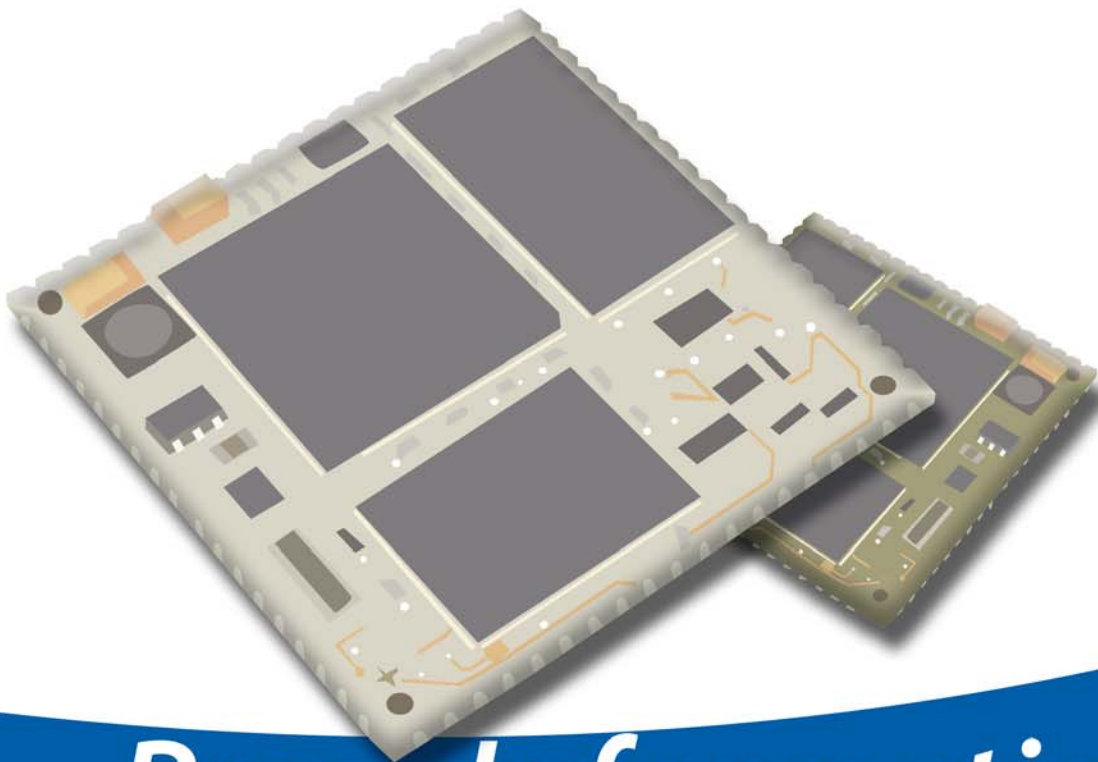


**BLUE**  
**TECHNIX**



***Press Information***

*...maximum performance at minimum space*

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## Company profile

Bluetechnix, established in September 2004, is a spin-off of the Vienna University of Technology. With its headquarters in Vienna, Bluetechnix core business focuses on the design and development of embedded system Core Modules based on Blackfin Digital Signal Processors from Analog Devices and Freescale's i.MX multimedia application processors. The customer can immediately use these Core Modules for rapid prototyping, which will reduce prototyping costs and will lead to shorter time-to-market. Bluetechnix can call on many years of experience in individual development services for customers' designs. Additionally we have gained long experience in low-level software development for embedded system. Client satisfaction, innovation and quality of product and service have been the cornerstones of Bluetechnix success. Our motivated employees know what it takes to deliver services that exceed customers' expectations. Therefore, we are continuously reinventing ourselves and use our technological expertise to develop cutting-edge technology for industrial, transport, medical and consumer applications.

## Company history

Bluetechnix was founded in September 2004 as a spin-off of the Institute of Computer Technology of the University of Vienna.

Based on the development results and experience gained from the research project tinyphoon ([www.tinyphoon.com](http://www.tinyphoon.com)) where the redesign of the Tinyphoon platform was very time consuming each time, the idea of building easy to use plug-in Core Modules for the processors was born.

In 2005 the first Core Modules based on the Blackfin processor, CM-BF533 and the CM-BF561, were brought to market. They were followed in 2006 by the CM-BF537E and its derivatives the CM-BF537U and the TCM-BF537. The TCM-BF537 was the smallest ever developed Core Module (28mmx28mm) which also has a BGA (Ball Grid Array) and a BP (Boarder Pad) option.

In 2006 Bluetechnix developed hardware and firmware of a complex industrial product based on Freescale's MPC5200 processor for a big multinational company. In the same year Bluetechnix developed new Development and Extender Boards to support product development of customers worldwide. One example is the flexible DEV-BF5xx-FPGA board hosting two slots for Blackfin Core Modules and a Xilinx FPGA. This board was the basis for several customer specific projects.

In 2007 Bluetechnix's research proposal for a Wireless Cargo Monitoring System was accepted and was awarded for the best proposal from the Austrian research fund Fit-IT ([www.fit-it.at](http://www.fit-it.at)). Together with the Institute of Computer Technology of the Vienna University of Technology and the Linz Center of Mechatronics a wireless low power sensor system for Cargo Monitoring was being developed.

Still in 2007, the giant Distributor Avnet/Silica partnered with Bluetechnix to develop the FireCracker Reference Design Platform ([www.silica.com/firecracker](http://www.silica.com/firecracker)) which is sold by Silica starting from summer 2008.

Besides Blackfin based customer specific developments, Bluetechnix started in 2007 with a new processor family, the i.MX family from Freescale. The first Core Module from this powerful processor family was the CM-i.MX31 which has many different mount options and comes with Linux or Win-CE.

In 2008 the new Blackfin Core Modules CM-BF527 and CM-BF548 were brought to market. Since February 2008 Bluetechnix and Farnell are in a strong partnership. Farnell is selling the Blackfin and Freescale products from Bluetechnix all over the world. Since Februar 2009 Bluetechnix is cooperating with another strong partner – Silica, which is selling the Bluetechnix products, too.

In March 2009 Schmid-Engineering becomes a Development partner from Bluetechnix. Schmid-Engineering supports Bluetechnix regarding requests on LabVIEW embedded and on the other hand of the cooperation Bluetechnix supports Schmid-Engineering with the Blackfin Know-How and Core Modules of the Blackfin processors.

Nowadays Bluetechnix is growing. In July 2009 the number of employees increased to 20 employees. A marketing department was set up and the development team has been extended.

## **Business objectives**

The required market position of Bluetechnix is the position of the world leader in developing of embedded systems incorporating the Analog Devices Blackfin and Freescale i.MX processors. In addition the development is focused to gain the maximum performance of the processor at a minimum size.

In the future Bluetechnix should be the first choice for Core Modules, Evaluation and Development Boards regarding the Analog Devices Blackfin and the Freescales i.MX processors.

## Factsheet

Company foundation:	September 2004
Corporate form:	Limited Liability Company
Company location:	Waidhausenstraße 3/19 1140 Vienna AUSTRIA
Development office:	Lainzerstraße 162/3 1130 Vienna AUSTRIA
Contact:	Tel +43 (1) 914 20 91 x 0 Fax +43 (1) 914 20 91 x 99 <a href="mailto:office@bluetechnix.at">office@bluetechnix.at</a>
Management:	Dr. Gregor NOVAK (CEO)
Number of employees:	20
Business activity:	Core Modules, Evaluation and Development boards for Analog Devices Blackfin processors  Core Modules, Evaluation and Development boards for Freescales Multimedia application processors – i.MX family  Hard- and Software Development services for individual solutions

## Product range

Bluetechnix offers Core Modules, Evaluation Boards and Development Boards based on the Analog Devices Blackfin family and the Freescale i.MX family. The following products are available:

### Products based on Analog Devices Blackfin

- Core Modules incorporating Analog Devices ADSP-BF527, ADSP-BF533, ADSP-BF537, ADSP-BF548, ADSP-BF561
- Evaluation Boards for the Core Modules
- Development Boards and packages for the Core Modules
- Extender Boards for the Development Boards with following functions:
  - Audio, Video, Camera, USB to Ethernet, AD – DA, Experimental, ADIS 16350 Tri-Axis Sensor
- *New to come:* Core Module based on Analog Devices ADSP-BF518 and ADSP-BF525

### Products based on Freescale's i.MX family

- Core Modules incorporating Freescales i.MX31
- Evaluation Boards for the Core Modules
- Development Boards and packages for the Core Modules
- *New to come:* Core Module based on Freescales i.MX27 and i.MX35

## Hardware and Software Development services

Bluetechnix offers Development assistance from concept phase to scale production.

Bluetechnix the world leading developer of Blackfin and i.MX Core Modules focused on high performance at a tiny space offers beside their developed products also Hard- and Software development services.

The development team of Bluetechnix is dealing with the Blackfin processors since the very beginning of the Blackfin family and gained high experience in several Blackfin development projects over the last years. Beside the Blackfin processors Bluetechnix gained Knowhow of the i.MX multimedia processor family of Freescale too. Constitutive to this gained knowledge of the processors Bluetechnix offers Hardware and Software development services to their customers.

Bluetechnix offers:

- Development support for the development and design phase of products
- Design assistance through the whole product development cycle
- Assistance for firmware development
- Software development regarding your individual requirements

In addition Bluetechnix cooperate with different leading production facilities to allow a smooth path towards medium to high volume production.

## Reference projects

Bluetechnix successfully has done the following projects.

### Tinyphoon

Tinyphoon represents a completely autonomous robot with integrated digital camera. Since it is derived from Roby-Go, a MiroSOT Soccer Robot, it is still a two-wheeled differentially driven robot with the dimensions of a cube with an edge length of 75mm. The first version of Tinyphoon was finished and introduced in September 2003.

It consists of a motion unit containing the motor driver, a micro controller, digital encoders for the measurement of the wheels' speed, acceleration sensors and a yaw rate sensor. Furthermore it consists a mono vision system unit equipped with a CMOS camera and a DSP (Digital Signal Processor). Both units are connected via CAN (Controller Area Network) bus.

The robot was presented on the largest exhibition for embedded Systems in Europe, at the Embedded World 2004 in Nürnberg and in the USA (Redmond: Microsoft Headquarter and San Francisco: Embedded System fair). Meanwhile the third generation of Tinyphoon has been developed. The first version, which was released in 2003, consist three boards. In the second generation, which was released in begin of 2005, the three boards from the first generation were combined to one board. For this design the Core Modules of Bluetechnix were used. The robot could be equipped either with a Blackfin ADSP-BF533 single core processor or in order to increase the calculation power with a Blackfin ADSP-BF561 dual core module.

Besides the research done at the Vienna University of Technology cooperation exists with the FH Hagenberg and the Austrian Research Center Seibersdorf. Tinyphoon is used by them for their Robot Soccer Team. Furthermore a shared source project for Tinyphoon is set up. In future Tinyphoon will be used for several applications dealing with Multi Agent Systems.

[www.tinyphoon.com](http://www.tinyphoon.com)

### AMOUR (Autonomous Modular Optical Underwater Robot)

Amour is AUV (Autonomous Underwater Vehicle) that is used to deploy and read information from underwater sensor nodes.

The application of wireless sensor networks to the underwater domain has huge potential for monitoring the health of river and marine environments. The oceans alone cover 70% of our planet and along with rivers and lakes are critical to our well-being. Monitoring these environments is difficult and costly for humans: divers are regulated in the hours and depths at which they can work, and require a boat on the surface that is costly to operate and subject to weather conditions. A sensor network deployed underwater could monitor physical variables such as water temperature and pressure as well as variables such as conductivity, turbidity and certain pollutants. The network could track plumes of silt due to dredging operations or pollutants flowing in from land, and it could monitor and model the behavior of underwater ecosystems.

[http://groups.csail.mit.edu/drl/underwater\\_robotics/amour/amour.html](http://groups.csail.mit.edu/drl/underwater_robotics/amour/amour.html)

## FireCracker – Development Kit

The FireCracker Development and Reference Design Platform is a flexible development platform for Audio/Video and communication applications from Silica ([www.silica.com](http://www.silica.com)). It is based on Analog Devices ([www.analog.com](http://www.analog.com)) popular Blackfin embedded processor family. For its development Silica joined forces with Analog Devices and Bluetechnix. FireCracker can be loaded either with the CM-BF537E or the CM-BF527 Core Module from Bluetechnix.

FireCracker is a unique concept of a hybrid between a development board and a reference design. The Debug Agent (optional feature) allows full debugging of the Blackfin Processor. For evaluation purposes evaluation software is pre-flashed on the Core Module. Different demonstration applications can be chosen. Reprogramming of software updates either for the Core Module or the FPGA is possible.

Bluetechnix started developing the FireCracker Board in 2007 and Silica is selling this reference and development kit since summer 2008.

<http://www.silica.com/firecracker>

## Contact

Management:

Dr. Gregor Novak

[gregor.novak@bluetechnix.at](mailto:gregor.novak@bluetechnix.at)

Tel.: +43 (1) 914 20 91 x 0

Fax.: +43 (1) 914 20 91 x 99

Marketing:

Manuel Svoboda, B.A.

[manuel.svoboda@bluetechnix.at](mailto:manuel.svoboda@bluetechnix.at)

Tel.: +43 (1) 914 20 91 x 16

Fax.: +43 (1) 914 20 91 x 99