

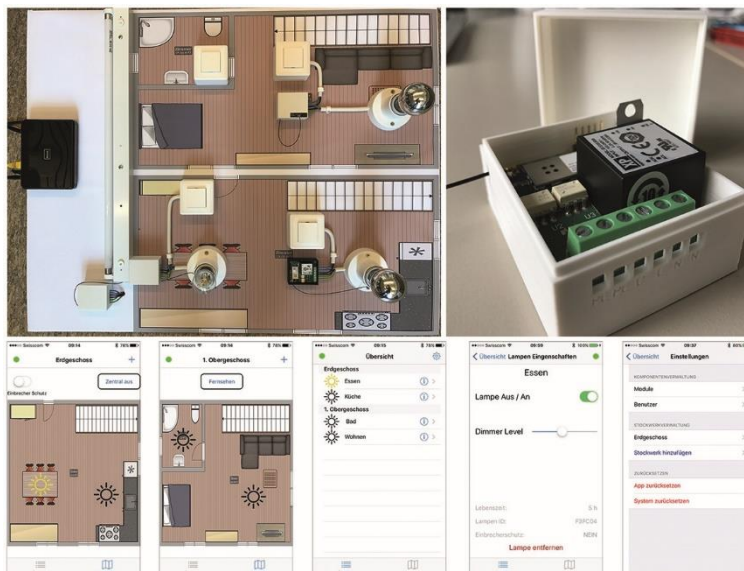
### Smart Light Module

The Smart Light Module is a modern, WLAN-based home light system, which the user can install in an existing home installation for a fraction of the cost. The Smart Light Module is able to switch and dim a light using a conventional light switch as well as through the developed Smart Light App on a smartphone. The hardware is miniaturized so that it can be installed inside a lamp. Multiple modules and Smart Light Apps can cooperate in a system. For such a system, the Smart Light App provides useful light control functions and the ability to create self-designed light scenes. The communication between the Smart Light Apps and the modules is done by the internet of things protocol MQTT. Detailed tests have been conducted to determine whether the system is ready to be installed and used. For the hardware, safety tests such as short-circuit and heat tests have been carried out. To validate the software, a test application has been developed which can test processes in the communication and software. A market analysis has been carried out to assess the chances for the Smart Light System on the market for intelligent light systems. This analysis, compares the cost and functionality of the Smart Light System to competitive systems. Moreover, the strengths and the weaknesses of the Smart Light System are identified.



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The picture shows the demonstration set-up (top left), a single Smart Light Module (top right) and the Smart Light App (bottom).