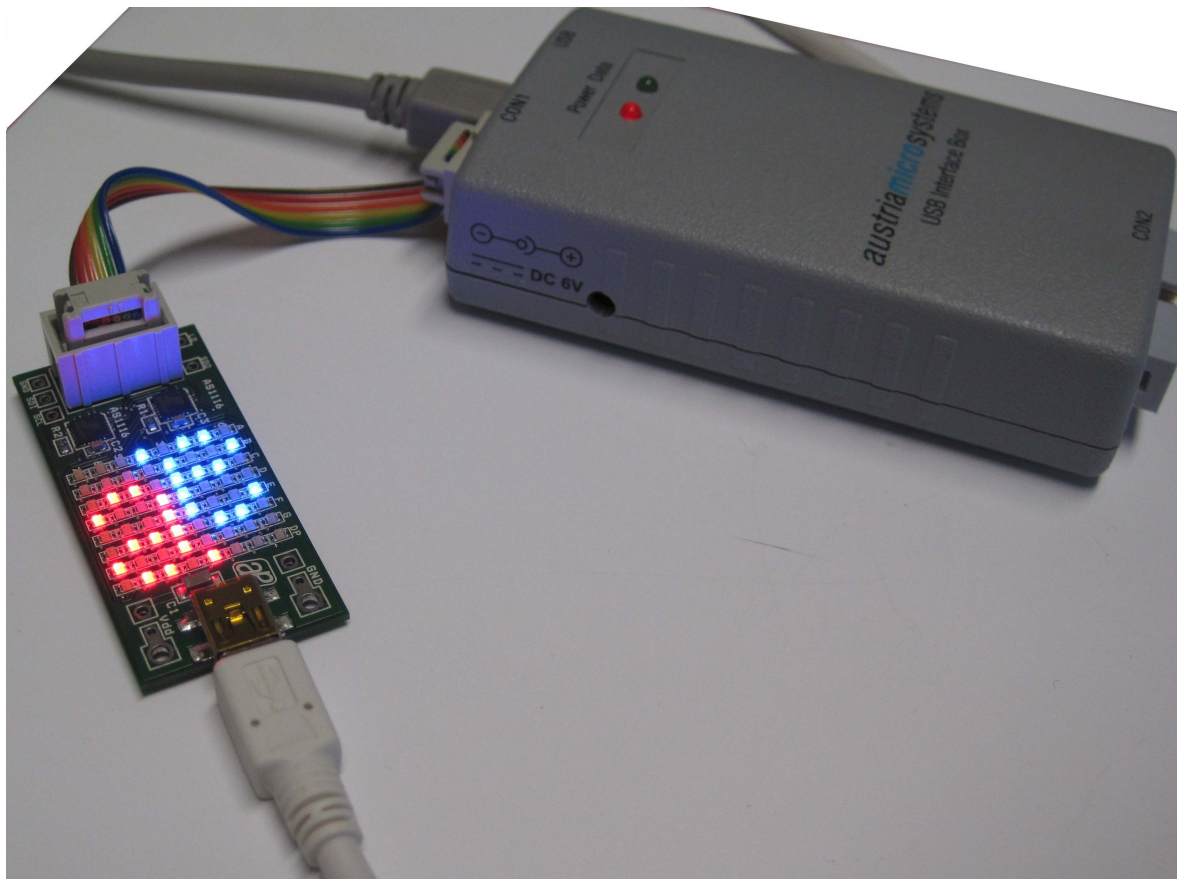# Bicolor Demo Board Manual

AS1116

64 LED Driver with Detailed Error Detection

www.austriamicrosystems.com/AS1116

General Description

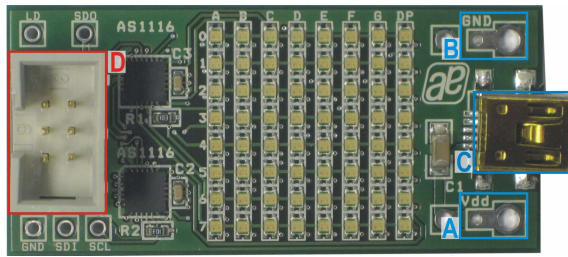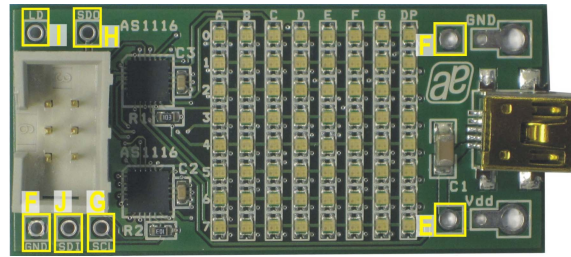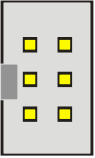## Board Description

Figure 1: Board Description - Connectors

Figure 2: Board Description – Measurement Points

Connector Description

Label	Name	Description	Info
A	**VDD**	Supply Voltage	Supply voltage ranging from 2.7V to 5.5V
B	**GND**	Ground	
C	**USB**	Mini USB 5-pin Connector	Supplies the AS1116 with 5V. Connect to a standard USB port.
D	**I / O**	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	**LD**	Pin 9
A2	**NC**	
A3	**GND**	Pin 3
B1	**SDO**	Pin 21
B2	**SCL**	Pin 11
B3	**SDI**	Pin 22

Measurement Point Description

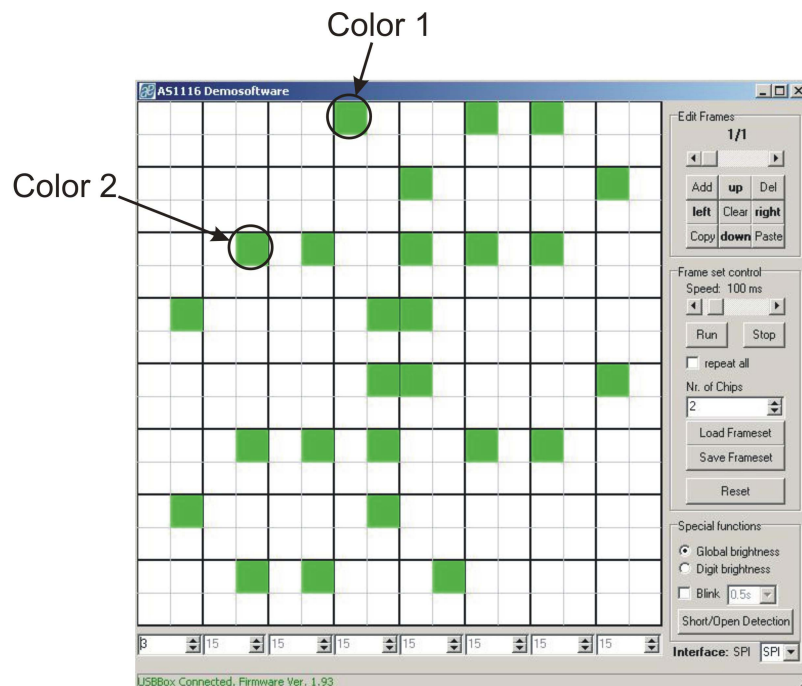| Label	Name	Description	Info
E	**VDD**	Supply Voltage	
F	**GND**	Ground	
G	**SCL**	Serial Clock Input	Measurement Points
H	**SDO**	Serial Data Output	
I	**LD**	Load	
J	**SDI**	Serial Data Input	

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.austriamicrtosystem.com.

2. First connect the power supply via connector **"C"** to a powered USB port and than power up the I/O - Interface **"D"**. To power down the system disconnect first the I/O Interface and than the power supply of the demoboard.

3. Connect the I/O - Interface **"D"** to a µC 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.
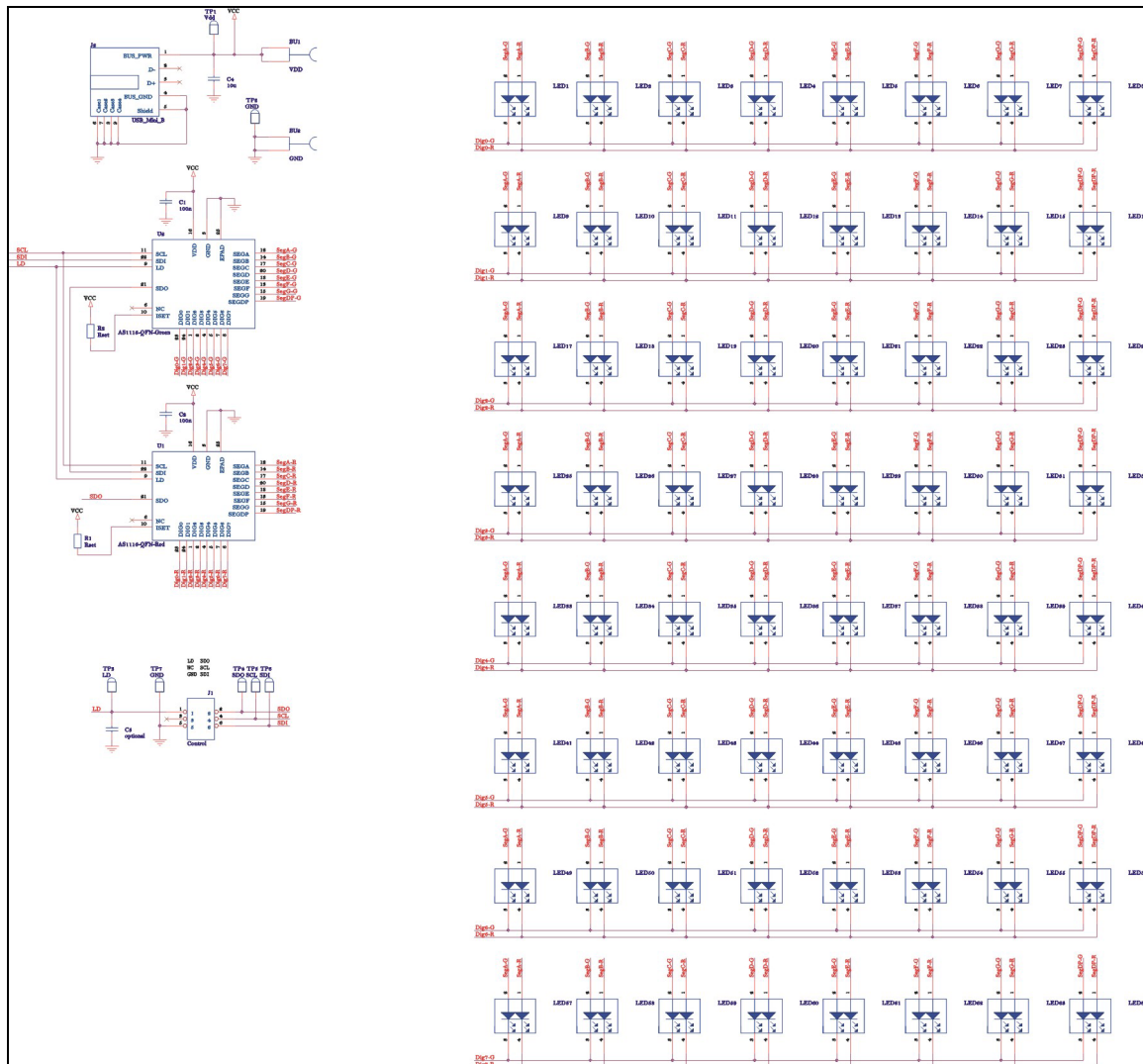
Layout of Demo Board

Board schematics and layout

Figure 3: Schematics

Figure 4: Top Layer

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