

Smartcom Bulgaria AD Company Profile

Corporate

Smartcom Bulgaria AD is a Bulgarian based company established in 1991, working in the field of Information and Communication Technologies. Throughout its history the company has consistently delivered outstanding quality and value to its customers and partners. Our focus is to be a competent and trustful partner. Our aim is professional excellence.

Our team is our biggest investment and achievement. We respect knowledge and experience. We appreciate creativity and devotion. We encourage initiative and sharing.

Our goals are:

- To be the preferred telecommunications system integrator in the Balkan region;
- To provide best-in-class professional services;
- To extend our knowledge, skills and market position as a development and design partner;

Smartcom Bulgaria AD implemented a quality management system in 1999. The company is certified under the international standard ISO 9001:2008. We believe that quality is no coincidence. It is the result of everyday team effort. We work hard to bring quality solutions and services to our customers and partners.

Smartcom Bulgaria AD received the 2009 award in the "National Competition for Innovative Enterprises" in the category of medium-size and large company.

Our Services

System Integration

Smartcom provides communications solutions, and associated services to enterprises, service providers and equipment vendors. With its broad portfolio of products and services, Smartcom is positioned as the go-to partner, capable of providing turn-key solutions for today's and tomorrow's telecommunications networks.

Smartcom's culture is built upon total focus on the needs and requirements of customers, the majority of which are well established telecommunications and network service providers.

Our team's technical expertise and integrity has repeatedly been recognized by our customers and partners.

Smartcom has sales and support offices throughout Bulgaria and extends its regional presence through a number of partnerships on the Balkans.

Solutions

Enterprise solutions

- Network Security - Firewalls, SSL VPN solutions, Intrusion Detection and Prevention Systems
- Routing & Switching
- VoIP

Service Provider Solutions

- Nationwide and metropolitan networks and infrastructure
- xWDM
- SDH
- Active Ethernet
- passive optical infrastructure
- Best-in-class core and edge routing solutions allow reliable delivery of

network services over revenue-generating IP and MPLS infrastructure.

- VoIP solutions with focus on communications, applications and networking elements.

Telecom Professional Services

Smartcom provides comprehensive, high-standard Professional Services. The following services are offered to clients on short-term and long-term basis to assist and support in planning, designing, implementing, operating, and managing their networks:

- Network modeling, planning and design
- Project implementation and management
- Network support and maintenance

Solutions Partners

Smartcom has multiple successful partnerships with market leading telecommunications solutions vendors, including:

- ADC, www.adc.com
- AudioCodes, www.audiocodes.com
- Fastwire, www.fastwire-group.com
- Gallery IP Telephony, www.g-ipt.com
- Infinera Corporation, www.infinera.com
- Juniper Networks, www.juniper.net
- Microsens, www.microsens.de
- OFS BrightWave, www.ofsoptics.com
- SAGEM S.A., www.sagem.com

Partner products and solutions have been successfully implemented by Smartcom in a variety of projects on a regional (Balkans) scale.

Design & Development Services

Product Development

ISO 9001:2008 certified development process

- Management commitment to quality and customer satisfaction
- Process and quality control systems
- Consistency and predictability of produced results
- Version and source control systems and review process: ensure that only quality changes make it into the code base

Project approach

- Resources allocated on a per-project basis
- Technical project manager appointed for each project
- Increased accountability and control of projects (both cost- and time-wise)
- Increased flexibility in resource assignment, allocation and utilization

Proven track record

- Developed and successfully marketed a number of in-house products both internationally and in Bulgaria
- Carried out a number of successful outsourcing contracts for international customers
- Developed tailor-made products upon customer request

Competences

- Schematic and PCB design
- Hardware prototyping
- Software systems design and implementation
- Embedded systems development
- Testing

Electronic Design Automation (EDA) services

Our experience in EDA tool development and product management makes Smartcom the most suitable choice for an EDA software services partner. With highly skilled EDA engineers, a broad range of tools and a growing portfolio of products Smartcom brings significant benefits to its services customers. Smartcom offers services in EDA tool development, integration, and maintenance.

The team has experience in developing and maintaining design and verification flows in the ASIC, SoC, and custom design space.

Smartcom has successfully taken ownership of developing, deploying, and supporting design toolkits and verification methodologies for several major semiconductor organizations. In addition, Smartcom has experience in developing point tools to target specific design and verification needs that cannot be met by generic EDA solutions.

Selected sample projects:

- Foundry/Fab design kit development and support
- Verification methodology development and support
- Evaluation of CAD tools
- Custom EDA tool development

Our Products

Strong Access family

The Smartcom StrongAccess family of Ethernet Access switches was designed around the DHCP subscriber management model with TriplePlay service delivery in FTTX settings in mind. Its feature set was defined to meet the growing demands for delivering quality services to end users that today's access networks have.

The StrongAccess family consists of two categories of products: Customer Premises Equipment (CPE) and access layer concentrator switches. Both categories of products are based on Marvell chipsets, which combined with the Smartcom control plane software, offer the features needed to deliver TriplePlay services to subscribers.

The development of the StrongAccess family has its roots in Smartcom's participating in an EU-funded R&D program (Bulgarian National Innovation Fund), which Smartcom continues to participate in. The latest Smartcom EU funded project is an FTTX IAD with integrated Wi-Fi, VoIP and Ethernet functionality.

Secure Alert

SecureAlert is an automated emergency notification solution for emergency response groups, business continuity teams and disaster recovery planners.

Organizations that need to ensure safety and survival during disasters rely on the SecureAlert emergency notification solution; to achieve operational efficiencies during routine events, the SecureAlert solution automates incident communications and accelerates incident resolution.

Smartcom Call Recording System

Smartcom Call Recording System is a software solution to provide call recording for Cisco IP telephony and Cisco IP contact centers. It has a rich set of standard features that includes an intuitive web-based user interface, complete call life cycle management, user access based on roles and privileges, total and on-demand recording and much more.

Our Technology

Smartcom's research and development background has always driven the company to incorporate novel ideas in all offered solutions. Smartcom's proven track record is the result of:

- Constant focus on innovation
- Close co-operation with universities and academia
- Management and production based on modern tools, such as ERP, CRM, WorkFlow control, CAD, EDA and others
- More investment in R&D

Electric Filters Design

Intensive research is carried out for the design of high stable, high accuracy filters based on Film Bulk Acoustic Resonators (FBAR). An application for the patent of a new filter structure has been filed (International Patent Application No. PCT/IB2009/006083). The filter structure has the following properties:

- The circuit consists of resonators and amplifiers;

- A smaller number of resonators used compared to the existing FBAR filter structures with similar selectivity;
- Easier adjustment of filter pass-band through the use of amplifier parameters;
- Ability to create and tune in wide frequency range of transmission zeros in the filter stop-band by varying the amplifier parameters only;
- Moderate requirements concerning amplifiers since they are not involved in feedbacks.

The area of application of the new filter is in the analogue front end of RF transceivers.

Previous products: Design and producing of high accuracy extremely narrow band quartz-crystal filters for FDM phone systems.

Microelectromechanical systems (MEMS) design

MEMS, or micro-electro-mechanical-systems, are tiny devices often made from silicon, utilizing processes similar to those used for semiconductor chip production. The primary difference is that a MEMS device usually has a mechanical actuating element, such as cantilever, tilting micro-mirror, or moving membrane.

The microelectromechanical systems design is a natural extension of Smartcom's expertise in the area of electronic design automation (EDA) and microelectronics. Smartcom identified it as a strategic area for development in 2006. Since then Smartcom has established partnership with the two leading universities in Bulgaria: Technical University - Sofia and Sofia University. Our team of highly qualified engineers is working in the field of MEMS design, modelling and characterization. Since the complex, precise MEMS product development requires more than a clean

room, processing equipment and skilled operators, modelling tools are used to simulate the design performance before fabrication expenses are incurred. Smartcom's design flow includes:

- MathWorks Matlab
- Cadence IC (Virtuoso, Spectre, Assura)
- Verilog-A modeling
- Ansys Multiphysics
- Softmems Design Explorer
- Coventorware Coventor

Carbon nano tube field effect transistors

Most experts agree that the standard CMOS electronics will reach technological, economic and, most importantly, fundamental physical limits in the next 5-10 years. Therefore, it is of great importance for the industry to develop technologies that will enable continued implementation of increasingly higher performance devices. The carbon nanotube field effect transistors (CNT FET) are among the most promising new technologies that could take the place of the silicon based electronics.

Smartcom is part of an international consortium participating in a FP7 STREP project for development of new types of field effect transistors (FET) and interconnects based on carbon nanotubes (CNT). The main objective of the project is to develop, characterize, model and measure new high-performance, low noise CNT based FETs and interconnects.

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