



Vimercati Spa
la vostra auto parte da qui

Electronic Systems
R & D

Vimercati spa

Electronic R&D Department

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The Electronic R&D Department

The Vimercati electronic R&D Department is organized to fulfill the Automotive SPICE requirements and is structured as follows:

- *3 hw engineers;*
- *2 sw engineers;*
- *2 testing engineers;*
- *1 sw Quality engineer (hierarchically dependent from Quality Department);*
- *1 Configuration Manager.*



Development capabilities

Vimercati's electronic competences are ranging into the following areas:

- *LIN bus peripherals (Vimercati is member of LIN Consortium);*
- *CAN bus peripherals;*
- *human interfaces;*
- *Multifunction commands;*
- *Magnetic or capacitive contactless sensors, with digital and linear outputs.*





Electronic CAD and Development Systems

Vimercati's electronic reference CAD for schematic design and pcb routing is Cadence SPB/Orcad rel.16.6, fully integrated into the corporate PLM system (PTC Windchill 10.0) in order to ease the mechanical integration of electronic assemblies through the EDIF export to the mechanical 3D CAD Systems (PTC Creo 2.0 and CATIA v 5).

The PLM System integrates also the Windchill Quality Solutions tools for reliability analysis, FMEA and FTA.

Validation tool for CAN and LIN buses is Vector Informatik CANoe rel. 8.

Test development environment is NI LabView.

Static Software Analysis are performed with RistanCASE DAC.



Continuous Improvement Process

In order to give the best answer to the increasing requirements of the Automotive market Vimercati has planned training activities for the following domains:

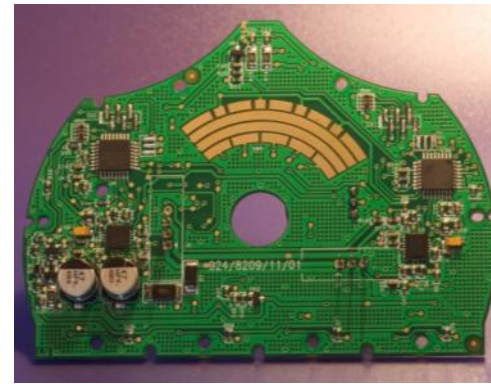
- *Automotive SPICE (Vimercati's last assessment has been for level 2, the new goal is to reach level 3 in early months of 2014);*
- *Functional Safety and ISO 26262;*
- *6-sigma.*



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Some product example (in mass production)



*Rolls-Royce
Light Unit*



*BMW
Light Unit*



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Some product example (in mass production)



*DAF Trucks
Light Unit*



*DAF USB
Charger*



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Some product example (in development)



*Chrysler - FIAT
Steering Wheel
Commands*



*BMW Seat
Heating Switch*



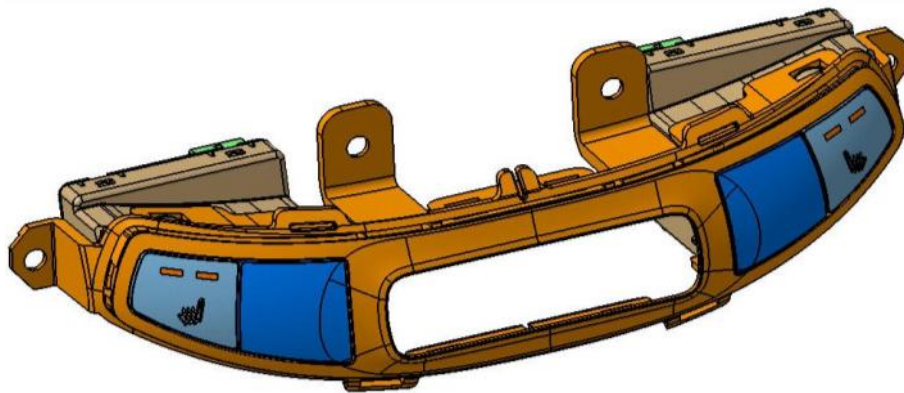
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Some product example (in development)



*BMW Central
Stack Console
Switch Bar*



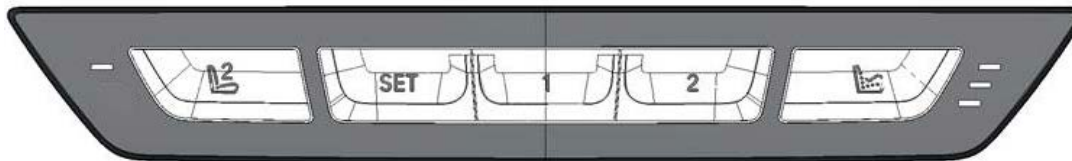
*FIAT Central
Stack Smart
Switches Panel*



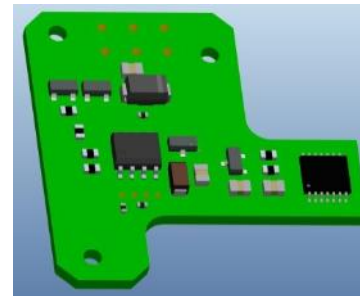
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Some product example (in development)



*BMW Seat
Memory and
additional
functions panel*



*Programmable
linear output
rotating sensor*

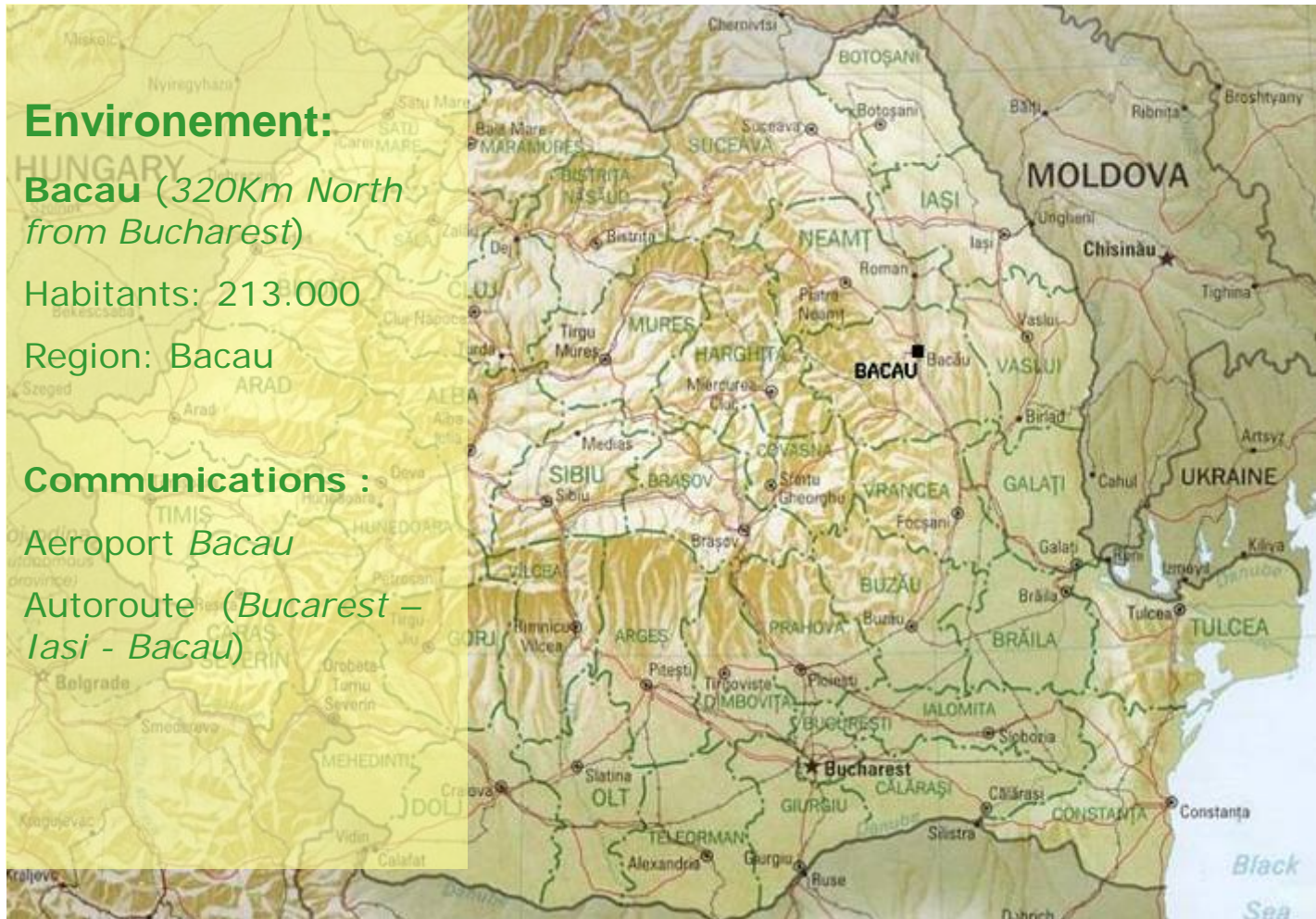


Vimercati East Europe

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Electronic Production Facilities

Vimercati East Europe



Environnement:

Bacau (320Km North from Bucharest)

Habitants: 213.000

Region: Bacau

Communications :

Aeroport Bacau

Autoroute (Bucarest – Iasi - Bacau)



Vimercati East Europe

This site is especially dedicated to the production of electronic components, and assembly of small and medium series.
Workforce of 250 employees





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Assembly line-General description

- Maximum board size: 400 x 400mm
- Maximum output: 22-24.000 components/hour conform standard IPC9850
- Maximum component size/height: 32x32mm/10.5mm
- Minimum pitch: 0.5mm
- Components feeding: roles
- Automatic printing with 2D inspection
- Convection Reflow Soldering System BTU Pyramax 100A with 8 heating zones and 2 cooling zones
- Post-reflow optical inspection (100%)

Vimercati East Europe

- Speedline MPM125 printer



- MPM 125 Stencil Printer Base Machine
- Programmable squeegee print head
- Stencil Wiper with Vacuum and Solvent
- Automatic Stencil Positioning
- 13 Second Cycle Time
- Board thickness range of 0.2mm to 3.8mm (0.8mm to 5mm with alternative foils provided)
- 50.8mm X 50.8mm (2" X 2") to 609.6mm X 508mm (24" X 20") board size capability (X, Y)
- Convection Reflow Soldering System BTU Pyramax 100A with 8 heating zones and 2 cooling zones
- Post-reflow 2D optical inspection (100%)

- **Assembleon (Philips)
AX-301 pick&place system**



- 5 placement head laser vision (PH-LV)
- component vision camera A-series
- Tape feeding between 8 – 44 mm
- Maximum output per hour: 24.000
- Component range/max. height: 0.4x0.2 mm to 45x45 mm /10.5 mm

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- Convection Reflow Soldering System BTU, Pyramax 100A

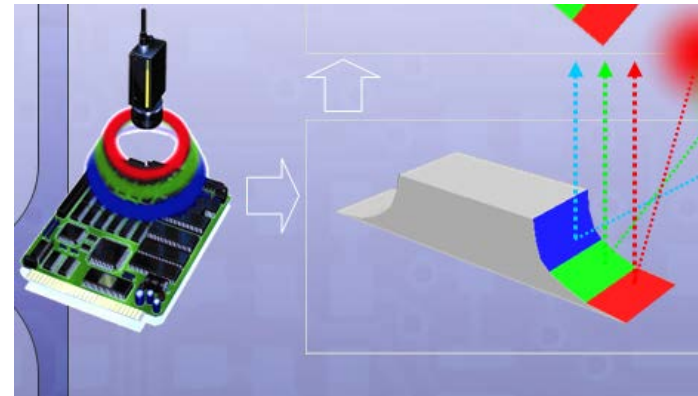


- Forced convection provided by a blower system.
- 2.54 meters (100 inches) of convection heated length controlled in 16 zones (8 top, 8 bottom), with independent adjustment of temperature
- Typical PCB throughput rates are 0.7 to 1.0 meters/minute
- boards up to 457 mm (18 inches) wide

- **Automatic optical inspection system
OMRON VT-RNS2**



- High speed version automatic Optical 3D inspection



- End-of-line repair station for verification after solder inspection



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Thank you for your attention