Parrot
S.L.A.M.dunk

The development kit for autonomous navigation and obstacle avoidance for drones and robotic platforms

Parrot, the pioneer in consumer and professional civil drones, announces an open development kit for the design of advanced applications for autonomous navigation, obstacle avoidance, indoor navigation and 3D mapping for drones and other robotic platforms in environments with multiple barriers and where GPS signals are not available.

### Parrot S.L.A.M.dunk: Turn a drone into a smart robot

Parrot S.L.A.M.dunk integrates advanced software applications based on a Simultaneous Localization and Mapping algorithm: S.L.A.M.
S.L.A.M. technology enables the drone to understand and map its surroundings in 3D and to localize itself in environments with multiple barriers and where GPS signals are not available.

With an embedded NVIDIA® Tegra® K1 processor, **Parrot S.L.A.M.dunk** allows implementation of the latest algorithms of computer vision and autonomous navigation that are optimized for NVIDIA® GPU. In addition, the **Parrot S.L.A.M.dunk** is optimized to minimally impact the battery life of the drone.

Parrot S.L.A.M.dunk integrates several sensors:
- A fish-eye stereo camera with a 1500x1500 resolution at 60fps
- An Inertial Measurement Unit (IMU)
- An ultrasound sensor
- A magnetometer
- A barometer
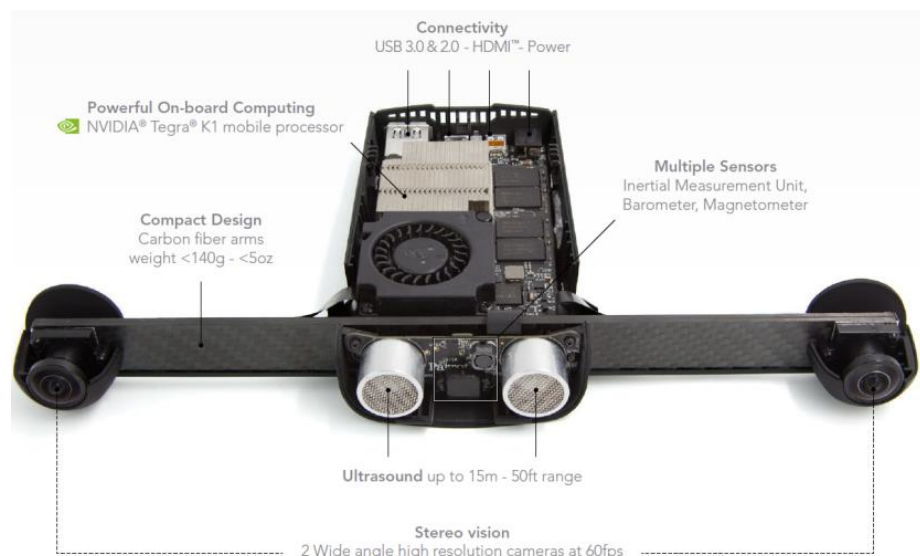
Parrot S.L.A.M.dunk: An open kit designed for developers

Parrot developed **S.L.A.M.dunk** to be as easy and user-friendly as possible for developers, researchers, integrators and academics.

Sensors and algorithms are fully integrated in order to speed the design of advanced applications for drones and robotic platforms.

All Ubuntu functionalities and benefits from ROS (*Robot Operating System*) framework are embedded in the **Parrot S.L.A.M.dunk** making it user-friendly. The HDMI port makes it possible to develop directly on the product.

Parrot S.L.A.M.dunk: Use Cases

Parrot S.L.A.M.dunk can be used for:
- Prototyping of drones and robotic solutions
- autonomous navigation of drones and robots
- 3D mapping
- Stereo camera and a sensor array (IMU, barometer, magnetometer, ultrasound)

S.L.A.M.dunk: Compatible with many drones and robotic platforms

Weighting less than 4.9oz (140g), **Parrot S.L.A.M.dunk** fits on various types of Linux-based drones and robotic platforms including quadcopters and fixed-wings, rolling robots and articulated arms, with the help of munt kits.

Once placed, **Parrot S.L.A.M.dunk** should be linked to the battery of its host-drone by a 3.5mm jack cable and a USB cable in order to send and receive information and commands to and from the drone.

Developed by robotic researchers for robotic researchers, **Parrot S.L.A.M.dunk** is a "ready-to-use" module that will accelerate the development of tomorrow's application for drones and robotic platforms.

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http://developer.parrot.com/   **Availability: Q4 2016**

For more information, visit http://www.parrot.com or contact:
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ABOUT PARROT
Founded in 1994 by Henri Seydoux, Parrot creates, develops and markets high tech wireless products for the retail and professional markets. The company operates in 3 main sectors:
- Civil Drones (UAVs) through retail leisure quadcopters and cutting hedge professional solutions
- Automotive, with the widest range of hands-free communication systems and infotainment solutions for the car,
- Connected objects, in the area of sound as well as gardening.

Parrot, headquartered in Paris, currently employs over 1000 people worldwide and generates the majority of its revenues outside of France. The company is listed on Euronext Paris (FR0004038263 – PARRO) since 2006.