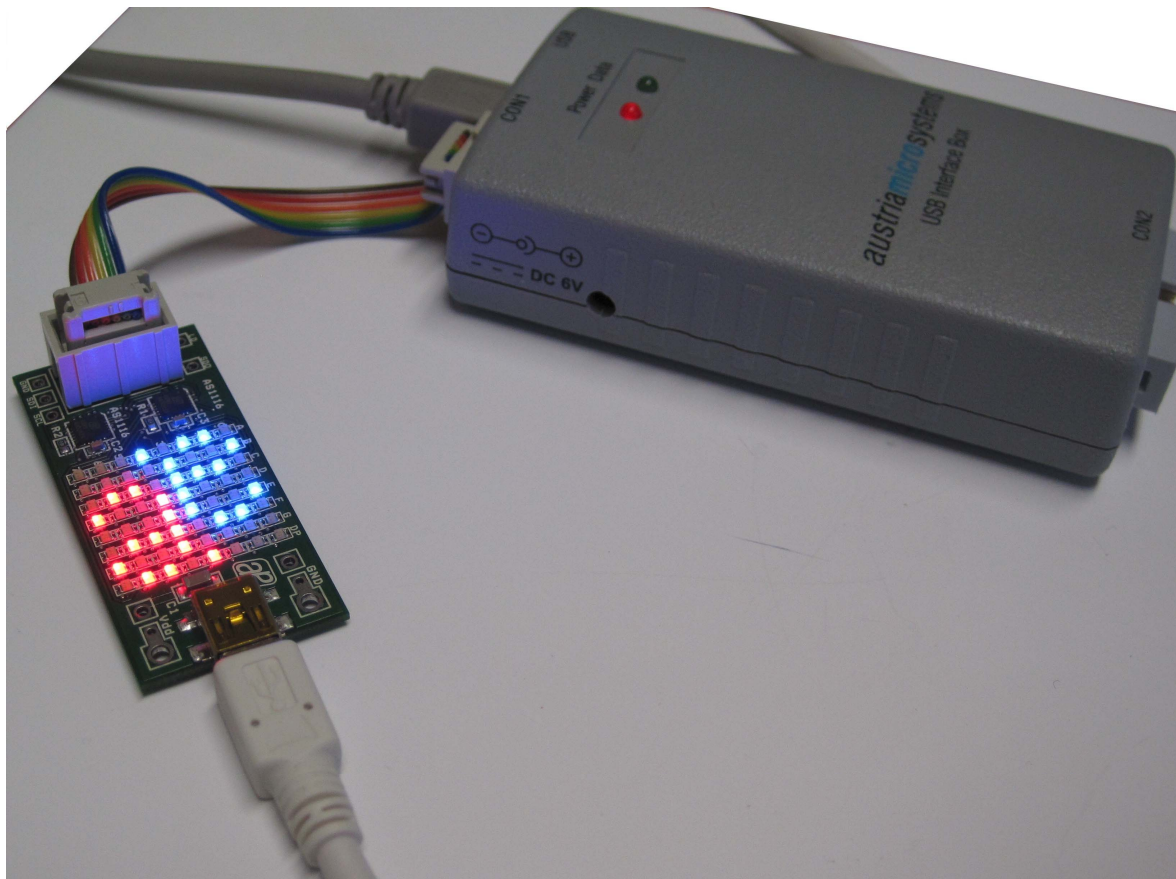


## Bicolor Demo Board Manual

# AS1116

## 64 LED Driver with Detailed Error Detection

[www.austriamicrosystems.com/AS1116](http://www.austriamicrosystems.com/AS1116)



# General Description

## Board Description

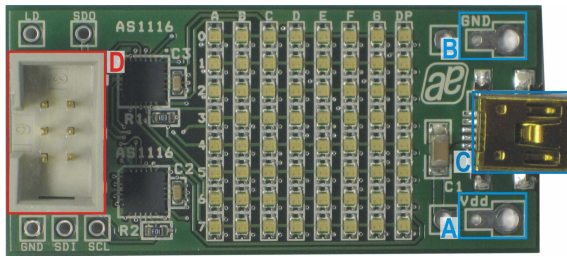


Figure 1: Board Description - Connectors

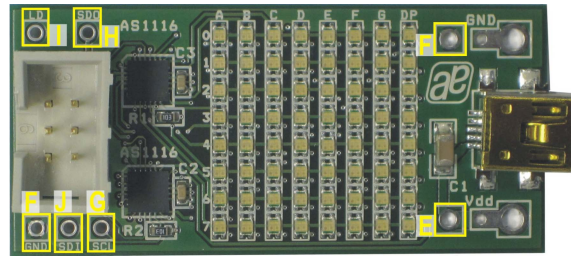


Figure 2: Board Description – Measurement Points

## Connector Description

Label	Name	Description	Info
A	<b>VDD</b>	Supply Voltage	Supply voltage ranging from 2.7V to 5.5V
B	<b>GND</b>	Ground	
C	<b>USB</b>	Mini USB 5-pin Connector	Supplies the AS1116 with 5V. Connect to a standard USB port.
D	<b>I / O</b>	Interface Connector	see Interface Connector Description below

**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

	Label	Name	AS1116
	A1	<b>LD</b>	Pin 9
	A2	<b>NC</b>	
	A3	<b>GND</b>	Pin 3
	B1	<b>SDO</b>	Pin 21
	B2	<b>SCL</b>	Pin 11
	B3	<b>SDI</b>	Pin 22

## Measurement Point Description

Label	Name	Description	Info
E	<b>VDD</b>	Supply Voltage	Measurement Points
F	<b>GND</b>	Ground	
G	<b>SCL</b>	Serial Clock Input	
H	<b>SDO</b>	Serial Data Output	
I	<b>LD</b>	Load	
J	<b>SDI</b>	Serial Data Input	

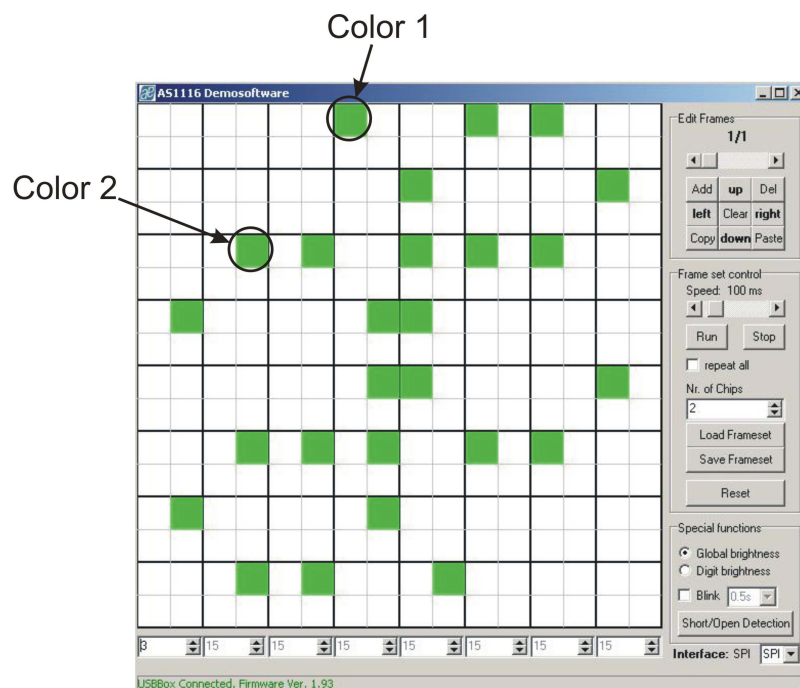
## Software

To use the AS1116 Bicolor Demoboard a controller is required. The controller can be connected to the demoboard via the I/O Connector “D”.

If no controller is available the austriamicrosystems USB box in combination with the AS1116 Bicolor Demoboard software can be used as well. This USB box is needed to set-up the connection between the demoboard and the USB interface of a PC. The USB box can be ordered via <http://www.austriamicrosystems.com>.

To realize a panel with more than 64 LEDs, it's possible to connect more AS1116 demoboards. Connect the SDO pin of one AS1116 to the SDI pin of the next AS1116. The SCL and LD pin have to be connected in parallel. With the austriamicrosystems Demosoftware it's possible to connect up to 4 devices. Take care to set the 'Nr. Of Chips' accordingly in the software.

To draw a picture, click the left or right small box to put one of the two colors of the dual LED's on. Of course it's also possible to activate both channels at the same time to get the mixture of both colors.



## Operational sequence

This demo board comes with two AS1116.

1. Drive the IC on the demo board only with the recommended settings and values as described in the [datasheet](#). If not present get the datasheet for the AS1116 from [www.austriamicrosystem.com](http://www.austriamicrosystem.com).
2. First connect the power supply via connector “C” to a powered USB port and then power up the I/O - Interface “D”. To power down the system disconnect first the I/O Interface and then the power supply of the demoboard.
3. Connect the I/O - Interface “D” to a  $\mu$ C or via the *austriamicrosystems USB Interface Box* to a PC. For interfacing please see the corresponding datasheet of the AS1116.

If there are questions do not hesitate to contact us. See contact information at the end of this manual.

# Layout of Demo Board

## Board schematics and layout

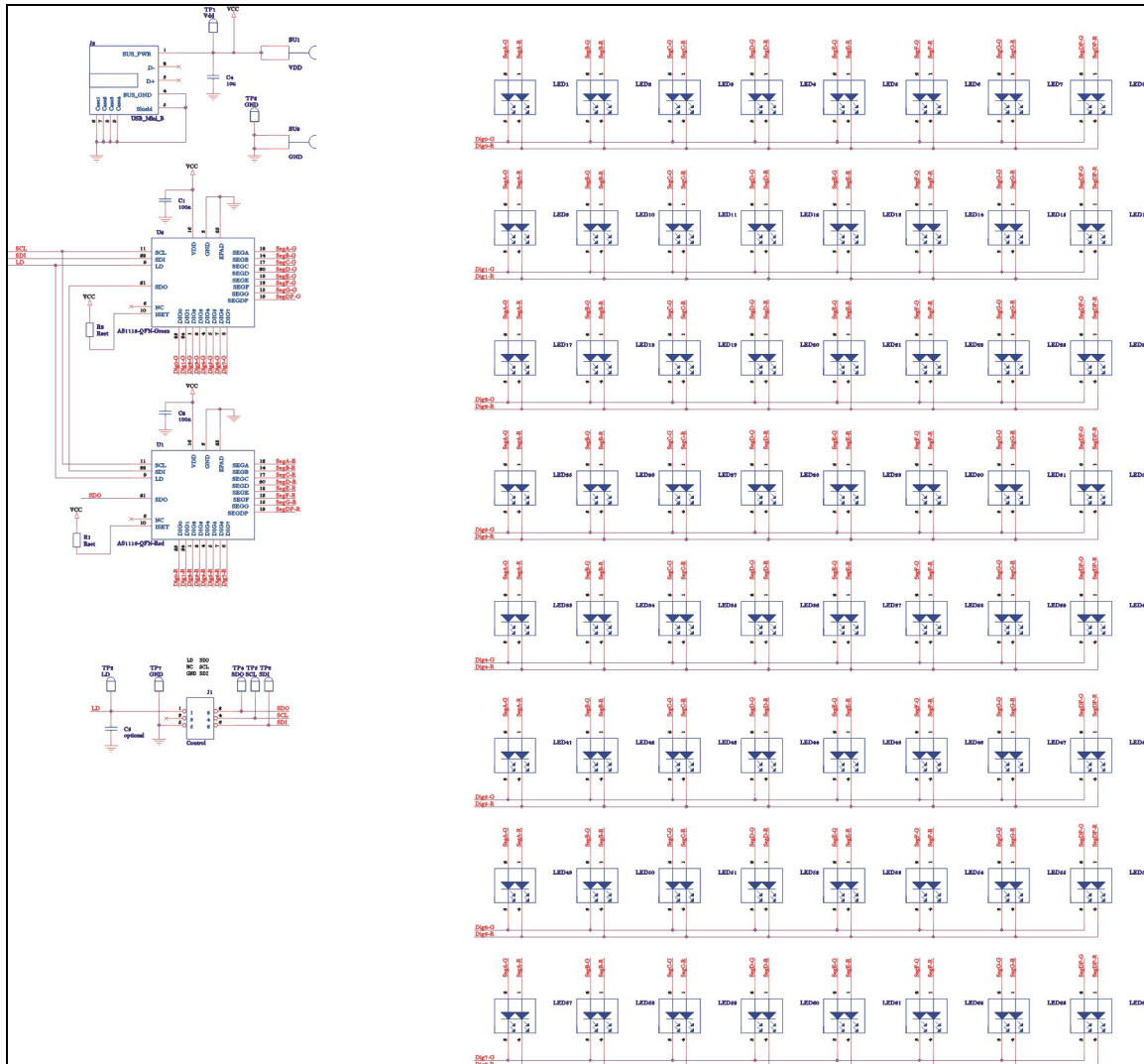


Figure 3: Schematics

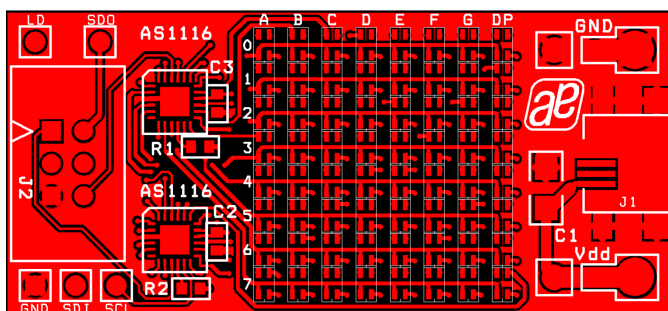


Figure 4: Top Layer

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