Bluewind Support for Infineon

Company Profile (full)

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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
Development: System & Hardware

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

Hardware schematic and layout design
with CAD tools (*PowerPCB/Mentor*)

Project validation
with in circuit emulators, electronic loads, waveform generators and antenna Spectrum Analysers
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.
Partnership: INFINEON

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
Sensorless PMSM brushless motor control for fridges

Washing machine V/F motor controlled by 8-bit CPU for high volume productions
Optimized Field Oriented Control for AC Induction Machine with 16 bit Microcontroller
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**
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

www.bluewind.it
Embedded Linux

Home automation: Voice and Video IP based on Embedded Linux + touch screen for Building Automation, alarm systems and surveillance
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 cycle based on Infineon XE166
Sports and Racing

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

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

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
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)
# 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)

## 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
Bluewind support for Infineon AURIX area covers:

- Italy
- Switzerland
- Austria
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).
Support for Infineon

**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.
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.
Support for Infineon

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.
Support for Infineon

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.
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.
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