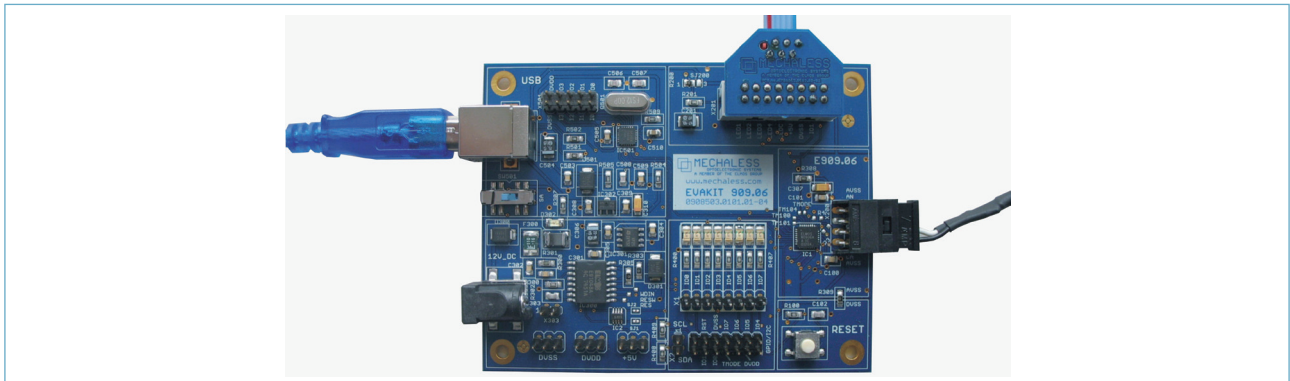


This Evaluation Kit (Order No.: KI-1210001) is designed to provide you the most quick and easy approach to the amazing HALIOS® technology based on Elmos IC E909.06.

## Hardware



Picture 1: Baseboard for E909.06

A typical HALIOS® application consists of optics, electronics and software. While electronics and the essential part of the software are covered mainly by the IC and its firmware, the evaluation kit supports you with examples for optic design and a ready-to-run development environment. Power supply of the hardware is established via USB or with an alternative external power supply (not included with the Evaluation Kit).

### Materials provided:

- ▶ 1x Baseboard containing IC E909.06
- ▶ 1x JTAG program adapter
- ▶ 1x parallel port cable
- ▶ 2x optical head (Gesture- and PROX-head)
- ▶ 1x USB cable
- ▶ 1x USB stick, containing the HAcO development tool, software, documentation, etc.

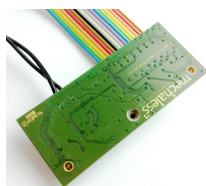
### Optical heads:

Basically there are two optical heads available for the evaluation board. Both will be delivered with the Evaluation Kit:



#### PROX-head

This HALIOS® optical proximity sensor is intended for far range motion detection. Fantastic real-time detection of proximity and/or movement of an object at a detection range from 0 cm up to approx. 2 m.



#### Gesture-head (FR4 prototype)

In the beginning of 2013, a new gesture head was launched to realize simple and easy proximity- and wipe-gestures. The new HALIOS® gesture head consists of 2 sender LEDs (incl. a current driver for each sender LED), 1 photodiode as receiver and 1 compensator LED. This HALIOS® gesture sensor is intended for close to mid-range motion detection like proximity and wipe gestures. A perfect HMI approach in delivering z- and x-coordinates simultaneously.

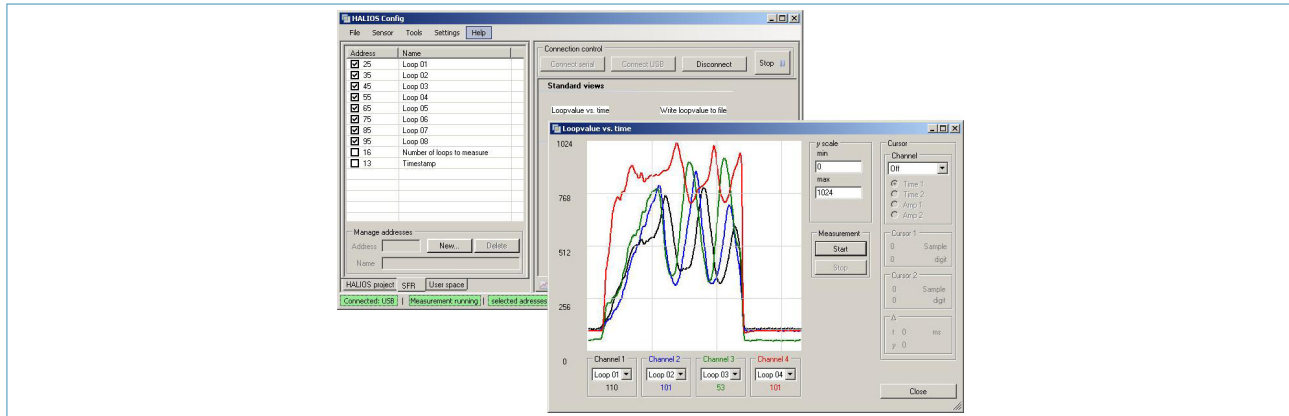
Proximity range (awareness) up to approx. 35 cm in z-axis, wipe gestures up to approx. 25 cm in x- or y-axis (proximity and wipe range depends on degree of reflectivity of the object, e.g. human skin).

FEB 20, 2013

Both optical heads come with ready-made parameter sets for the HALIOS® firmware from Mechaless as well as for HAcO and detailed documentation to jump-start the development of your own applications.

## Software

Included with the evaluation board is the Microsoft Windows™ based graphical HALIOS® Configuration tool (HAcO).



Picture 2: HAcO screenshots example showing four simultaneous measurements (loops)

This PC-based development tool gives you full control over every aspect of the connected HALIOS®-IC, e.g. E909.05 or E909.06. By using HAcO you can configure every relevant parameter of the IC, whether it is based on hardware (analogue frontend) or it is based on internal software (e.g. sequence and timing of the measurements). In addition, the data generated by the sensor can be transmitted to HAcO and then be visualized on your PC. In the beginning, HAcO's intuitive user configuration interface along with its data visualization will make your first HALIOS® experiences effortless. As you advance, HAcO will support you and your development in a fast and reliable way! In order to support the development of embedded software for the internal Elmos 16bit-micro-processor (EL 16), the USB stick contains the necessary C-libraries for the HALIOS® IC firmware as well as additional functions such as filter, self-calibration, etc.

For more detailed information about the HALIOS® IC or the EL16 please refer to the latest datasheets available at [www.elmos.com](http://www.elmos.com).

For any questions concerning HALIOS® or the contents or features of this Evaluation Kit, please feel free to visit us at [www.mechaless.com](http://www.mechaless.com) or send us an e-mail to [info@mechaless.com](mailto:info@mechaless.com).

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