VR Spark—Drone Code Edition

Roberto Navoni

What is demonstrated

- Virtual Robotix UAV VR Spark 350
- A Professional Drone compliant to EU and USA requirement for certification based on opensource APM Copter Firmware.
- The VR Spark 350 include two Boards. VRBrain 5.2 is Virtual Robotix Autopilot board the other could be VruBrain or an Embedded Linux board like Raspberry PI 2. The second board is used as application processor.
- We develop our Android Ground Station VR Pad Station.
- During the initial stage of development is possible to use SIL Software in the loop simulator.
- The drone support all kind of advanced functionality for manual and autonomous flight.
- Is possible to connect the drone by mavlink towards radio link or usb. The application processor is connected to the drone by usb.
- With this kind of approach is possible to use the our drone platform as advanced R&D linux / android for custom project.
- In our template example is possible to transmit realtime video by 4G connection with drone telemetry information from the drone to a remote worldwide Ground Station.

Hardware Information

- Inside our drone we use our Autopilot : VR Brain 5.2 and VR uBrain 5, VR GPS 8, VR Link, VR OSD
- As application processor we can connect a lot of Elinux processor like Raspberry PI, BeagleBoard or Smartphone.

What was improved

- With our SDK is possible to implement a lot of power full application based on solid hardware and stack.
- With our architecture is more simple to develop, debug and release a final product of service based on drone technology.
- More information about our product is available on our community: www.virtualrobotix.com
- Or on our website: www.virtualrobotix.it

Source code or detail technical information availability

- On our Github: https://github.com/virtualrobotix you can found the source code of Nuttx OS for VR Brain products, Our distribution of APM Copter, Plane and Rover, VR Pad Station, and our version of Mission Planner.