Technology solutions
for Industry

Bluewind Support for Infineon

Company Profile (full)

DOCID: 20131205

Company focus

Bluewind provides innovative design services,
in the field of Digital Electronics,
Energy Efficiency and Wireless

Bluewind at a glance

Founded in 1997, Bluewind provides full Electronic product design covering the complete cycle,from product concept to production.

The R&D task force consists of 12 skilled engineers, with established relationships with Universities and recognized Labs.

Key partnerships with Semiconductor Manufacturers and Distributors

Based in Castelfranco Veneto, Italy (40km from Venice Airport)

Leading technologies

Power conversion and motion control

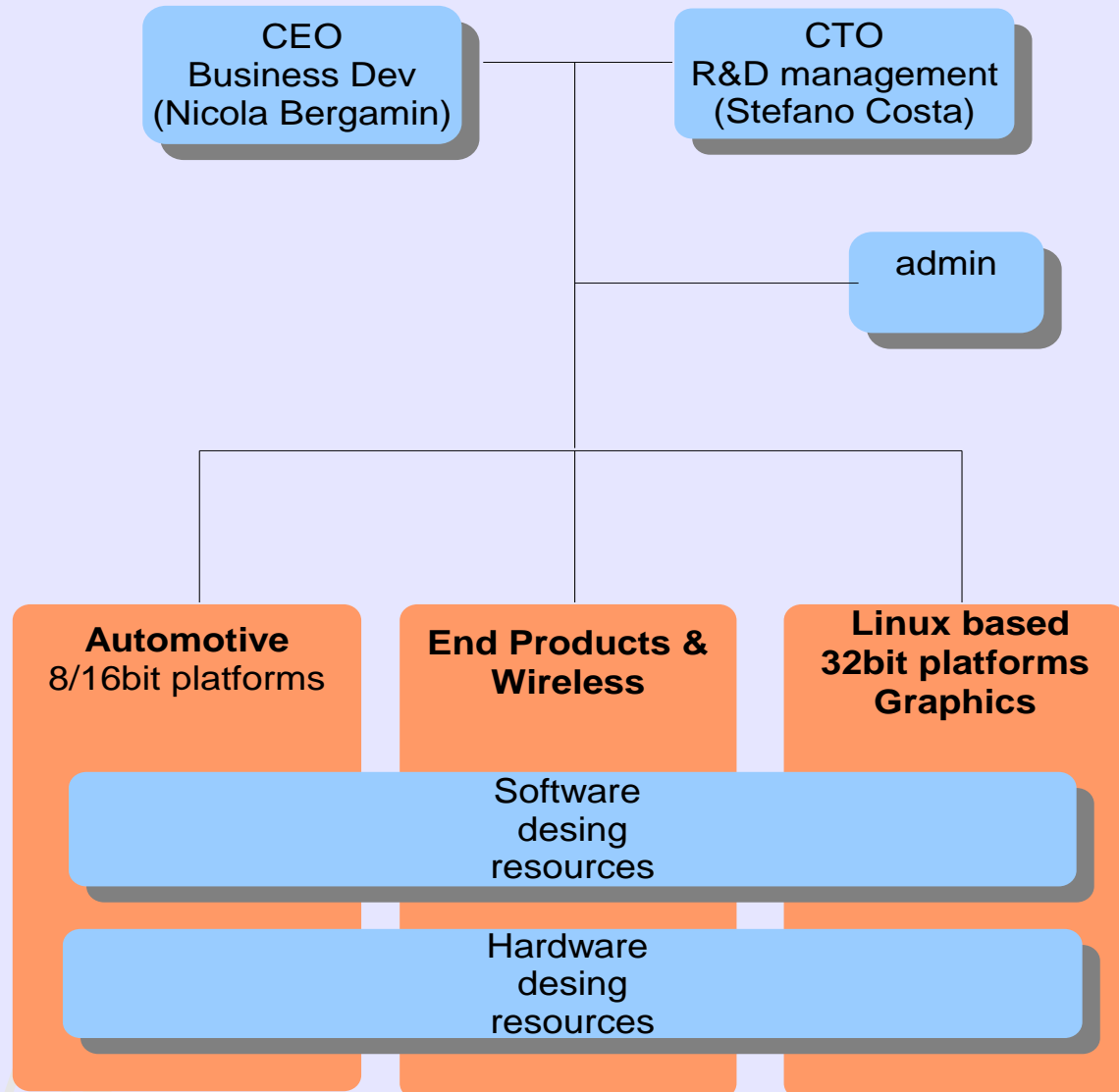Sensorless motion control for white goods

Automotive: Automatic Gear Control

High End Linux and Graphical Platforms
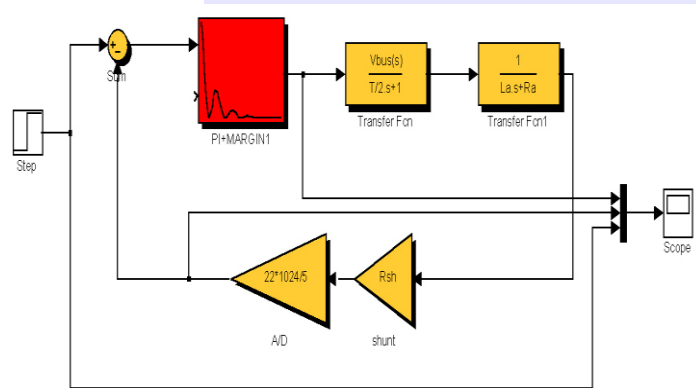
Audio and Noise Reduction systems

Wireless: WiFi, Zigbee, NFC,and UMTS platforms

Organization

CEO
Business Dev
(Nicola Bergamin)

CTO
R&D management
(Stefano Costa)

admin

Automotive
8/16bit platforms

**End Products &
Wireless**

**Linux based
32bit platforms
Graphics**

Software
desing
resources

Hardware
desing
resources

System concept
and physical modeling:
with MATLAB/ Simulink;
pSpice; Antenna Simulators

Hardware schematic
and layout design
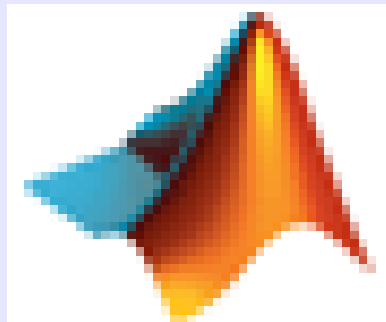withCAD tools *(PowerPCB/Mentor)*
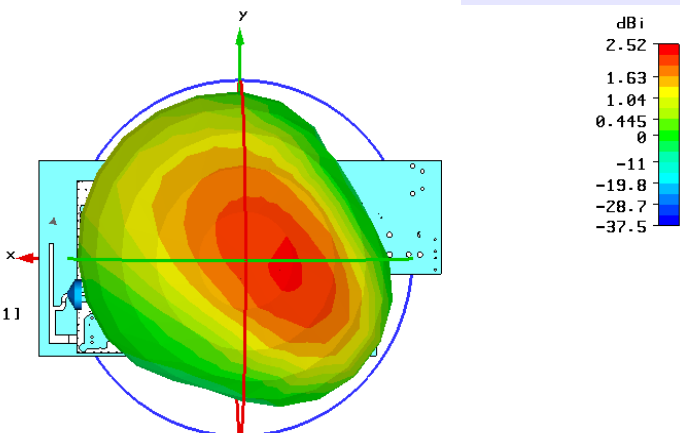
Project validation
with in circuit emulators,
electronic loads, waveform generators and
antenna Spectrum Analysers

Development: Firmware

CVS is used as Software Revision Control tool

Matlab/ Stateflow is used for logical modeling and automatic code generation

UML

Code description, Formal code verification, Unit Tests

Never stop thinking

Bluewind established partnership since 1998,
in several fields:

Automotive for Infineon Key accounts (**XC16x Family, AUDO**

Telecom / VoIP (**Tricore**)

Bluetooth for automotive After Market

Bluewind has been contracted by Infineon
to supply **Motion Control Software** and Evaluation Systems

Bluewind directly supports Infineon on **AURIX** and
XMC Arm-based microcontrollers
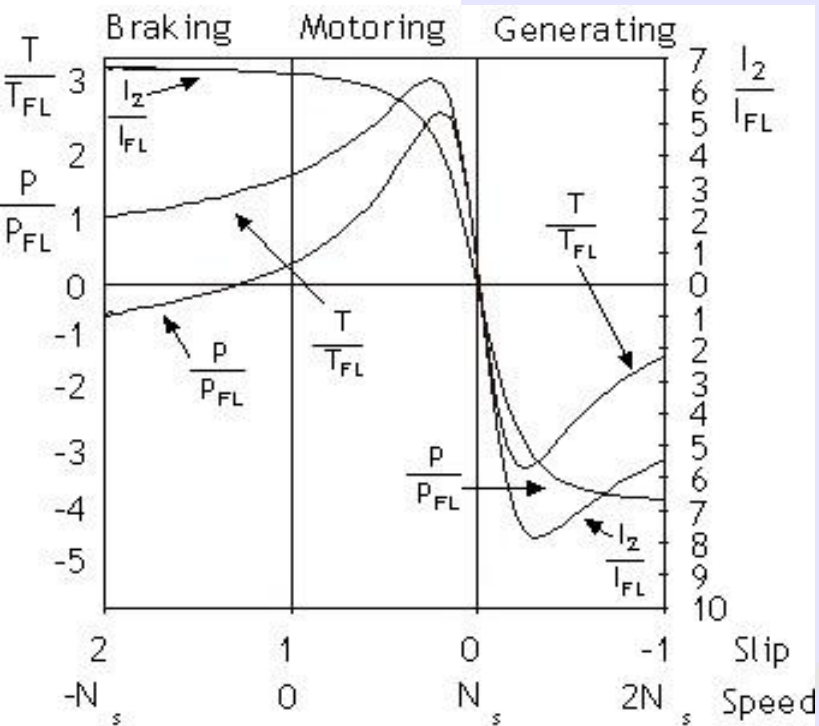
Appliances & white goods

Sensorless PMSM brushless motor control for fridges

Washing machine V/F motor controlled by 8-bit CPU for high volume productions

Appliances & white goods

Optimized Field Oriented Control for
AC Induction Machine
with 16 bit Microcontroller

Industrial & power conversion

Solar inverters
controlled by 32bit DSP **Infineon Tricore**

Full digital control
of on-line UPS (100kVa) with **XC16X**
and DSP combined

Control of resonant LLC for
Next generation solar
micro-inverter with **Cortex MCU**

Industrial

Controller unit for distributed refrigeration systems

- ARM Cortex based CPU
- Operating System from Keil
- MMI with graphics library
- Ethernet, USB,
- SD card recording
- Expansion to ZIGBEE; WIFI

Automotive

Automotive Aftermarket:
Bluetooth/GSM
handsfree integrated in
car mirror (**Bluemoon**)

Automotive:
EOBD ScanTool for
car diagnostics on
CAN, K-LINE, PWM (**XC16X, XE2200**)

Automotive Production:
Automatic Gear software
(C16x family)

Home Automation

Zigbee compliant Home automation heating system:

Radio Link, Control Terminal and Power Actuator based on ARM Cortex CPU

Embedded Linux

Home automation:
Voice and Video IP based on
Embedded Linux
+ touch screen
for Building Automation,
alarm systems and surveillance

Versione NF

Video Over IP and Streaming

Video & Voice over IP streaming based on **ARM9** platforms:

- streaming
- recording
- 3GPP file formats
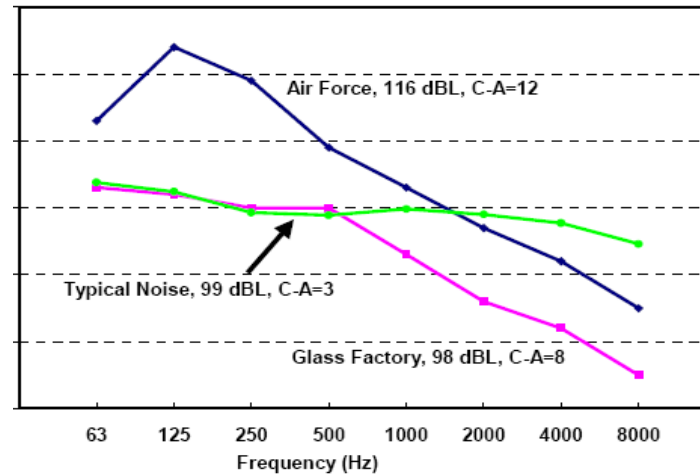- audio and video codecs
- MPEG-4, H263/H264

Medical

Dental
High-end sterilization equipment
(autoclave) with certified temperature cy
based on Infineon XE166

Sports and Racing

Figure 6: Spectra of the three special noises

Air Force, 116 dBL, C-A=12

Typical Noise, 99 dBL, C-A=3

Glass Factory, 98 dBL, C-A=8

Frequency (Hz)

Audio:
Electronic Active
Noise reduction
for Avionics, car helmets
and hearing protections

Motorbike Racing:
TCP/IP based diagnostic system
for racing tests

Technology solutions
for Industry

BLUE WIND

Bluewind Support for Infineon

Company Profile(Short)
and Support to AURIX

Bluewind provides innovative design services, in the field of Digital Electronics, Energy Efficiency and Wireless

Bluewind started partnering with Infineon in the Automotive & Industrial segment since 1998, and has been designing Industrial Controls with their products since then, consulting european customers in several market fields (www.bluewind/infineon)

Services and solutions at a glance

Full design of electronic boards, including Testing

Firmware development for Embedded Applications

Prototyping and Production Services

Body Rental and Training

System testing (Functional, Labview, ICT) and compliance (EMC, CE, FCC)

www.bluewind.it

Bluewind CV and Expertise

Automotive

First Tier automatic car gear (XC16X)

LPG injection systems (XE16X)

EOBD (CAN, KWP) car diagnostics (XC800)

Test and Diagnostics for automotive ECUs

GMR-based position sensing (XE16x)

Medical and Signal Processing

Medical Dental equipment with XC2200

Mp3 audio player for professional use

Communication, Networking, Audio & Video

V2IP-Voice and Video streaming over IP (MPEG4, H.264 and SIP) with Tricore TC11xx and OpenSource software

Compact TCP/IP, SNMP and Web Server over XC16X platforms

Fully Zigbee compliant product design

Mobile GSM platform with EGOLD C166

Medical and Signal Processing

Medical Dental equipment with XC2200

Mp3 audio player for professional use

Support Area

Bluewind support for Infineon AURIX area covers:

Italy

Switzerland

Austria

Standard Package

Bluewind guarantees **1ˢᵗ level support** to the customer: helping customer select proper AURIX solution, providing the documentation not available to sales force. This includes **help desk** with 24hrs response time to customer inquiries (by email ticketing system). This excludes Design Services, being Design a specific part of Premium Package

Bluewind provides **technical help** to customer, especially advice in architecture (sw, hw) definition according to the existing official documentation at Infineon, on a maximum amount of hours per customer basis.

Bluewind can also **help sales force** with technical advice in the "Design IN" phase. "Design IN" is specifically run by sales people, however.

Training: a base full 8h **training, free of charge** on Aurix architecture is guaranteed at Bluewind site, for designated design teams of the Customer. Same training at customer site can be managed, at just travel plus lodging cost expenses. **Extra training days or technical consultancy** can be added, depending on subject complexity, at a cost of 1000,- Euro per day (plus travel and lodging cost).

Premium Package

System Architecture

Bluewind can provide engineering resources to support the customer in the first phase of design (after Design IN): especially advice in:

hardware architecture (component resources definition, sensors, I/O, resource initialization, Board Support Package porting to target board)

software architecture (use case analysis, RTOS, timings, real time issues, software layers, data flow control, inter-process communications, and sw packages definition.

Bluewind will designate a competent project leader to assist the customer in the process.

Premium Package

Hardware Design & Test

Bluewind can help customers in designing the target board, or design it in full. This can include: schematic entry, component creation, PCB layout , line impedance Simulation/Spice, Design Validation, Functional Board Test, support for ICT (In circuit) testing.

Bluewind can provide a full hardware design solution, including sample functional prototypes

Premium Package

Compliance (EMC, CE, FCC)

Bluewind has gained wide experience in product testing and certification.

Certifications, (i.e. CE, E, FCC and Safety) , are a mandatory step in product validation. Bluewind takes them into account from the beginning of the design process. Pre-scans (or pre-compliance) tests can be performed during the development to prepare for certification.

Bluewind also takes care of assisting the Customer in passing final certifications (CE, E, and other automotive) with the help of external qualified laboratories.

Premium Package

Software: Drivers and Package Porting

Bluewind can help customers in implementing specific drivers for the target system: this includes, for example: drivers and initialization for specific memory devices (SDRAM, FLASH, initialization of specific custom software protocols), special modifications of Kernel and RTOS, with special regards to: process latency time, real time, interrupt response, boot timing, low power modes, power down and energy management.

Premium Package

Application Firmware Development

Bluewind can help customers in developing the system application: this may include: RTOS structure initialization; Infineon package configuration; Infineon packages deployment, AutoSAR, Safety aware software development.

Bluewind

Electronic design
and embedded systems

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MANASLU PEAK