



*The Israel Export & International Cooperation Institute*

# ISRAEL

## Telecommunications Industry



VoIP  
wireless  
broadband



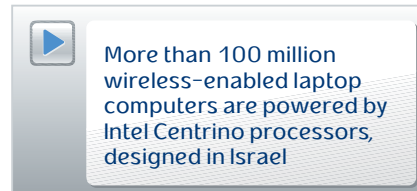


## Background

Telecommunications is one of the fields in which Israel's high-tech ingenuity has taken it to a position of prominence in the global markets.

The country's telecoms industry integrates a broad spectrum of companies working in fields including semiconductor development, hardware design, software, content, and system integration and includes firms ranging from the newest start-ups to giant Israel Aircraft Industries, which developed and launched the country's Amos communications satellites.

Israel, whose high-tech sector has always included many niche players, has also benefited from the fact that the telecoms market is made up of many diverse niches in a complex food chain, from optical modems to data compression, and from provisioning software to intelligent antennas. Perhaps more than other technology-based markets, Israel's firm focus on leading-edge technology development has given it a major competitive advantage in the telecommunications market, where demand for new services and ever-greater bandwidth continues to grow rapidly. And, unlike in other markets where Israeli companies are at a disadvantage in building international brand recognition and selling to the end-user, Israeli telecoms companies are able to sell very successfully to international brand-name corporations such as Cisco, Alcatel and Nokia and to leading service providers such as AOL, Deutsche Telekom and Vodafone.



## Telecoms by the numbers

Israel has 550 telecoms high-tech companies, of which 300 companies exported \$3.4bn worth of equipment and more than \$1.5bn in software products and services in 2006, an increase of 17.1% over 2005.

**Israel's domestic market** ▶ population 7.1M

**Market penetration of telecoms services** ▶ fixed line: 99%, cellular: 110%, broadband (up to 5Mbit/s): 64%





# The Israeli Advantage

## International Innovation Leadership

Israeli industry is internationally acknowledged as one of the most innovative throughout the world of research and development, both for basic technology and for its applications to the real world. Israel has the world's highest concentration of high-tech start-ups per capita, and the second-highest in the world in absolute numbers after Silicon Valley: many of these are in electronics and related fields, while backing by Israel's very active venture capital funds ensures that a high proportion of the best ideas actually get commercialised.

## Outstanding Human Resources

Israel has the highest proportion in the world of scientists and engineers with postgraduate education: 135 per 10,000, compared to 78 per 10,000 in the USA. Israeli science and engineering students are also more mature than those in other countries, and more experienced in real-world challenges, thanks to three years of military service, which helps to make them productive and innovative as soon as they start to work. The experience gathered during military service is especially important in the telecommunications industry: the defense establishment's needs cover every possible communications technology, from fiber optics to encryption, from miniaturized antennas to instant messaging; and all of this experience is also expressed in civilian industries.



Israel has more high-tech start-up companies per head than anywhere else in the world, and the largest concentration in absolute numbers anywhere outside Silicon Valley. Telecommunications is one of the leading fields of excellence of Israeli start-ups, and many have either gone public or been acquired by major multinational companies.

The level of the country's human capital can also be measured by the number of patents registered, which is one of the highest in the world relative to population.





## Government Support

The Israeli government actively supports the whole chain of industrial innovation, from entrepreneurial start-ups through multinational companies, with a broad spectrum of tax benefits, incentive funds for establishing manufacturing facilities and funds for R&D support. These include incentives for foreign capital investments, tax holidays, matching funds for industrial R&D from the Chief Scientist's Office, support programs for pre-industrial generic R&D, start-up incubators, and bi-national R&D funds with five countries, R&D cooperation agreements with ten countries and participation in the European Union's R&D Framework.

## A strong local market

Unlike many other high-tech fields, where Israel's local market of 7.1 million people isn't large enough to stimulate the development of new products and

services, Israeli consumers are an avid domestic market for telecoms, thanks especially to the deregulation of the last few years, and are among the most enthusiastic early adopters of new technology.



Voice-over-Internet Protocol (VoIP) was originally developed by Israeli company Vocaltec

The national telecoms carrier, Bezeq, was privatized in mid-2005 after already losing its monopoly on both domestic and international calls. There are currently four mobile providers, and six carriers competing for international telephony. There is also a full range of internet and mobile-based e-commerce, e-government and Value Added Services.

The telecoms industry has also benefited from the needs of national defense. The defense establishment, has always been the most demanding market for every possible communications technology, most of which has been provided by local manufacturers; and it is currently developing a multi-hundred-million-dollar C<sup>4</sup>I system that will allow battlefield commanders to see and control every unit, vehicle and soldier in real time. These requirements have made Israel's population one of the most technology-literate in the world and ensure that local industry develops the most sophisticated cutting-edge systems rapidly and cost-effectively.



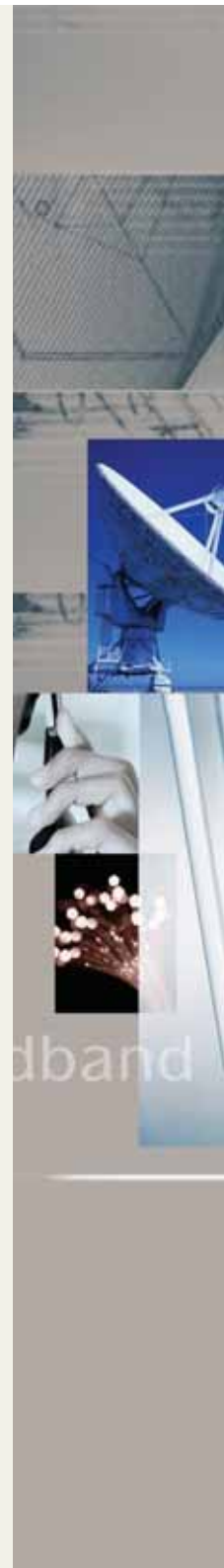
The wireless pager was originally developed in order to provide silent messaging to Israeli security service officers



## Multinational Companies

Many leading international telecoms companies have built up a strong presence in Israel to take advantage of local abilities, both through the establishment of local R&D centers and through acquisitions of Israeli start-ups.

- ▶ **Intel's** Centrino chipset, which powers millions of new-generation laptop computers and also provides their wireless networking capabilities, was developed by one of the company's Israeli R&D labs.
- ▶ **Cisco** is not only a key provider of network infrastructure hardware to the local telecoms market, but has invested about one billion dollars in acquiring Israeli companies. These include Actona Technologies, whose solutions enabled central data storage and real-time data access over wide-area networks; Pentacom; and Riverhead, which developed traffic management solutions for extreme data overloads.
- ▶ **Motorola** is one of the oldest-established multinationals in Israel, and Motorola Israel is regarded by the parent company as one of its most successful investments ever. The Israeli R&D facilities lead the company's development of digital packet radio systems, as well as for wireless terminal and command-and-control systems, and there is also a major manufacturing plant in southern Israel.
- ▶ **Freescale Semiconductors**, which span out of Motorola, has one of its main development centers in Israel, responsible for more than one-sixth of the company's global revenues. The company makes processing chips for the broadband communications market, used by companies such as Cisco, Siemens and Alcatel, and also chips for mobile telephones and other wireless systems.
- ▶ **NDS**, a subsidiary of News Corporation, develops the encryption and decryption technology for the television decoders for broadcasting networks all over the world. NDS relies on Israel's outstanding skills in cryptography and data security to deliver content to subscribers and ensure revenue, while blocking illegal distribution and content hacking. NDS' systems are used in over 58 million digital TV boxes worldwide



## Success Stories



▶ **RAD Data Communications** has for 25 years been an outstanding example of Israeli technological innovation and entrepreneurship. From a small company developing wireline and fiber optic modems, it has grown into a group of 14 separate companies, of which six are traded on NASDAQ. The group develops and produces technology solutions covering everything from wireline network access equipment to ultra-broadband wireless infrastructure, including optical frequency multiplexers, encryption adapters, desktop wireless networking and network management systems.



▶ **Comverse** is one of the leading providers of infrastructure technology for mobile and wireline telephony. Its products range from billing systems for both prepaid and subscription customers as well as mobile transactions, through multimedia messaging solutions, to rich media content and advanced voicemail platforms. Comverse supplies some of the world's largest telcos, including AT&T and Verizon in the USA, Vodafone Global and Deutsche Telekom, and the three largest carriers in China.



▶ **Alvarion** is the world's leading provider of WiMAX and wireless broadband solutions. With over 3 million units deployed in 150 countries, Alvarion offers the most extensive deployments and proven product portfolio. Leading the market to Open WiMAX, Alvarion's fixed and mobile solutions enable the delivery of Personal Broadband, business and residential broadband access, toll quality telephony, mobile base station feeding, hotspot extension, community interconnection and public safety communications.





► **AudioCodes Ltd.**, established in 1993, a key originator of the ITU G.723.1 standard, has since acquired four companies and is a leading player in the VoIP industry. Registered on the NASDAQ and Tel Aviv Stock Exchange, AudioCodes has a staff complement of over 700 employees. AudioCodes provides flexible, comprehensive media gateway and media processing technologies and Session Border Controllers (SBCs), and enabling technology products which include VoIP and CTI communication blades, VoIP media processors, Modules and CPE devices.



► **ECI Telecom**, one of the pioneers of Israel's telecoms industry, jumped to prominence in the 1980s with voice multiplexing technology that enabled telcos to increase the number of subscribers on existing infrastructure. After reorganizing to meet the industry's new needs, the company has become a leading supplier of optical networking solutions including provisioning and management, as well as management solutions for broadband access networks. Customers include Deutsche Telekom, D2 Vodafone, Globe Telecom, Telia, Bezeq, Singapore Telecom, KPN, China Telecom, CNC, and Korea Telecom.



► **Scopus Video Networks** is an international pioneer in Video over IP. It develops and manufactures a broad range of equipment, including encoders, decoders and multiplexers, as well as network management software, for point-to-point and broadcast video over satellite, cable and broadband infrastructure. Its products are used for direct broadcast as well as video-on-demand by hundreds of network operators worldwide.



## About the Israel Export & International Cooperation Institute

The IEICI supported by over 2600 member firms, private sector bodies and the Government of Israel, promotes business relationships between Israeli exporters and overseas businesses and organizations. By providing wide range of export-oriented services to Israeli companies and complementary services to international business community, the Institute helps build successful joint ventures, strategic alliances, and trade partnerships.



### Contact Information

-  **Amnon Ferber, MBA**  
Business Development Manager, Telecommunications Industry
-  Israel Export & International Cooperation Institute  
29 Hamered St. Tel Aviv 68125, Israel
-  +972-3-514-2955
-  +972-3-514-2881
-  [Ferber@export.gov.il](mailto:Ferber@export.gov.il)
-  [www.export.gov.il](http://www.export.gov.il)

This publication is for informational purposes only. While every effort has been made to ensure that the information is correct, the Israel Export & International Cooperation Institute assumes no responsibility for damages, financial or otherwise, caused by the information herein.

© March 2007  
The Israel Export & International Cooperation Institute  
Production: Media & Productions Unit  
Copywriting: David Nordell  
Design: Ayala Eylath

