

SAFESPOT INTEGRATED PROJECT - IST-4-026963-IP**DELIVERABLE****SP1 – SAFEPROBE****Hardware and Software Platform Specifications**

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Authors (per company, if more than one company provide it together)	Christian Zott, Bosch; Christopher Brown, Bosch; Sheung Ying Yuen, Bosch; Florian Ahlers, Ibeo; Panagiotis Lytrivis, ICCS		
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EXECUTIVE SUMMARY

The SAFEPROBE vehicular platforms will host a variety of modules developed semi-independently by a variety of working groups. These platforms will exist in a variety of configurations based on available data (sensors), desired functionality and physical constraints. These configurations include a solution with one or two PCs for the Piaggio PTW and more comprehensive configurations for the passenger cars and trucks. The latter have an Ethernet-based LAN that may consist of a main PC (hosting data fusion and the LDM), an ego-positioning PC, a VANET router, an applications PC and a Laserscanner PC. A gateway will provide an interface between the OEM sub-system and the SF LAN. In addition, provision has been made for the inclusion of an ESPOSYTOR PC to monitor the operation of the node.

With such a diverse range of modules and configurations, a software framework based on Qt has been proposed to support rapid development, efficient use of computing power and operating system independence. It is believed that this advanced, flexible framework will allow SF developers to concentrate on algorithms and functionality rather than low-level details of the implementation.

The specification of the SAFEPROBE platform, as described in this deliverable, provides a description of the hardware and software architecture of the platform and gives proposals for the framework that will support the development of the functional modules. Although amendments or clarifications to this specification can be anticipated during the progress of the project, this deliverable is seen as critical to the follow steps of algorithm development and implementation.