebec) J7E 4W5  
CANADA

Telephone: (450) 435-3637  
Fax: (450) 435-3016  
Web site: [www.jftech.ca](http://www.jftech.ca)

Contact: Mr. René Trudel  
Sales and Marketing Director  
E-mail: [info@jftech.com](mailto:info@jftech.com)

Year of foundation: 2001  
Number of employees: Less than 10

### **Description of activities**

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JF Tech is specialized in the design, production and assembly of fiber optic cable assemblies. These include connector installation on devices, pigtails, multi fiber assemblies, etc.

JF Tech quality policy is to continuously improve its procedures to satisfy the needs of its customers and to deliver quality products every time and on time.

# JLS Services

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Address : 521 Lepine Avenue  
Dorval (Quebec) H9P 2S2  
CANADA

Telephone : (514) 631-7956  
Fax : (514) 631-7135

Web site : [www.jlsservices.com](http://www.jlsservices.com)

Contact : Mr. Breen Kennedy  
President

E-mail : [Breen@jlsservices.com](mailto:Breen@jlsservices.com)

Year of foundation : 1993

## Description of activities

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JLS offers the following services:

- Printed circuit boards design
  - All CAD and CAE software support
  - Surface-mount technology and sub-assemblies
  - Photo plotting
- Prototype boards
  - Single and double sided (24-hour service)
  - Multilayer (72 hour service)
  - Bare board testing
- Printed circuit boards manufacturing
  - Single and double sided (2-3 weeks delivery)
  - Multilayer (2-4weeks delivery)
  - Bare board testing
- Electronic manufacturing services (EMS)
  - Through hole and surface mount technologies
  - Single and double sided
  - Component procurement

## Labo Circuits Inc.

---

Address: 529 Deslauriers Street  
Saint-Laurent (Quebec) H4N 1W2  
CANADA

Telephone: (514) 745-4464  
Fax: (514) 745-4465  
Web site : [www.labo-circuits.ca](http://www.labo-circuits.ca)

Contact: Mr. Denis Josien  
President  
E-mail : [info@labo-circuits.ca](mailto:info@labo-circuits.ca)

Year of foundation: 1989

### **Description of activities**

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Labo Circuits offers double sided and multilayer printed circuit boards manufacturing services.

## **LTRIM Technologies Inc.**

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Address: 140 - 440 Armand-Frappier Boulevard  
Laval (Quebec) H7V 4B4  
CANADA

Telephone: (450) 681-3171

Fax: (450) 681-0370

Web Site : [www.ltrim.com](http://www.ltrim.com)

Contact: Mr. Yves Gagnon

President

E-mail : [info@ltrim.com](mailto:info@ltrim.com)

Year of foundation: 1998

### **Description of activities**

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LTRIM Technologies is a chipless semiconductor company which is specialized in analog virtual components for the system on chip (SoC) industry.

## **LxSix Photonics Inc.**

---

Address: 520 McCaffrey Street  
Saint-Laurent (Quebec) H4T 1N1  
CANADA

Telephone: (514) 599-5714  
Fax: (514) 599-5729  
Web site: [www.lxsix.com](http://www.lxsix.com)

Contact: Mr. Jacques Légaré  
President and Chief Director  
E-mail: [info@lxsix.com](mailto:info@lxsix.com)

Year of foundation: 2001

### **Description of activities**

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LxSix Photonics offers new photonics processes and manufacturing technology services. LxSix has developed an advanced highly automated technology platform based on key Intellectual Property. This technology platform allows a new writing approach (Write-On Technology) which enables production of high performance components at a much lower cost. The technology is being leveraged to develop new integrated optical components for next generation systems to deliver advanced functionality addressing innovative applications in the network.

## Lyrtech Inc.

---

Address: 100 - 4495 Wilfrid-Hamel West Boulevard  
Quebec (Quebec) G2P 2J7  
CANADA

Telephone: (418) 877-4644  
Fax: (418) 877-7710

Web site : [www.lyrtech.com](http://www.lyrtech.com)

Contact: Mr. Louis Bélanger  
General Manager

E-mail : [louis.belanger@lyrtech.com](mailto:louis.belanger@lyrtech.com)

Year of foundation: 1984

### **Description of activities**

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Lyrtech is a high technology firm specialized in state of the art electronics, the computer sector and signal processing. With 15 years of experience, the company provides solutions to the high technology business community. Lyrtech's expertise has lead to the development of fast prototyping products for DSPs used in electro-optical instruments.

## M2S Electronics Inc.

---

Address: 2855 De Celles Street  
Quebec (Quebec) G2C 1K7  
CANADA

Telephone: (418) 842-1717  
Fax: (418) 842-0123  
Web Site: [www.m2s.ca](http://www.m2s.ca)

Contact: Mr. Bertrand Saucier  
President  
E-mail: [bsaucier@m2s.ca](mailto:bsaucier@m2s.ca)

Contact: Mr. Mario Marcotte  
General Director  
E-mail: [mmarcotte@m2s.ca](mailto:mmarcotte@m2s.ca)

Year of foundation: 1981  
Number of employees: 80

### **Description of activities**

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M2S Electronic works in partnership with OEMs and system integrators to offer value added electronic manufacturing services (EMS). With a qualified team, specialized equipment and efficient processes, the company is offering a complete turn-key solution to their clients.

M2S Electronics's broad range of EMS services includes:

- Residential and commercial air conditioning control and interface;
- Communication interface;
- Motor control and interface;
- Industrialization of electronic products;
- Electronic products assembly and integration;
- Printed circuit boards assembly and integration.

# Matrox Graphics Inc.

---

Address: 1055 Saint-Régis Boulevard  
Dorval (Quebec) H9P 2T4  
CANADA

Telephone: (514) 822-6000  
Fax: (514) 822-6294  
Web Site: [www.matrox.com/mga](http://www.matrox.com/mga)

Contact: Ms. Darlene Gillis  
Public Relation Department  
E-mail: [dgillis@matrox.com](mailto:dgillis@matrox.com)

Year of foundation: 1981  
Number of employees: 400 (Microelectronic Division)

## **Description of activities**

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For over 25 years, Matrox Graphics has been a leader in offering professional digital 2D/3D imaging accelerators to the market. With DualHead® innovative technology, Matrox is a designer of graphic processors and a manufacturer of graphic cards that have received more than 1,000 awards from the international trade press. In July 2002, Matrox has been elected an ARB (OpenGL® Architecture Review Board) member. Matrox's head office is located in Montreal (Canada), with satellite offices in the United States, England, France, Germany, Italy, in Hong Kong and Taiwan. Products information, technical assistance and additional details are available at [www.matrox.com/mga/](http://www.matrox.com/mga/)

## Maya Ltd. (Heat Transfer Technologies)

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Address: 400 - 4999 West Ste-Catherine Street  
Montreal (Quebec) H3Z 1T3  
CANADA

Telephone: (514) 369-5706  
Fax: (514) 369-4200

Contact: Mr. J. Arnold Free  
Vice-President, Business development  
E-mail : [info@mayahtt.com](mailto:info@mayahtt.com)

Year of foundation: 1982  
Number of employees: 47

### **Description of activities**

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MAYA develops leading edge mechanical engineering thermal, fluid flow, and structural simulation software as well as provides engineering services to the electronics, aerospace, automotive and manufacturing industries. The company is a provider of solution and technical analysis software services.

MAYA has acquired an expertise in thermal and fluid flow analysis. The company develops two thermal and fluid flow analysis products; TMG Thermal Analysis and Electronic System Cooling (ESC), and also offers I-DEAS and FEMAP software, including computer assisted engineering mechanical design software (UG-NX or EDS PLM). Every tool is conceived in order to offer an efficient solution to the client.

# MBI Plastic

---

Address: 1335 Du Palais Avenue  
Saint-Joseph-de-Beauce (Quebec) G0S 2V0  
CANADA

Telephone: (418) 397-8088  
Fax: (418) 397-6014  
Web Site: [www.mbiplastic.com](http://www.mbiplastic.com)

Contact: Mr. Pierre Rochette  
Sales and Marketing Director

E-mail: [mbplas@globetrotter.net](mailto:mbplas@globetrotter.net)

Year of foundation: 1987

## **Description of activities**

---

MBI Plastic is specialized in injection molding and manufactures over 500 different products for their clients located in Eastern Canada and the United States.

The company is committed to projects from blueprints to finished products. The line of products includes various types of components especially electronic and parts from one-gram to two kilograms in a wide range of common or engineered resins.

The company's expertise goes beyond injection molding by delivering turnkey projects. Services include the following:

- Technical assistance
- Mold manufacturing and finishing
- Over-molding
- Assembling
- Paint
- Shielding
- Installation of threaded inserts
- Printing
- Packaging
- Etc.

# Megatech Electro Inc.

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Address: 90 28<sup>e</sup> Street  
P.O. Box 861  
Grand-Mère (Quebec) G9T 5Z8  
CANADA

Telephone: (819) 533-3201  
Fax: (819) 533-3901  
Web Site: [www.megatechelectro.com](http://www.megatechelectro.com)

Contact: Ms. Linda Dauphinais  
E-mail: [linda.dauphinais@megatechelectro.com](mailto:linda.dauphinais@megatechelectro.com)

Year of foundation: 1988  
Number of employees: 330

## Description of activities

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Megatech Electro offers electronic manufacturing services (EMS). These services include: design and manufacture of electronic and electro mechanical modules, electric cables, and high end multiplex systems for transport and multiple industrial applications.

The company is focused on electronic and electromechanical needs of the transportation industry using through-hole and surface-mount automated equipment.

Megatech is also involved in the development and manufacture of engine revolution limiters for watercrafts, ignition systems for recreational vehicles, dashboards, electrical harnesses for bus, heavy vehicles and boats and multiple industrial applications.

The company provides full product cycle assistance to customers from design, prototyping, manufacturing and assembly, including manufacturing services for the next generation of products.

# Memtronik Innovations Inc.

---

Address: 8648 Pie IX Boulevard  
Montreal (Quebec) H1Z 4G2  
CANADA

Telephone: (514) 374-1010  
Fax: (514) 374-0000  
Web Site: [www.memtronik.com](http://www.memtronik.com)

Contact: Mr. François Lequin  
Vice-President, Marketing and R-D  
E-mail: [info@memtronik.com](mailto:info@memtronik.com)

Year of foundation: 1994  
Number of employees: 103

## Description of activities

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Memtronik is a company specialized in the manufacturing of technological products related to silk-screening. Research & Development of high quality and innovative products is one of the primary goals of the company. Every year, since its opening, the company has been putting new products on the markets for all type of applications such as: control equipment, medical apparatus, appliances, telecommunications, etc.

**Membrane switches:** Interface in which at least one contact is integrated in a flexible material.

**Graphic overlays:** Embossing, multiple textures, scratch resistance, chemical resistance, etc.

**Mechanical options:** With or without tactile feedback, with or without EMI/RFI protection, waterproof design, etc.

**CSA labels:** Self adhesive labels for the identification of equipment and product that require Canadian standard association approval.

**Electroluminescent:** A thin and flexible layer able to light uniformly and esthetically for a wide range of applications.

## Microbridge Technologies Inc.

---

Address: 505 - 1980 Sherbrooke West Street  
Montreal (Quebec) H3H 1E8  
CANADA

Telephone: (514) 244-7256

Contact: Mr. Leslie Landsburger

E-mail: [leslie@ece.concordia.ca](mailto:leslie@ece.concordia.ca)

Year of foundation: 2001

### **Description of activities**

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Microbridge Technologies, is a spin-off of University Concordia with expertise in semiconductors, MEMS and analog microelectronic.

The first ready to market product is a high precision variable resistor which is adjustable using low energy electrical signals. This resistor finds many applications in analog microelectronic designs for industrial control and high performance analog and mix signal circuits. This product has been designed to be marketed as a discrete component or as a virtual component on an integrated circuit or on a System on Chip.

# MPB Inc. (Technologies)

---

Address: 151 Hymus Boulevard  
Pointe-Claire (Quebec) H9R 1E9  
CANADA

Telephone: (514) 694-8751  
Fax: (514) 694-6869  
Web Site: [www.mpb-technologies.ca](http://www.mpb-technologies.ca)

Contact: Mr. Jimmy Herrera  
E-mail: [jimmy.herrera@mpbc.ca](mailto:jimmy.herrera@mpbc.ca)

Year of foundation: 1976  
Number of employees: 186

## Description of activities

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MPB Technologies and MPB Communications are specialized in the development and manufacturing of telecommunication, aerospace and photonic products.

Microelectronic services are as follow:

- Test and reliability center for evaluation, qualification and certification of electronic components and sub-assemblies
- Electromagnetic measurement
- Laser cutting
- Optoelectronic

Related products are:

- Eximer and fiber lasers (Ximer-300, etc.);
- Erbium doped broadband sources
- Erbium doped fiber amplifier (EDFA)
- Application specific integrated circuits
- Humidity measurement products;
- Precision optical sensors for motion measurement.

## Multifor Ltd.

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Address: 519 Lepine Avenue  
Dorval (Quebec) H9P 2S9  
CANADA

Telephone: (514) 631-2560  
Fax: (514) 633-5648  
Web site : [www.multifor.com](http://www.multifor.com)

Contact: Mr. Bill Kennedy  
President

E-mail: [multifor@multifor.com](mailto:multifor@multifor.com)

Year of foundation: 1984

### **Description of activities**

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Multifor is specialized in the production of printed circuits boards' prototypes of one to twelve layers of metallization.

The company offers engineering services and dynamic testing of PCBs.

## O/E Land Inc.

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Address: 200 - 2555 32<sup>e</sup> Avenue  
Lachine (Quebec) H8T 3G9  
CANADA

Telephone: (514) 631-8236  
Fax: (514) 631-2671  
Web site: [www.o-eland.com](http://www.o-eland.com)

Contact: Mr. Pin Long  
President

E-mail: [info@o-eland.com](mailto:info@o-eland.com)

Year of foundation: 1997  
Number of employees: 8

### **Description of activities**

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O/E Land specializes in the development and manufacturing of diffractive optic elements and diffractive arrays.

The company offers the following products and services:

- Multiphase beam generator
- Fiber Bragg grating
- Beam shaping elements (cross, arrow and character)
- Micro lens array
- Diffractive binary and sinusoid arrays
- Instrumentation sensors
- Optoelectronic components

# O-m6 Technologies

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Address: 90 – 14163 Road 117  
Mirabel (Quebec) J7J 1M3  
CANADA

Telephone: (450) 979-2275  
Fax: (450) 979-4110  
Web site: [www.om6.com](http://www.om6.com)

Contact: Mr. Jean-Yves Couturier  
General Director

E-mail: [info@om6.com](mailto:info@om6.com)

Year of foundation: 1996

## Description of activities

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O-m6 Technologies is a leader in the manufacturing of fiber optic assemblies. The production plant can respond rapidly to large and medium sized orders for conventional cable products as well as optical patch cords, pigtails, and multi fiber cables.

The custom assembly division can process orders in the following product categories:

- Specialized fiber cables, including PM, Pure mode, custom cables
- Cables with specialized jackets such as loose tube, flexible jackets, metal jackets
- Custom terminations such as ferrules and connectors
- High-technology assemblies including Si-V array blocks, polishing of bare fiber, metallization assemblies
- Custom cables and cable harnesses

O-m6 Technologies is a client-driven company that delivers quality products on time.

## Octasic Inc.

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Address: 300 - 4101 Molson Street  
Montreal (Quebec) H1Y 3L1  
CANADA

Telephone: (514) 282-8858  
Fax: (514) 282-7672  
Web site: [www.octasic.com](http://www.octasic.com)

Contact: Mrs. Lucie G elinas  
Vice-President, Finance and Administration  
E-mail: [lucie.gelinas@octasic.com](mailto:lucie.gelinas@octasic.com)

Year of foundation: 1998  
Number of employees: 60

### **Description of activities**

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Octasic designs and markets integrated circuits for world leading telecommunications equipment manufacturers.

Octasic's communication processors target VoIP technology requirements, with industry-leading scalability, while remaining flexible and compatible with existing DSP (digital signal processor) and VP (voice processor) implementations. These key voice over packet technologies are packetization, aggregation, voice compression, interworking and echo cancellation.

From 1998 to 2000, Octasic has introduced five application specific integrated circuits (ASIC) on the market. These devices have achieved significant market penetration and are currently used in equipment manufactured by leading telecommunications vendors. At the end of 2000, Octasic has decided to market integrated circuits under its own brand name. Three Octasic high-density integrated circuits for network equipment are currently available.

- OCT8304, a packetization and aggregation engine for Voice over IP (VoIP) and Voice over AAL2 (VoATM) applications.
- OCT7102, a low cost, low power, and area efficient solution for high-density Adaptive Differential Pulse Code Modulation (ADPCM) compression.

## Optimont Inc.

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Address: 9C De la Place-du-Commerce Street  
Brossard (Quebec) J4W 2V6  
CANADA

Telephone: (450) 465-1818  
Fax: (450) 923-0144  
Contact: Ms Christiane Legault  
E-mail: [clegault@optimont.com](mailto:clegault@optimont.com)  
Year of foundation: 1992  
Number of employees: 20

### **Description of activities**

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Optimont offers a broad range of electronic manufacturing services (EMS). The company is involved in engineering, design, sourcing, and electronic assembly on a build-to-order basis.

Optimont has industry acknowledged expertise in industrial control and microcontrollers. The company also provides supply management services for production and manages sub-contractors technical and commercial relationships. Many financial services for component procurement are offered.

The automated production line finalizes surface-mount (0402, BGA of 1 mm, QFP of 0.5 mm) and through-hole assemblies, and PCB insertion. Conformal coating, placement and refurbishment are performed by digital controlled equipment. Specialized selective soldering and desoldering equipment with qualified thermal profile provides the ability for BGA replacement on assembled PCB. Small quantity of prototype (less than 25) is assembled within days and medium volume requirement (25 to 200) is produced within a two weeks timeframe. The company has the required know-how and equipment for water cleaning, surface coating, system integration and functional test.

# Optolys

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Address: 120 - 2376 Galvani Street  
Sainte-Foy (Quebec) G1N 4G4  
CANADA

Téléphone : (418) 527-2225  
Fax : (418) 527-3335  
Courrier électronique : [info@optolys.com](mailto:info@optolys.com)  
Web site : [www.optolys.com](http://www.optolys.com)

Contact : Mr. Simon Lagacé  
President  
E-mail : [simon.lagace@optolys.com](mailto:simon.lagace@optolys.com)

Year of foundation: 2000

## Description of activities

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Optolys offers an integrated solution from prototype to production of optomechanical systems.

At Optolys, every system development takes into account actual operation conditions (temperature, vibration, mechanical stress...). Based on a strong expertise in mechanics, optics and electronics, Optolys optimizes features of a finished product so that concepts and processes can lower the cost of production.

**Capabilities** : 1 000 square meter, clean rooms, 25 optical technician assemblers, design (mechanical and optical), complex assembly, material and glue selection, complex optical alignment, turn key project, small or high volume production, sub-contractors relationship and production process documentation.

**Markets**: dentistry, biomedical, industrial, telecommunications, defense and aerospace.

The company is ISO 9001 certified since 1993.

## Perkin Elmer Optoelectronic

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Address: 22001 Chemin Dumberry  
Vaudreuil (Quebec) J7V 8P7  
CANADA

Telephone: (450) 424-3300  
Fax: (450) 424-3411

Contact: Mr. Ron Swarbrick  
General Director

Year of foundation: 1940

### Description of activities

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Perkin Elmer Optoelectronic manufactures custom optoelectronic components and subsystems for many applications.

Products offered by Perkin Elmer Optoelectronic are the following :

- Semiconductor lasers and emitters using GaAs, le GaAlAs and InGaAsP, laser grating devices, infrared emitters and devices.
- Silicon and InGaAs PIN photo detectors, avalanche photo detectors, hybrid preamplifier detectors and semiconductor detectors and modules using silicon and III-V material technologies.

# Phasoptx Inc.

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Address: 460 West Ste-Catherine Street, Suite 503  
Montreal (Quebec) H3B 1A7  
CANADA

Telephone: (514) 788-6332  
Fax: (514) 395-0260

Web site: [www.phasoptx.com](http://www.phasoptx.com)

Contact: Dr. Eric Weynant  
Vice-President, Research & Development  
E-mail: [info@phasoptx.com](mailto:info@phasoptx.com)

Year of foundation: 2000

## Description of activities

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**PhasOptx** has developed a new generation of connectivity products based on a disruptive technology that will facilitate the deployment of optical communication infrastructure.

The competitive advantages of this new technology over techniques using conventional splices and connectors are as follows:

- Auto alignment of fiber optic;
- Higher coupling efficiency almost identical to fusion;
- Much easier installation;
- Unsurpassed price-performance ratio;
- Product/technological roads map that meets market-driven needs.

## Photintech Inc.

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Address : 300 - Parc Samuel-Holland Building 1  
1245 Chemin Sainte-Foy  
Quebec (Quebec) G1S 4P2  
CANADA

Telephone : (418) 681-0666  
Fax : (418) 681-8555  
Web site : [www.photintech.com](http://www.photintech.com)

Contact : Mr. Tigran V. Galstian  
President and Chief Technology Officer

E-mail : [info@photintech.com](mailto:info@photintech.com)

Year of foundation : 2000

### **Description of activities**

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Photintech develops and markets low cost electrically adjustable and reconfigurable fiber components (attenuators, filters). These products are very small in size and will all deliver, low insertion loss and low power consumption for Network Service Providers to manage and grow their network costs effectively.

Photintech's technology uses electro optic materials (liquid crystals, polymers, etc.) to manufacture Variable Optical Attenuator (VOA), WDM filters and dynamic dispersion compensators. The company is also specialized in the development of laser diode collimator and VCSEL including fiber to fiber and fiber to laser connectors.

## PMC-Sierra Inc.

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Address : 500 - 3333 Graham Boulevard  
Mont-Royal (Quebec) H3R 3L5  
CANADA

Telephone : (514) 734-3700  
Fax : (514) 734-3701  
Web Site : [www.pmc-sierra.com](http://www.pmc-sierra.com)

Contact : Mr. Martin Chalifoux  
Marketing Manager  
E-mail : [martin\\_chalifoux@pmc-sierra.com](mailto:martin_chalifoux@pmc-sierra.com)

Year of foundation: 1992 (1997 in Montreal)

Number of employees : 900 (45 in Montreal)

### Description of activities

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PMC-Sierra (NASDAQ:PMCS) is a fabless company that offers network integrated circuits for ATM, SONET/SDH, T1/E3 and IP (MAN and WAN networks), high performance MIPS microprocessors, including specialized components for enterprise networks (LAN and SAN). The company, which is involved in the development of the worldwide broadband communication infrastructure, is offering high value added solutions to telecommunication equipment leaders like Cisco, Nortel, Lucent, Alcatel and many others. The company is ISO 9001 certified. The headquarter of PMC-Sierra is located in Vancouver (BC) with research centers located in Montreal (QC), Ottawa (ON), Saskatoon (SK), Portland (OR) and San Jose (CA). Even though the company is in an economic turndown, PMC-Sierra has been able to increase its market share and is positioned to eventually take advantage of the next up cycle.

## Pocatec Ltd.

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Address: 85 132 West Road  
La Pocatière (Quebec) G0R 1Z0  
CANADA

Telephone: (418) 856-1454  
Fax: (418) 856-5978  
Web site: [www.pocatec.com](http://www.pocatec.com)

Contact: Mr. Carl Cassista  
President  
E-mail: [pocatec@pocatec.com](mailto:pocatec@pocatec.com)

Year of foundation: 1974

### **Description of activities**

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Pocatec designs, manufactures, and supplies advanced information and entertainment system for the public transit industry.

The company is ISO 9001 certified and the sole manufacturer of integrated audio and visual systems. It boasts a solid reputation for both its products and its service.

The company is offering the following services:

- Products at the cutting-edge of technology and innovation
- Outstanding solutions to meet your requirements
- Versatile and highly flexible with very fast turnaround
- Reliable, just in time delivery

## Pro 2000 Inc.

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Address: 430 Faraday Street  
Sainte-Foy (Quebec) G1N 4E5  
CANADA

Telephone: (418) 688-1055  
Fax: (418) 688-3214

Contact: Mr. François Houde  
President

E-mail : [pro2000@oricom.ca](mailto:pro2000@oricom.ca)

Year of foundation: 1991

### Description of activities

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PRO 2000 offers the full range of electronic manufacturing services (EMS). Depending on the needs, the company will design the product, develop production-engineering documents and complete its production.

The printed circuit board assembly cell is equipped for automatic surface mounts pick and place, mass reflow, component insertion and wave soldering.

## Promark Electronics Inc.

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Address : 245 Avro Street  
Pointe-Claire (Quebec) H9R 6A9  
CANADA

Telephone : (514) 426-4104  
Fax : 1 866 426-4104  
Web Site : [www.pmk.com](http://www.pmk.com)

Contact : Mr. Syd Knecht  
President  
E-mail : [sydk@pmk.com](mailto:sydk@pmk.com)

Year of foundation : 1987

### **Description of activities**

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Promark Electronics is a distributor of cables and electronic connectors. The company is also a provider of cables and connectors assembly turn key services.

Promark is ISO 9003 certified.

## Qma Electronic Inc.

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Address: 100 - 3600 1re Street  
Saint-Hubert (Quebec) J3Y 8Y5  
CANADA

Telephone: (450) 445-6556  
Fax: (450) 445-3052  
Web Site: [www.qma-electronics.ca](http://www.qma-electronics.ca)

Contact: Mr. Éric Laroche  
General Manager

E-mail: [ericlaroche@qma-electronics.ca](mailto:ericlaroche@qma-electronics.ca)

Year of foundation: 1995  
Number of employees: 40

### **Description of activities**

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QMA Électronique is an electronic manufacturing services (EMS) provider. The production plant offers a broad range of services namely: surface-mount and through-holes assembly, turnkey assembly, prototype assembly, urgent 24/48 hours assembly, wave soldering, packaging, test and calibration.

R&D and design services are also available.

# Quantiscript Inc.

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Address: Electrical and computer engineering department  
Sherbrooke University  
Sherbrooke (Quebec) H4T 1Y3  
CANADA

Telephone: (819) 821-8000, post 1095

Fax: (819) 821-7937

Web Site: [www.quantiscript.com](http://www.quantiscript.com)

Contact: Mr. Jacques Beauvais  
President

E-mail: [quantiscript@quantiscript.com](mailto:quantiscript@quantiscript.com)

Year of foundation: 1999

Number of employees: 10

## **Description of activities**

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Quantiscript is a research and development company that develops a new nanolithography technology for microelectronic application. The company is developing new generation lithography processes for nano-scale devices. The company intends to bring new patented technologies to commercial maturity in time to play a key role in the implementation of sub-100 nm microelectronic technologies.

The patented technologies developed by Quantiscript are electron beam lithography processes on sensitive evaporated resists. The company is offering licenses, engineering services, as well as deposition services for our evaporated resists. Quantiscript also manufactures X-ray masks and molds for nano-imprint lithography.

## RDDC Valcartier

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Address: 2459 Pie-XI North Boulevard  
Val-Belair (Quebec) G3J 1X5  
CANADA

Telephone: (418) 844-4000  
Fax: (418) 844-4700  
Web site: [www.valcartier.drdc-rddc.gc.ca](http://www.valcartier.drdc-rddc.gc.ca)

Contact: Mr. Denis Faubert  
General Director  
E-mail: [denis.faubert@drdc-rddc.gc.ca](mailto:denis.faubert@drdc-rddc.gc.ca)

Year of foundation: 1945

Number of employees: 400, with 100 in Optronics

### **Description of activities**

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The mission of RDDC Valcartier (R&D for Defense Canada) is to improve Canada's defense capabilities, through research and development, by providing independent expert advice and by investigating, demonstrating and exploiting innovative technological concepts for combat, electro-optical, command and control information systems. With a team of 100 highly specialized employees, one of the three departments of RDDC Valcartier is dedicated to Optronics.

The expertise, besides contributing to the success of the Canadian Forces operations, enriches the pool of knowledge accessible, via the Business Development Service, to the private sector, and the entire scientific and technological community. RDDC Valcartier has strong ties with the other laboratories of Defense R&D Canada and works closely with other federal research centers and with Canadian universities, industry, OTAN and even with Australia and New Zealand.

## Repro-Precision Inc.

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Address: 161 Mérizzi Street  
Saint-Laurent (Quebec) H4T 1Y3  
CANADA

Telephone: (514) 731-3691  
Fax: (514) 731-3778  
Web site: [www.repro.com](http://www.repro.com)

Contact: Mr. Perry March  
President  
E-mail : [perry@repro.com](mailto:perry@repro.com)

Year of foundation: 1984

### **Description of activities**

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Repro-Precision offers laser photo plotting services for the production of printed circuit boards.

The company is ISO 9002 certified.

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## SCI Systems (Canada) Inc.

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Address: 2001 Des Sources Boulevard  
Pointe-Claire (Quebec) H9R 5Z4  
CANADA

Telephone: (514) 684-6759  
Fax: (514) 684-1833  
Web Site: [www.sci.com](http://www.sci.com)

Contact: Mr. Sandro Baggio  
Manager, Marketing & Sales.  
E-mail: [sandro.baggio@sanmina-sci.com](mailto:sandro.baggio@sanmina-sci.com)

Year of foundation: 1962

### **Description of activities**

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SCI is one of the largest providers of electronic manufacturing services (EMS) in the world. The company is listed on the stock exchange with annual sales of US\$ 6.7 billions, generated by 34 plants and more than 25 000 employees. The head quarter is located in Huntsville, Alabama (US). In Quebec, the company just moved in a new facility in Pointe-Claire. That plant uses 12 leading edge automated assembly lines from FUJI that handled through-holes and surface-mount technologies.

Quality is monitored by functional and burn-in testing capabilities equipment, including temperature cycling.

SCI is specialized in high volume assembly.

The Pointe-Claire plant is ISO 9002 and NSAI certified, and is IPC (Class 2 and 3) compliant.

## **Seku Components Inc.**

---

Address: 10300 Secant Street  
Anjou (Quebec) H1J 1S3  
CANADA

Telephone: (514) 351-2275  
Fax: (514) 355-7549

Contact: Mr. Robert Sebag  
President

E-mail: [seku@videotron.ca](mailto:seku@videotron.ca)

### **Description of activities**

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Seku Components designs, manufactures and markets transformers for a broad range of electrical and electronic applications.

## Silonex Inc.

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Address: 5200 Saint-Patrick Street  
Montreal (Quebec) H4E 4N9  
CANADA

Telephone: (514) 768-8000  
Fax: (514) 768-8889  
Web Site: [www.silonex.com](http://www.silonex.com)

Contact: Mr. Michel Chiasson

Year of foundation: 1958  
Number of employees: 40

### Description of activities

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Silonex is specialized in the design, manufacture and marketing of optoelectronic devices.

Main products are:

- CdS photoconductive cells;
- Photodiodes and phototransistors;
- Opto-couplers;
- Specialized opto-electronic sensors;
- Hybrid micro-modules on ceramic or composite substrates.

Silonex is ISO 9001 certified since 1994. The company has the equipment and the expertise to design and manufacture optical sensors. The air conditioned 1 500 square-meters plant has a class 10,000 humidity and temperature controlled clean room.

## SMIS R&D Inc.

---

Address: 3100 Industriel Boulevard  
Sherbrooke (Quebec) J1L 1V8  
CANADA

Telephone: (819) 829-5120  
Fax: (819) 829-1133  
Web Site: [www.smisrd.com](http://www.smisrd.com)

Contact: Mr. Alain Boucher  
General Director

E-mail: [infosmis@smisrd.com](mailto:infosmis@smisrd.com)

Year of foundation: 1999  
Number of employees: 16

### **Description of activities**

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SMIS R&D is a research and development organization working in a variety of areas within the fields of electronics, microelectronics, and software engineering. Its customer services include consulting, feasibility studies, and product development from design to prototypes as well as pre-series models, if required. SMIS R&D is a partnership between C-MAC (now Solectron) and University of Sherbrooke.

SMIS R&D focuses primarily on telecommunications, energy control, instrumentation, security and home automation. Services offered are:

- Electronic product development, tele-measurement and remote control systems, data transmission systems and specialized circuits;
- Embedded software development based on many platforms (DSPs, 8-16-32-64 bits processors) and operating systems: Linux, QNX, Solaris, Windows, etc.
- System integration of specific product or technology (application specific circuit boards, third party specialized software, etc.)

Based on its close relationship with the various Solectron technical centers, SMIS R&D offers turnkey product development services, including electronic design, mechanical layout, industrial design and software development.

# Solectron

---

Address:	4025 Letellier Street Sherbrooke (Quebec) J1L 1Z3 CANADA	Solectron Corporation 847, Gibraltar Drive Milpitas, Ca, 95035
Telephone:	(819) 569-9561	(408) 957-8500
Fax:	(819) 569-8222	
Web site:	www.solectron.com	
Contact:	Mr. Daniel Boivert Manager, Business Development	
E-mail:	DanielBoivert@solectron.com	

## **Description of activities**

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Created in 1977, Solectron, the world's largest electronics manufacturing services (EMS) provider is offering its customers a full range of integrated solutions across the entire product life cycle. Their clients are the largest manufacturers of high-technology electronic products in many sectors: automotive, telecommunications, computer, consumer electronic, industrial, etc.

Solectron had US\$ 12.3 billion of revenue in 2002 generated by many manufacturing entities in more than 23 countries located mainly in Asia-Pacific, Europe and America.

In 2001, the largest EMS provider in Quebec, C-MAC was acquired by Solectron.

In Quebec, Solectron is specialized in the following areas:

- Thick film microcircuits and multichip modules;
- Video-filters (Pre/post-filters);
- Electronic manufacturing services;
- High performance electronic thermostats;
- Connectivity products;
- Metal cabinets, complete systems, metallic foil, etc.

Based on the quality of their services and products, Solectron has been honored with 450 prestigious awards, including the Malcom Baldrige National Quality Award in 1991 and 1997. Since the 13 years of existence of that program, Solectron is the first company to receive twice that award in the manufacturing category.

# SolVision

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Address : 130 -2111 Fernand-Lafontaine Boulevard  
Longueuil (Quebec) J4G 2J4  
CANADA

Telephone: (450) 679-9542  
Fax: (450) 679-9477  
Web Site [www.solvision.net](http://www.solvision.net)  
Contact: Mr. Ronny Thériault  
Telephone: (450) 679-2878  
E-mail: [rtheriault@solvision.net](mailto:rtheriault@solvision.net)

Year of foundation: 1994  
Number of employees: 45

## Description of activities

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SolVision is the leader in high performance automated visual Inspection solutions for the microelectronics industry. The company has developed a new 3D inspection technology named FMI for bidimensional and tridimensional measurements. The FMI Technology is based on a method of a structured light pattern projection at the surface of either a reference or datum plane or at the surface of an object whose 3D shape is to be measured.

The FMI process, patented by SolVision, is based on the *Moiré* interferometer principle, and offers many advantages over other techniques for inspecting flip-chip or BGA (ball grid array) components. The FMI, which incorporated a methodology developed by SolVision under the VPA (Volume Pixel Acquisition) trade name, memorizes x, y and z positions for each pixel and offers a processing speed which is three time faster than current techniques.

SolVision systems are currently used in a broad range of products for components inspection before shipping to the final user. FMI systems are also used by flip-chip automated equipment makers and high speed positioning equipment for integrated circuits.

Other applications currently available from Solvision include inspection of solder paste after stencil printing of circuit boards and inspection of wafer-level packages, including non destructive quality control of silicon wafers.

# SpaceBridge

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Address: 115 Champlain Street  
Gatineau (Quebec) J8X 3R1  
CANADA

Telephone: (819) 776 2848  
Fax: (819) 776 4179  
Web Site: [www.spacebridge.net](http://www.spacebridge.net)

Contact: Mr. Sébastien Dignard

E-mail: [Sdignard@spacebridge.com](mailto:Sdignard@spacebridge.com)

## Description of activities

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SpaceBridge is a supplier of high-performance, broadband wireless semiconductor solutions. Our products enable equipment manufacturers, making it easier for them to design, develop, and integrate flexible wireless networking technologies.

Spacebridge is offering a complete semiconductor, access software, and evaluation system product portfolio for broadband wireless equipment. This unique design approach provides a lower cost means for transmitting aggregated DVB-RCS and IP-based voice, data, and video traffic over satellite, eliminating the need for expensive carrier channels within terrestrial and satellite networks.

Every product is offered individually, based on expertise in digital and RF semiconductor designs, and a thorough understanding of module, system, and can be adapted to a wide range of application requirements for terrestrial- and satellite-based wireless networks.

# Specnor Tecnic Corporation

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Address: 5350 J. Armand-Bombardier Street  
Saint-Hubert (Quebec) J3Z 1J1  
CANADA

Telephone: (450) 462-8651  
Fax: (450) 462-8654  
Web Site: [www.specnor.com](http://www.specnor.com)

Contact: Mr. François Parent  
President  
E-mail: [specnor@microtec.net](mailto:specnor@microtec.net)

Year of foundation: 1995

## **Description of activities**

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Specnor Tecnic is specialized in the development, manufacturing and marketing of soldering wave machines for the assembly of electronic components on printed circuit boards.

# Spectratech Inc.

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Address: 602 Meloche Avenue  
Dorval (Quebec) H9P 2P4  
CANADA

Telephone: (514) 636-1397  
Fax: (514) 636-1993

Contact: Mr. Nick Mibea  
President

E-mail : [spectratech@qc.aibn.com](mailto:spectratech@qc.aibn.com)

Year of foundation: 1995

## **Description of activities**

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Spectratech is an outsourcing company in the electronic assembly business (EMS). A buying service, for components and devices, is also offered to all its clients.

## Stockeryale Canada Inc.

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Address: 275 Kesmark Street  
Montreal (Quebec) H9B 3J1  
CANADA

Telephone: (514) 685-1005  
Fax : (514) 685-3307  
E-mail : [lasers@stockeryale.com](mailto:lasers@stockeryale.com)  
Web site : [www.stockeryale.com](http://www.stockeryale.com)

Contact : Ms. Marie-Ève Plouffe  
Human resource Manager

Year of foundation: 1985  
Number of employees: 100

### **Description of activities**

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Stockeryale Canada produces laser diode modules, optical diffractive components and phase masks.

# SyQuartz Inc.

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Address: 3095 Westinghouse Street  
Trois-Rivières (Quebec) G9A 5E1  
CANADA

Telephone: (819) 373-2579  
Fax: (819) 373-3221  
Web Site: [www.syquartz.com](http://www.syquartz.com)

Contact: Mr. Berthier Thibeault  
President  
E-mail: [syquartz@sympatico.ca](mailto:syquartz@sympatico.ca)

Year of foundation: 1994

## **Description of activities**

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SyQuartz is specialized in crystal growth for the electronic industry. The following services are offered:

- As-grown quartz crystals
- Lumbered quartz bar
- 750 and 1000 mm wafers

## Sysacom R&D Plus Inc.

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Address: 324 Saint-Paul Street  
Le Gardeur (Quebec) J5Z 4H9  
CANADA

Telephone: (450) 585-6396  
Fax: (450) 582-3231  
Web Site: [www.sysacom.ca](http://www.sysacom.ca)

Contact: Mr. Denis Lachapelle  
President

E-mail: [denisl@sysacom.ca](mailto:denisl@sysacom.ca)

Year of foundation: 1996  
Number of employees: 8

### **Description of activities**

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Sysacom R&D Plus is involved in electronic circuit design and real time software development. The company has been involved for more than seven year in turnkey electronic product development and consultation services. Sysacom's team is specialized in many fields namely: hardware design, signal processing, programmable circuits, imbedded software, visual C++ software and network software.

The company is also involved in the development of OEM products. Some of these products are PCI circuit boards and software modules. The company provides a broad range of services from concept, product definition, design, prototype and tests. The company is offering the following products:

- Signal processing and microcontrollers (8, 16 or 32 bits) electronic boards;
- FPGA and CPLD for analog and interface circuits;
- Power supplies and power circuits;
- Echo cancellation reduction, digital filter, inner bandwidth processing;
- Graphic interface software;
- DSP software for analog motor controller.

## Task Micro-Electronics Inc.

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Address: 16700 Transcanada Highway  
Montreal (Quebec) H9H 4M7  
CANADA

Telephone: (514) 697-6616  
Fax: (514) 697-4466  
Web Site: [www.taskmicro.com](http://www.taskmicro.com)

Contact: Mrs. Suzanne Fleurant  
Marketing manager  
E-mail: [info@taskmicro.com](mailto:info@taskmicro.com)

Year of foundation: 1987

### **Description of activities**

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Services currently offered by Task MicroElectronics to military, aerospace, medical, telecommunications, and some commercial markets include the design, development, and production of:

- Sensors
- Optoelectronic
- Hybrid circuits
- Chip-and-wire hybrids
- Surface-mount and mixed technology boards, including PCMCIA (Personal Computer Memory Card International Association)
- Chip-and-wire assemblies on most materials (FR-4, Flex, etc.)

## Technologies Design Workshop Inc.

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Address: 320 - 7405 Tran Canada Highway  
Saint-Laurent (Quebec) H4T 1Z2  
CANADA

Telephone: (514) 745-0770  
Fax: (514) 745-6556  
Web site: [www.designw.com](http://www.designw.com)

Contact : Mr. François Marquis  
President

E-mail : [info@designw.com](mailto:info@designw.com)

Year of foundation: 1988

Number of employees: 23

### **Description of activities**

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Design Workshop develops computer aided design software for many industrial micro fabrication applications: microelectronic, photonic, sensor and electronic components. This software can be used for the design of integrated circuits, integrated RF components and microwave, planar waveguide circuits, MEMS, hard disks heads and image detectors.

Physical layout products from Design Workshop are particularly well adapted to microsystems physical layout design, design rule checking, including photomasks validation for lithographic process.

Design Workshop software is compatible to many computer platforms from PC to high end workstations.

# Technologies Productix Inc.

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Address : 101 - 990 Armand-Bombardier Street  
Terrebonne (Quebec) J6Y 1R9  
CANADA

Telephone: (450) 433-3364  
Fax: (450) 434-7150  
Web Site : [www.productix.com](http://www.productix.com)

Contact: Mr. Sébastien Lassonde  
President

E-mail : [slassonde@productix.com](mailto:slassonde@productix.com)

Year of foundation: 1998  
Number of employees: 3

## Description of activities

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Productix Technologies is a consulting company in the field of computerized electronics, specializing in product research and development. Through a service in quality conceptual design, the company helps their clients to achieve successfully their business goals. Productix offers a leading edge expertise at a competitive price.

Productix is striving to become a leader internationally in the competitive world of electronic concept and design using cutting edge technology and continuous improvement and development of its entire staff in order to remain in the forefront of this exciting field. Up to date resources are placed at the disposal of their customers and working partners to maintain clear, honest and effective business communication within clients' organizations.

Services offered include:

- Hardware and software design
- Printed circuit boards design
- Embedded firmware
- Software and database programming for PocketPC, Palm and PC
- Automated test bench

## Technologies Summit Inc.

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Address: 200 - 850 Selkirk Street  
Pointe-Claire (Quebec) H9R 3S3  
CANADA

Telephone: (514) 428-1229  
Fax: (514) 428-5953

Contact: Mr. Louis Carrier  
President

E-mail : [lcarrier@summit.qc.ca](mailto:lcarrier@summit.qc.ca)

Year of foundation: 1993  
Number of employees: 21

### **Description of activities**

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Services include the following:

- Pattern design, geometrical and library design
- Creation of schematic drawing
- Printed circuit boards design
- Manufacturing, assembly and parts requirement
- Laser plotting
- Prototype printed circuit boards
- Printed circuit boards assembly

Summit technologies' team is comprised of designers with CEGEP degrees in electronics. The company offers high quality printed circuit boards that are in line with budget constraints and shipping requirements. Software used for the development of printed circuit boards is the following:

- Mentor Graphics
- Cadence Viewlogic
- PCAD
- Accel EDA
- Orcad
- PADDS
- Intercept Technology
- Veribest
- Specctra
- Valor
- Frontline
- Viewlogic

## TELOPS Inc.

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Address: 4940 Pierre-Georges-Roy Street  
Saint-Augustin (Quebec) G3A 1V7  
CANADA

Telephone: (418) 864-7808  
Fax: (418) 864-7843  
Web site : [www.telops.com](http://www.telops.com)

Contact: Ms.Nadine Bernard  
Human resource and Marketing Manager

E-mail : [contact@telops.com](mailto:contact@telops.com)

Year of foundation: 2000  
Number of employees: 40

### **Description of activities**

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Telops provides design and production services for sophisticated optoelectronic systems. Markets served are defense, aerospace and telecommunications.

# TeraXion Inc.

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Address: 20 - 360 Franquet Street  
Sainte-Foy (Quebec) G1P 4N3  
CANADA

Telephone: (418) 658-9500  
Fax : (418) 658-9595  
Web site : [www.teraxion.com](http://www.teraxion.com)

Contact : Mr. Alain Chandonnais  
President

E-mail : [info@teraxion.com](mailto:info@teraxion.com)

Year of foundation: 2000

## **Description of activities**

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TeraXion, a technology leader in grating-based components, designs and manufactures state-of-the-art passive optical components and modules for high-performance networks. These products are spectral filters, gain flattening filters and multiplexers.

With its Bragg grating and TerAnneal technologies combined to the design expertise of its R&D team and its internal capabilities in leading-edge holographic phase masks, TeraXion provides optical building blocks for today's high-speed and tomorrow's all-optical network transmission equipment.

TeraXion has developed a high performance Bragg grating concept by combining its unique writing technology to its internal manufacturing capacity of high quality phase masks.

In the fall of 2001, TeraXion opened a state-of-the-art facility dedicated entirely to manufacturing and production engineering. TeraXion is devoted to meeting and surpassing the optical telecommunications industry's quality standards. TeraXion optical components are Telcordia GR-1209 and GR-1221 compliant.

# Transfab Transformers Inc.

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Address: 175 Jules-Leger Street  
Boucherville (Quebec) J4B 7K8  
CANADA

Telephone: (450) 449-0412  
Fax: (450) 449-9115  
Web Site : [www.delta.xfo.com](http://www.delta.xfo.com)

Contact: Mr. Frank Falvo  
Sales Vice-President

Year of foundation: 1991  
Number of employees: 100

## Description of activities

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Transfab Transformers is specialized in the design and manufacturing of transformers.

The product range includes:

- Control Transformer
- Lighting Transformer (Low Voltage)
- Rectifier Transformer
- Transformers for electronic applications (Printed circuit Board Mounting)

Transfab is also involved in the development of custom designed transformers, including prototypes.

# Trilogix

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Address: 5150 Namur Street  
Montreal (Quebec) H4P 1X7  
CANADA

Telephone: (514) 733-6864  
Fax: (514) 733-0644  
Web Site: [www.trilogix.ca](http://www.trilogix.ca)

Contact: Mr. Frank Panarello  
E-mail : [frankp@trilogix.ca](mailto:frankp@trilogix.ca)

Year of foundation: 1989

## **Description of activities**

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Trilogix provides complete electronic assembly services on printed circuit boards (EMS) to small, medium and large companies from design to manufacturing of prototypes and finished products. Markets served are:

- Automotive
- Telecommunications
- Industrial controls
- Computers and peripherals
- Industrial and commercial security
- Rust protection and flow control

## TRIONIQ Inc.

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Address: 355 Racine East Street  
Chicoutimi (Quebec) G7H 1S8  
CANADA

Telephone: (418) 693-5858  
: 1 800 561-7380 (Canada and USA)  
Fax: (418) 696-4816  
Web site: [www.trioniq.com](http://www.trioniq.com)

Contact: Ms. Mireille Jean  
E-mail: [Jean.mireille@makinbox.com](mailto:Jean.mireille@makinbox.com)

Year of foundation: 1984  
Number of employees: 20

### **Description of activities**

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TRIONIQ offers a complete range of products based on the MakinaBOX system. Using MakinaBOX, it is possible in only a few seconds, to add or remove standard electronic cards (ISA, PCI, AGP, PICMG) from a PC system. It is then possible to remove the CPU/SBC card without peripheral disconnect. Mainly implemented as a cassette with a connector, the technology reduces maintenance time of a product. The technology also offered an efficient protection against electromagnetic interference.

The MakinaBOX patented technology is also offered on a license basis.

## Triton Electronik Inc.

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Address : 559 Industriel Boulevard  
Saint-Eustache (Quebec) J7R 6C3  
CANADA

Telephone: (450) 491-0540  
Fax: (450) 491-0905  
Web Site: [www.triton-electronik.com](http://www.triton-electronik.com)

Contact: Mr. Daniel Blanche  
President  
E-mail: [d.blanche@triton-electronik.com](mailto:d.blanche@triton-electronik.com)

Year of foundation: 1985

### **Description of activities**

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Triton Electronik is a leading electronic contract manufacturer specialized in high mix printed circuit boards assembly, cable harnesses, to complex systems assembly for mid size customers and projects.

Triton Electronik operates three production facilities in the Montreal area for a total of over 9 000 square meters.

# Varitron Technologies Inc.

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Address: 4811 Chemin de la Savane  
Saint-Hubert (Quebec) J3Y 9G1  
CANADA

Telephone: (450) 926-1778

Fax: (450) 926-1844

Web Site : [www.vti.qc.ca](http://www.vti.qc.ca)

Contact: Mr. René Séguin  
Sales and Marketing Director

E-mail : [vti@vti.qc.ca](mailto:vti@vti.qc.ca)

Year of foundation: 1992

Number of employees: 80

## **Description of activities**

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Varitron Technologies offers a full range of electronic manufacturing services (EMS). Depending on the needs, VTI will develop production-engineering documents (bill of material, approved vendor list, assembly instructions, test procedures, quality plan) and complete its production (parts procurement, assembly, test, packaging).

The printed circuit board assembly cell is equipped for automatic surface-mounts pick and place, component insertion and wave soldering, including ball grid array (BGA) packages and press-fit connectors insertion.

# Viasystems Inc.

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Address: 205 Brunswick Boulevard  
Pointe-Claire (Quebec) H9R 1A5  
CANADA

Telephone: (514) 694-8400  
Fax: (514) 694-4457  
Web Site : [www.viasystems.com](http://www.viasystems.com)

Contact: Mr. François Desjardins  
General Director

Year of foundation: 1973  
Number of employees: 950

## **Description of activities**

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VIA Systems is a global North American industry leader in the manufacturing of advanced printed circuits. The company manufactures multilayer and high density Printed Circuits that are used in a wide range of advanced applications throughout the electronics industry:

**Automotive:** VIA Systems's products are currently used in automotive engine and transmission control systems as well as in ABS traction controls, collision avoidance systems and accessory modules.

**Computer:** VIA Systems supplies multilayer products that are built into computer memory, printed circuit modules and data communication systems over the Internet.

**Industrial:** VIA Systems customers manufacture industrial automation and control systems as well as bar code readers.

**Telecommunication:** VIA Systems manufactures printed circuit structures for cellular telephones and miniaturized digital pagers, business communication systems and mobile radios, as well as for advanced switching and transmission systems.