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## **Operational Manual: AS8510-DK**

### **AS8510 Demo Board**



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**Revision History**

Revision	Date	Owner	Description
1.0	20.05.2014	GHE	Operational Manual: AS8510-DK

## 1 General Description

The AS8510 DemoKit for AS8510 Data Acquisition Front-End IC allows easy evaluation of the AS8510 Features. Its USB connector allows easy access to all the chips features via a user friendly Graphical PC Interface. The GUI is supplied with the Evaluation Board and can be used to plot measured data as well as to access all the device registers and evaluate special settings.

## 2 Kit Content

Board + Cable, Software is available as download

## 3 Getting Started

- Plug in the demo board via the provided USB cable
- Windows will detect a new device and ask for a driver. It is in the driver folder of the software package you got with the demo board.
- After installing the driver you have to install the .net framework dotnet4\_installer.exe which is also in the software package.
- After successful installation you have to find out the com port which the board was assigned. Press WIN + Pause to open the system properties. Go to Hardware, Device manager and Ports (COM&LPT) check for an entry called USB serial port and the COM number besides it.
- Open the Demo software under software\as8510demo.exe
- Select the COM port you just figured out and click the green connect button.
- A connect message will show in the title. You can now use the demo board as you like

## 4 Software Description

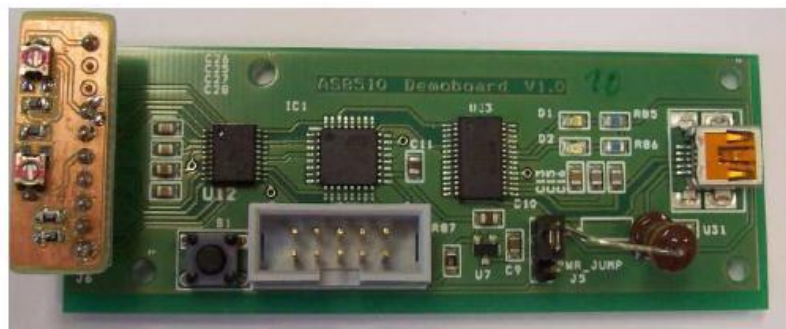
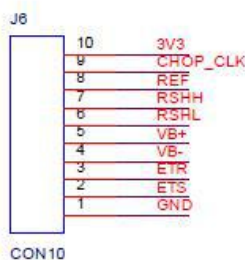
- SW AS8510 demo kit
- Installer net.framework
- AS8510 code example

All 3 items are available on the ams website as download

<http://www.ams.com/eng/Support/Demoboards/Sensor-Interfaces/Data-Acquisition-Front-End/AS8510-Demo-Kit>

## 5 Board Schematics, Layout and BOM

There is a 1x10 pin connector on the board which gives access to the interesting pins of the AS8510. The connection diagram of this port is as follows:



The 2x5 pin connector is a standard ATMEL ISP programming interface which is only needed to install the initial firmware.

Firmware update can be done via an integrated bootloader (FBOOT in the firmware package)

For usage of this bootloader see:

[http://www.mikrocontroller.net/articles/AVR\\_Bootloader\\_FastBoot\\_von\\_Peter\\_Dannegger#Brennen\\_des\\_eigentlichen\\_Programmes](http://www.mikrocontroller.net/articles/AVR_Bootloader_FastBoot_von_Peter_Dannegger#Brennen_des_eigentlichen_Programmes)

The 1x3 connector is to determine whether the board is supplied via USB or via the ISP adapter.

**Further Notice:**

To use the register tab you have to do a read first in order to get an initial set of values into the program.

## 6 Advanced Usage

The demo provides a standard serial interface which can be accessed by any program with serial interface capabilities such a Hyperterminal, Matlab or Simulink.

The interface presents an informational output if you print “?\n” to the serial device.

The standard functions are as follows:

- 0 - (re)configure device
- 1 - read device
- 2 - read internal temperature of device
- 3 - start continous read
- 4 - stop continous read
- 5 - start continous temp read
- 6 - stop continous temp read
- 7 - printout configuration registers
- 8 - write configuration registers #reg : #value \n
- 9 - timing read enter number of read cycles and press enter

The number has to be ended with a newline command “\n”

## 7 Ordering Information

Description	Price
AS8510 DEMOBOARD / #SAP: 990600426	\$ 140