

## Europass Curriculum Vitae



### Personal information

First name(s) / Surname(s) **Rocco Brandi**  
Address 3 Ivy Court Argyle Way SE16 3JE London  
Telephone(s) +44 (0)2035833178 Mobile +44(0)7598634931  
E-mail(s) roccobrandi@hotmail.com  
Nationality Italy  
Gender Male

### Desired employment / Occupational field

**Embedded firmware & software Engineer**

### Work experience

Dates 25/09/2017 →  
Occupation or position held Senior Software Embedded Engineer  
Main activities and responsibilities Software development of ECU for motorsports( Formula1, Formula E, Formula Indy, NASCAR...)  
Main activities:  
- Track support for Formula 1 teams  
- maintenance & debug of existing ECUs used in current season of Formula 1, Formula Indy , Formula E, Nascar  
- Development of new ECUs for Formula Indy and Formula 1  
These activities involve Bare metal application and development under RTOS like INTEGRITY from Green Hills

Name and address of employer McLaren Applied Technologies (UK)  
Dates 03/03/2014 → 25/09/2017  
Occupation or position held Embedded Engineer  
Main activities and responsibilities Embedded software design for radar and surveillance systems.  
Main activities:  
-Implementation of new functionality and maintenance/debug fixing in existing radar projects. This includes C programming with Xilinx SDK(bare metal software application) and VHDL programming with ISE Xilinx Studio (firmware);  
-Development of new board based on Xilinx Zynq 7030. Customization, Compiling and building Embedded Linux system for the custom board; implementing standalone linux application for interfacing the hardware; porting existing bare metal software applications under linux; implementing linux security features; support for FPGA engineer in firmware development. The activities includes C programming with Xilinx SDK and Petalinux, and VHDL programming with Xilinx Vivado.

Name and address of employer Kelvin Hughes Limited (UK)  
Dates 10/07/2013 → 01/03/2014  
Occupation or position held engineer FPGA engineer

**Main activities and responsibilities** Design of a Xilinx Zynq 7020 in an EtherCAT slave that controls a high power H-bridge. One ARM core of the Zynq manages the EtherCAT communication protocol (interfacing with ET1100 microcontroller) plus the acquisition of diverse sensors; the other ARM core implements the motor-control and allows the client to development his own application functions. In order to this, on the second core will run Embedded Linux or FreeRTOS.

**Main Activities:**  
 -FPGA design (VHDL, ISE Xilinx Studio);  
 -EtherCAT protocol: low level drivers, user drivers, data acquisition and transmission; implementation, debug and integration (C programming, SDK, Eclipse);  
 -High power H-Bridge: controller interface (VHDL, ISE Xilinx Studio), low level driver, data acquisition and transmission (C programming, SDK, Eclipse);

**Name and address of employer** Ma.Vi. Srl (Italy)

**Dates** 01/11/2012 → 30/08/2013

**Occupation or position held** embedded firmware & software

**Main activities and responsibilities** Project "iGun" for Beretta S.p.A; software development on PIC24 microcontroller, management of data acquisition from sensors and management of communication between embedded modules across multiple interfaces and protocols (UART, I2C, IrDA, Bluetooth, etc.). Implementation of specifications from Beretta, debug, verification, validation, integration and documentation.

**Main activities:**  
 All activities involve C programming with Microlab IDE.  
 -firmware development of the gun embedded module:  
 Low level drivers and user drivers for data acquisition from different sensors (such as coulombmeter, temperature, ADC, etc.) with different protocols (1wire, I2C etc.);  
 routines, timers and interrupt management for transmission of the acquired data to the black box embedded module via IrDA through a custom protocol;  
 Power management.  
 -firmware development of the black box embedded module (mounted under the gun):  
 low level drivers and user drivers for data acquisition from different sensors(such as coulombmeter, temperature, accelerometer, etc.) with different protocols (SPI, I2C, UART, etc.) managed by the "Diagnostic" State Machine;  
 IrDA communication with gun embedded module managed by the "IrDA" State Machine;  
 Bluetooth communication with holster embedded module managed by the "bluetooth" State Machine;  
 Implementation, debug and integration of the State Machines;  
 Power management.

**Name and address of employer** Ma.Vi. Srl (Italy)

**Dates** 01/10/2012 -19/07/2013

**Occupation or position held** FPGA engineer

**Main activities and responsibilities** Design of an Altera Cyclone III FPGA in an EtherCAT slave that has to drive an induction furnace. The FPGA is responsible to acquire and transmit data from 16 ADC channels, over 4 DAC channels, 20 Fibres optics channels, 6 digital I/O channels and exchanges data with an ET1100 EtherCAT controller.

**Main activities:**  
 -implementation of the peripheral controller interfaces for each external component such as ADS7863 (ADC), ADS5724 (DAC) and DOGS12W06 (display) (VHDL, Quartus II);  
 -low level drivers and user driver for the previous components and integration with NIOS II soft-core(C programming, Eclipse);  
 -validation & verification, development of firmware and software specially designed for the automated post-production testing of the device

**Name and address of employer** Ma.Vi. Srl (Italy)

Dates 04/06/2012 - 29/09/2012

Occupation or position held embedded firmware & software engineer

Main activities and responsibilities Development of an EtherCAT master for a microcontroller netX500; development of a web server (HTTP, TCP/IP) so the entire EtherCAT network could be under control via browser.

Specific activities:  
 All activities involve C programming with HiTOP IDE.  
 -configuration of the custom hard real-time OS "rcX" for netX family;  
 -task management for EtherCAT communication task and HTTP communication task;  
 -integration of the SOEM (Simple Open Master EtherCAT) library and LwIP library with the rcX OS;  
 -development of high-level application of the EtherCAT Master code;  
 -development of web server (HTML, Javascript) and high-level application code

Name and address of employer Ma.Vi. Srl (Italy)

## Education and training

Dates 21st November 2016-25th November 2016

Title Comprehensive Embedded Linux Security

Organization Doulos

Principal subjects / occupational skills covered Hardening" Linux systems to make them more resistant to attack is possible and is something that should be performed for every connected product.  
 This course covers three aspects of system hardening:  
 • Hardening the Linux operating system itself  
 • Protecting applications running under Linux  
 • Running applications in sandboxes - more detail on a specialized approach to protecting systems and the applications running on them

Dates From 1994 to 1997 – from 2009 to 2012

Title of qualification awarded Bachelor degree Electronic engineer-biomedics

Principal subjects / occupational skills covered Digital and analog signal processing; DSP,FPGA, ASIC and microcontrollers; biomedics signal and imaging software and application; industrial automation

Level in national or international classification Higher education/University

## Personal skills and competences

Mother tongue(s) **Italian**

Other language(s)

Self-assessment <i>European level (*)</i>	Understanding		Speaking		Writing	
	Listening	Reading	Spoken interaction	Spoken production		
<b>English</b>	C1 Proficient user	C1 Proficient user	B2 Independent user	B2 Independent user	B2 Independent user	
<b>Spanish</b>	C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user	
<b>German</b>	A2 Basic user	A2 Basic user	A2 Basic user	A2 Basic user	A2 Basic user	
<b>Japanese</b>	A2 Low-Intermediate	A2 Low-Intermediate	A2 Low-Intermediate	A2 Low-Intermediate	A2 Low-Intermediate	

(\*) [Common European Framework of Reference \(CEF\) level](http://www.cedefop.europa.eu/en/files/questdocument/11621/11621_en.pdf)

Social skills and competences Working on team is my natural environment. under a good leader and in a good team, all my potential comes out

I've been travelled a lot, from Japan to Spain, so it is very easy to me to work in a multicultural environment

for many years I've been investing my spare time in social and communication skills (verbal, non-verbal, para-verbal) through books and seminar, so I can nourish every single relationship according to people, situation and place) in a win-win manner

Organisational skills and competences Every people I worked with pointed out my ability to create an effective and efficient environment.  
I've attended a course of project management at ISIPM (Istituto Italiano Project Management)

Computer skills and competences Linux\ Windows + MSOffice  
RTOS for embedded systems (INTEGRITY, freeRTOS,...)

Embedded Linux  
YOCTO Project  
AGILE Development  
Python  
C/C++, Assembly, VHDL programming  
TCP/IP, HTTP and WebServer  
EtherCAT, CANopen  
Quartus II  
Eclipse, SDK  
Vivado, ISE  
ModelSim  
VisualDSP++  
Matlab/Simulink (basic skills)  
Pspice (basic skills)

Artistic skills and competences studies of drum at "Stefano Strata" Academy of Pisa (Italy); drum player from 1997 to 2009

Other skills and competences Proficiency N4 Japanese language  
A2 certificate German language at Goethe Institut  
PNL, lateral think, problem solving

Driving licence(s) B