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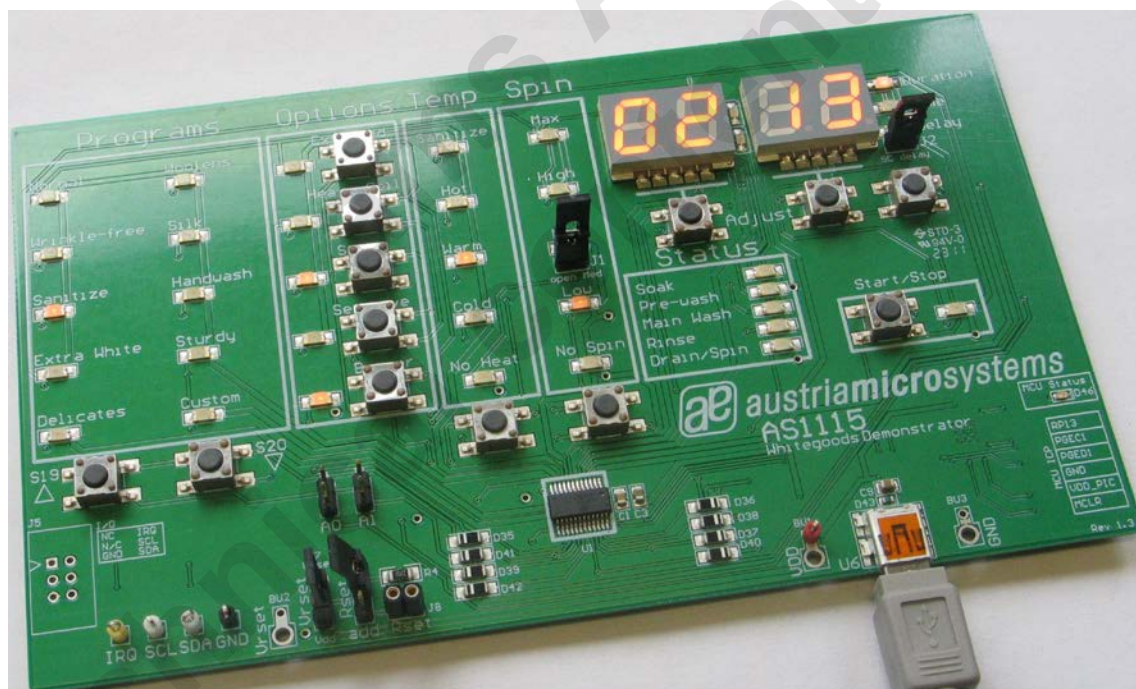
Please visit our website at [www.ams.com](http://www.ams.com)

## White Goods Demo Board Manual

# AS1115

## 64 LEDs, I<sup>2</sup>C Interfaced LED Driver with Keyscan

[www.austriamicrosystems.com/AS1115](http://www.austriamicrosystems.com/AS1115)



## General Description

### Board Description

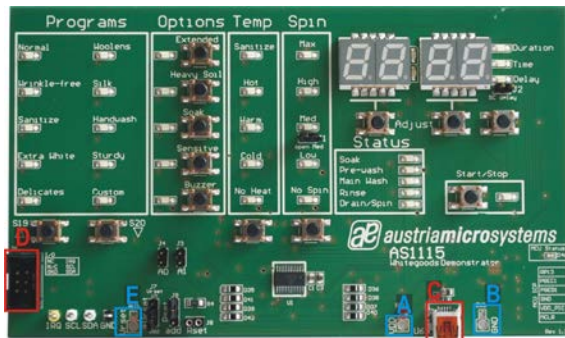


Figure 1: Board Description – Connectors

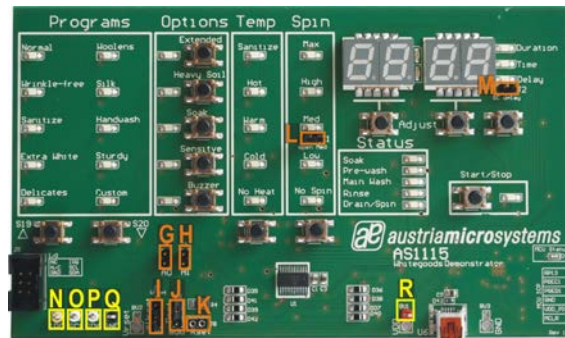


Figure 2: Board Description – Jumper and Measurement Points

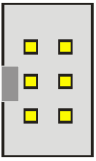
### Connector Description

| Label | Name         | Description                                 | Info   |
|-------|--------------|---|--|
| A     | <b>VDD</b>   | Power Supply Connectors for VDD and Ground. | +2.7V to +5.5V   |
| B     | <b>GND</b>   |   |  |
| C     | <b>USB</b>   | Mini USB 5-pin Connector                    | Supplies the AS1115 with 5V. Connect to a standard USB port. This Connector is <u>also</u> used for data transfer. |
| D *   | <b>I / O</b> | Interface Connector                         | For a detailed Connector Description see table below.  |
| E     | <b>VRSET</b> | Reference Voltage Connector                 | The brightness of the display segments could be controlled via this connector.                                     |





\* optional, n.c.








**Note:** Use only the Connectors VDD “A” and GND “B” or USB Connector “C”. Never use both supply possibilities at the same time!

### I/O - Interface Connector “D” Description (optional, n.c.)

|   | Label | Name        | AS1115 |
|---|-------|-------------|--------|
|  | A1    | <b>VDD+</b> | Pin 19 |
|   | A2    | <b>N/C</b>  |        |
|   | A3    | <b>GND</b>  | Pin 6  |
|   | B1    | <b>IRQ</b>  | Pin 24 |
|   | B2    | <b>SCL</b>  | Pin 14 |
|   | B3    | <b>SDA</b>  | Pin 1  |

### Jumper Description

| Label | Name      | Description           | Info   |
|-------|-----------|-----------------------|--|
| G     | <b>A0</b> | Self Addressing Bit 0 |  Address Bit 0: logic “0” |
|       |           |                       |  Address Bit 0: logic “1” |
| H     | <b>A1</b> | Self Addressing Bit 1 |  Address Bit 1: logic “0” |
|       |           |                       |  Address Bit 1: logic “1” |

|   |              |                           |  |   |
|---|--------------|---------------------------|--|---|
| I | <b>VRSET</b> | Reference Voltage Jumper  | <br> | IN: Rset connected to Reference Voltage Connector “E”<br>VDD: Rset connected to VDD |
| J | <b>RSET</b>  | Resistor Selection Jumper | <br> | SMD: Rset used is R4 (20kΩ)<br>add RSET: Rset used is “K” (User Resistor)           |
| K | <b>RSET</b>  | User Resistor             |   | Connector for User Resistor   |
| L | <b>OPEN</b>  | Open Circuit              |   | Remove Jumper to simulate an open circuit.  |
| M | <b>SC</b>    | Short Circuit             |   | Set Jumper to simulate a short circuit.   |

## Measurement Points Description

| Label | Name       | Description        | Info               |
|-------|------------|--------------------|--------------------|
| N     | <b>IRQ</b> | Interrupt Request  | Measurement Points |
| O     | <b>SCL</b> | Serial Clock Input |                    |
| P     | <b>SDA</b> | Serial Data I/O    |                    |
| Q     | <b>GND</b> | Ground             |                    |
| R     | <b>VDD</b> | Power Supply       |                    |

## Software

To run the AS1115 a controller is required. A microcontroller is mounted on the bottom side of the PCB to run the white good demoboard. The AS1115 WGB is controlled via the software in combination with the microcontroller. The board is only working in connection with software (GUI). The condition of the LED's (ON or OFF) or the different buttons can be triggered via the software or directly on the board.

Alternatively an external controller can be connected to the demoboard via the I/O Connector “D”.

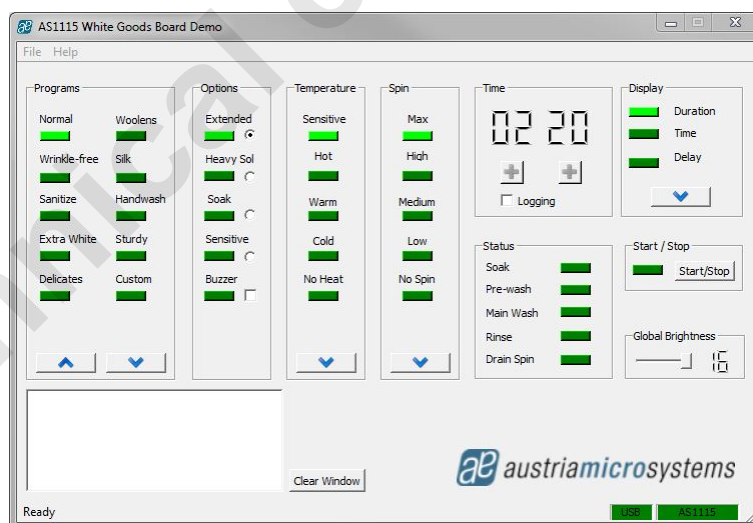


Figure 3: Software Panel

### Note:

As a first step make sure that the hardware connection between the PC and the Demoboard via a USB cable is set. The USB cable is for Power supply and for the data connection. After that, start the Software on you PC.

To check if the connection between the Software and the Demoboard is set, the USB and AS1115 sign (lower right side in *Figure 4*) have to turn to green.

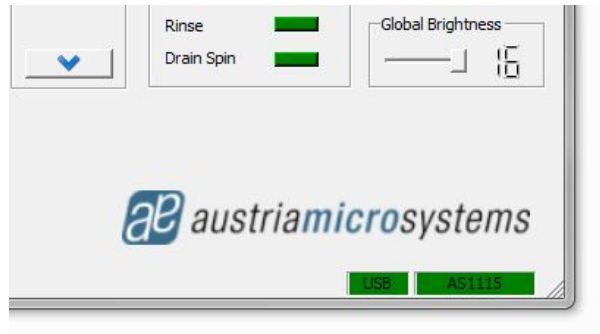


Figure 4: Software Panel detail

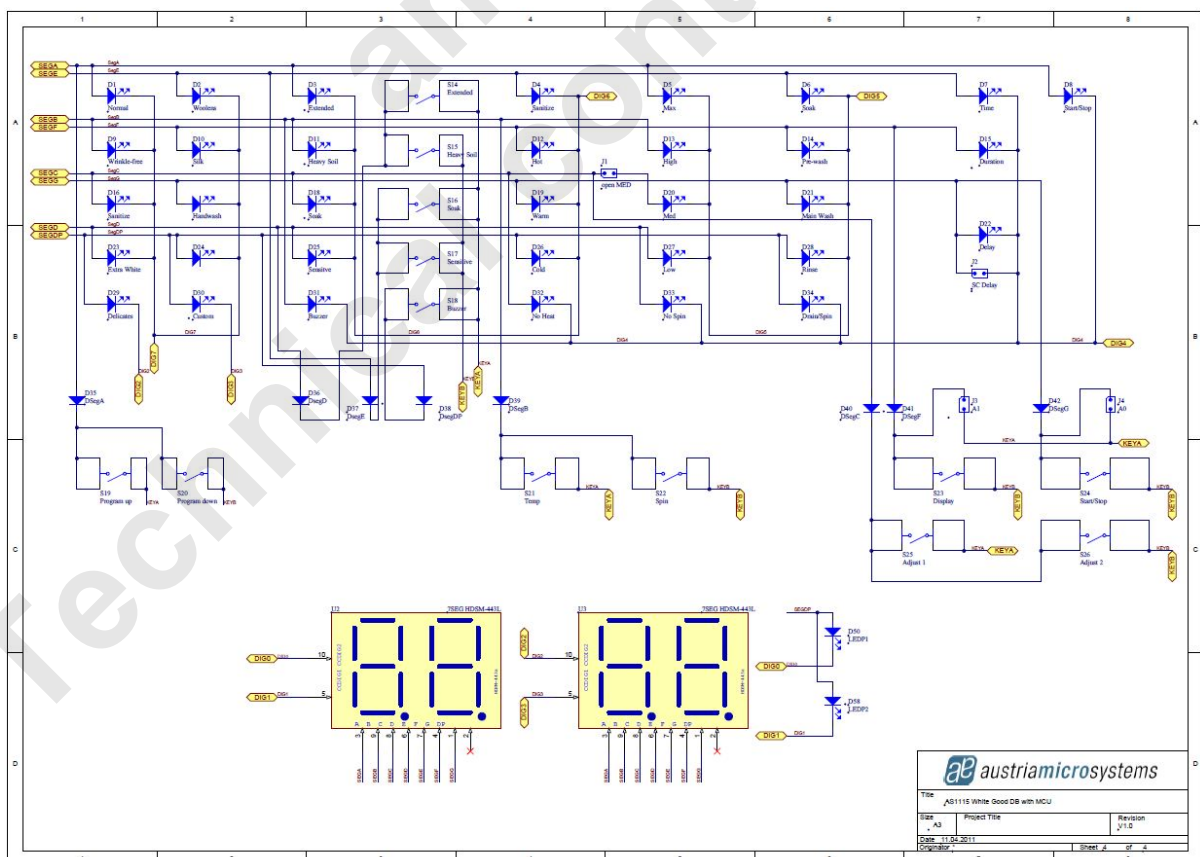
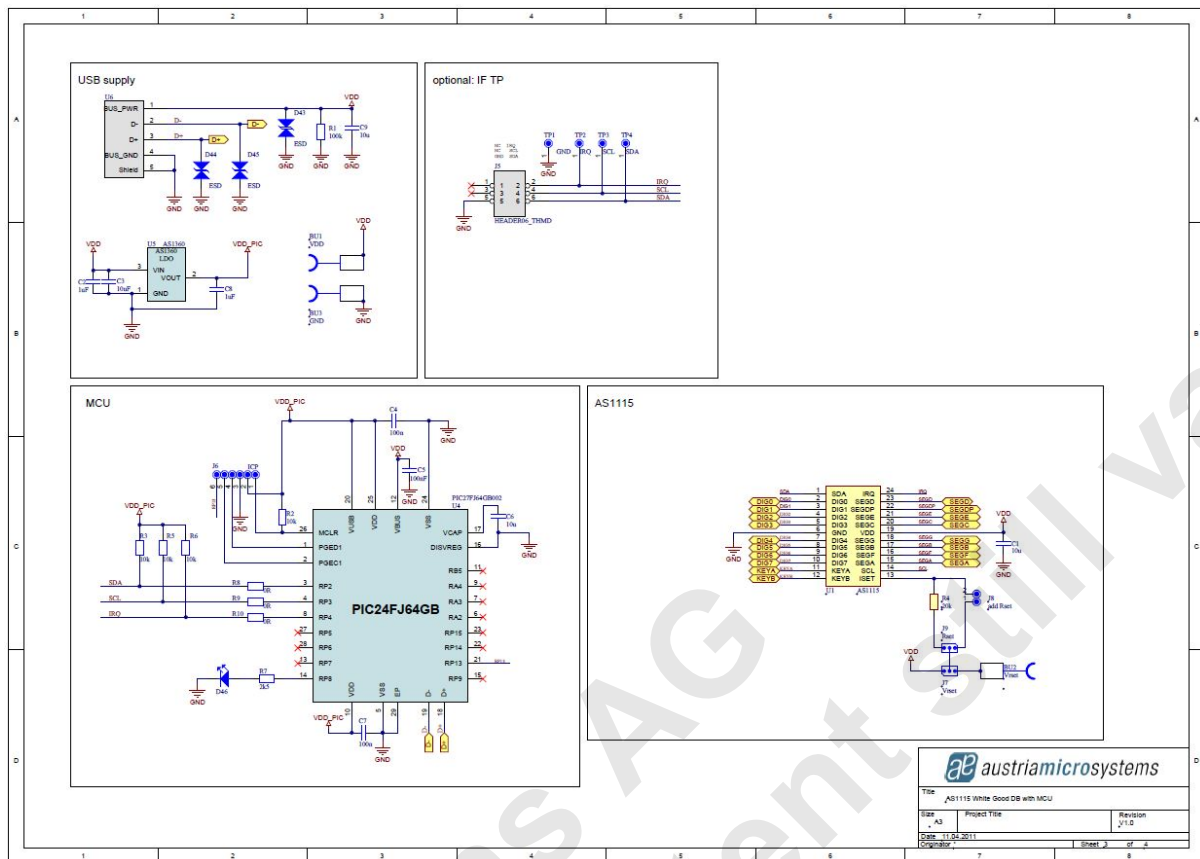
## Operational sequence

1. If not present get the datasheet for the AS1115 from [www.austriamicrosystems.com](http://www.austriamicrosystems.com). Use the IC on the demoboard only with the recommended settings and values as described in the datasheet.
2. First install the AS1115 WGB Software and then connect the demo board with the PC via the USB connector "C". To power down the system simply disconnect the USB cable.
3. For the data format of the I<sup>2</sup>C interface please see the datasheet of the AS1115.

Have fun using the demoboard. If there are questions do not hesitate to contact us. See contact information at the end of the application note.



## Board schematics of the demoboard



## Layout of the demoboard

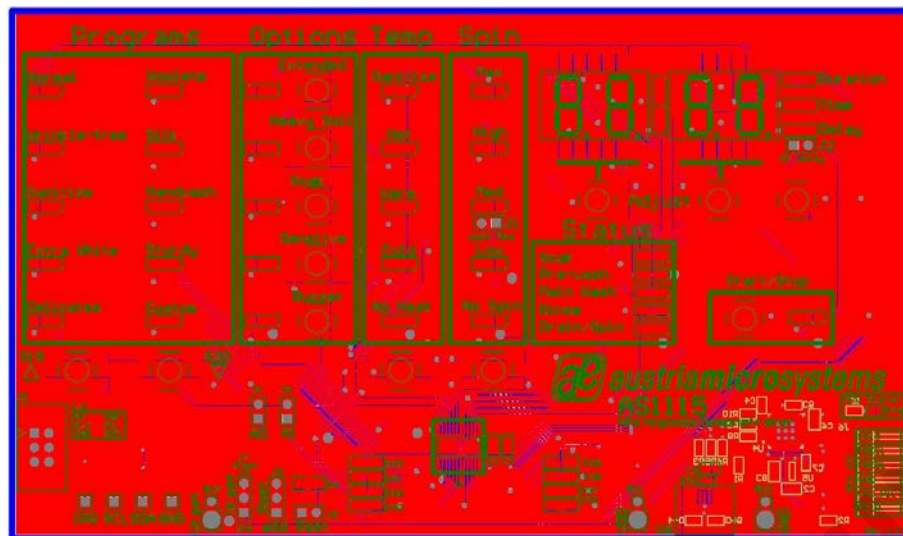


Figure 7: Top view

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