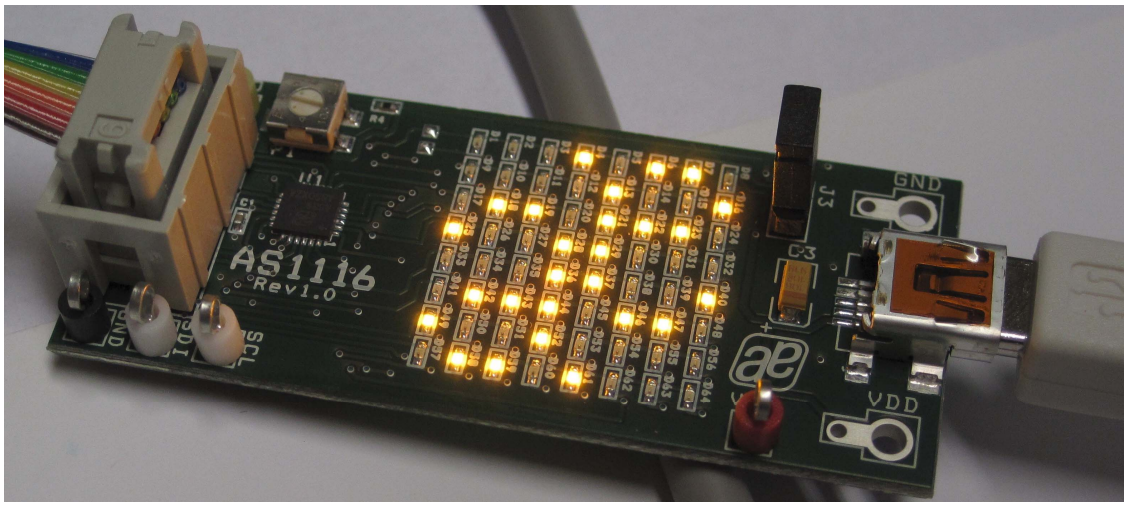
Single Color Demo Board Manual

AS1116

64 LED Driver with Detailed Error Detection

www.austriamicrosystems.com/AS1116



General Description

Board Description

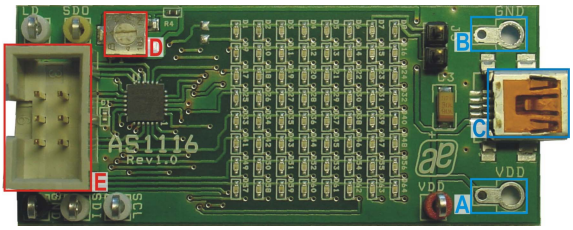


Figure 1: Board Description - Connectors

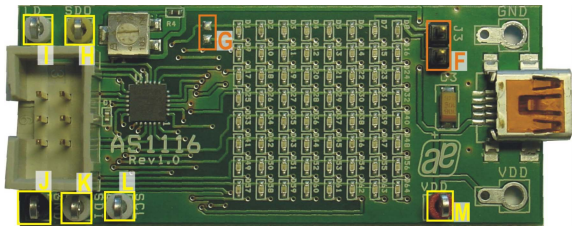


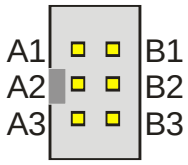
Figure 2: Board Description – Measurement Points

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		Potentiometer	LED current can be adjusted with this potentiometer. Rotating clockwise will increase current.
E	**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 "E" 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

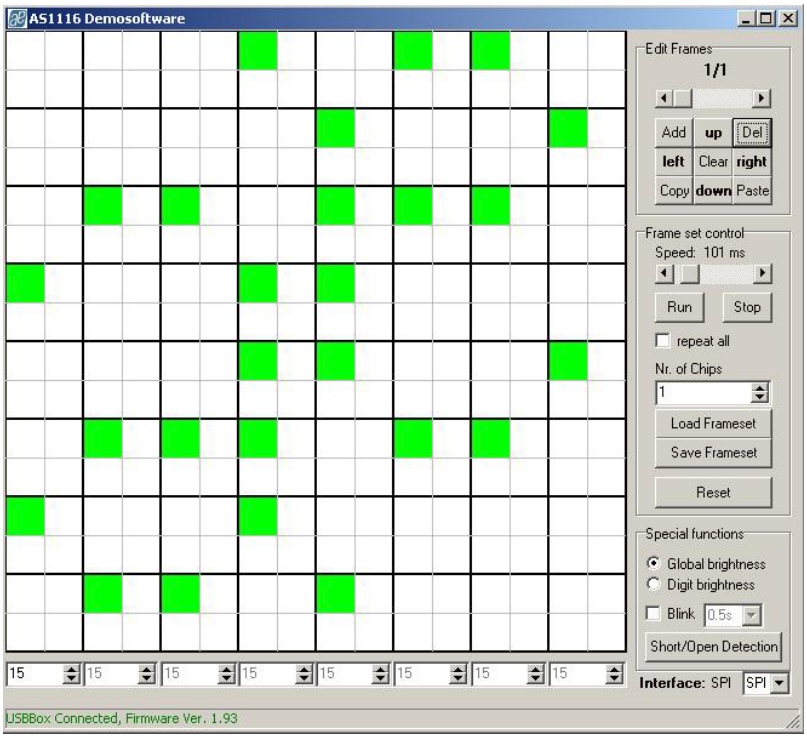
Measurement Point Description

Label	Name	Description	Info
F	**J3**	Open Jumper	Simulates an open of LED D8
G		Short Pins	Simulates an short of LED D1
H	**SDO**	Serial Data Output	Measurement Points
I	**LD**	Load	
J	**GND**	Ground	
K	**SDI**	Serial Data Input	
L	**SCL**	Serial Clock Input	
M	**VDD**	Supply Voltage	

Software

To use the AS1116 single-color Demoboard a controller is required. The controller can be connected to the demoboard via the I/O Connector **"E"**.
If no controller is available the austriamicrosystems USB box in combination with the AS1116 single-color 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.



Operational sequence

This demo board comes with one 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 **"E"**. 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 **"E"** 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

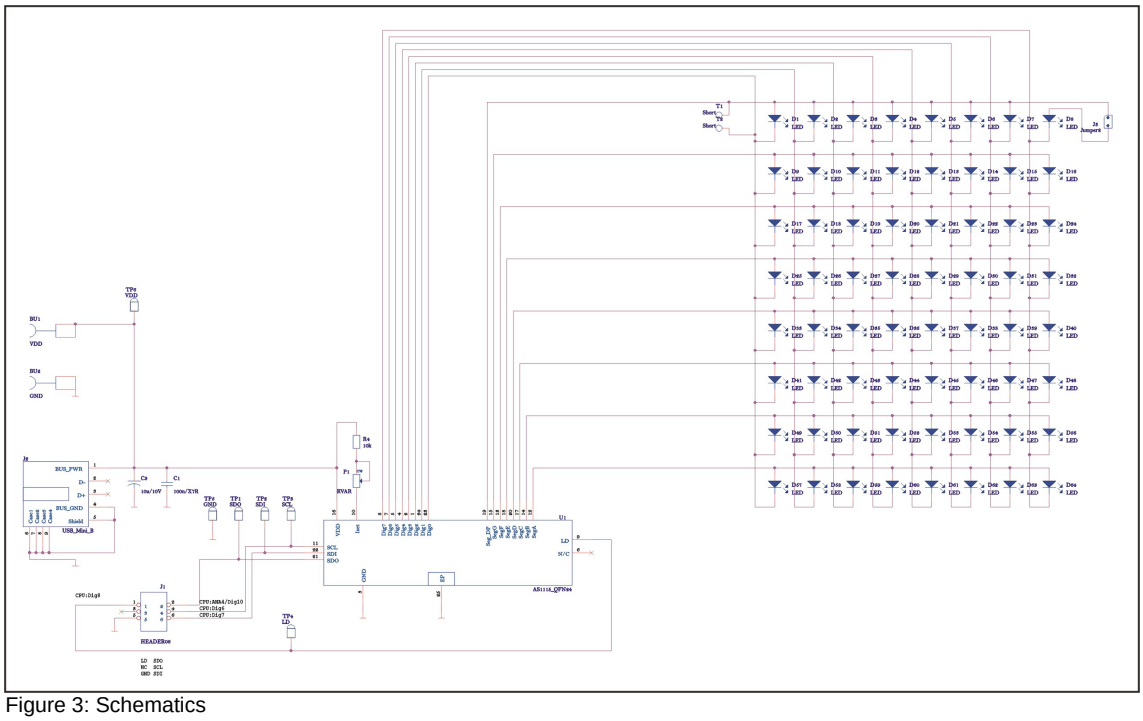


Figure 3: Schematics

Board layout

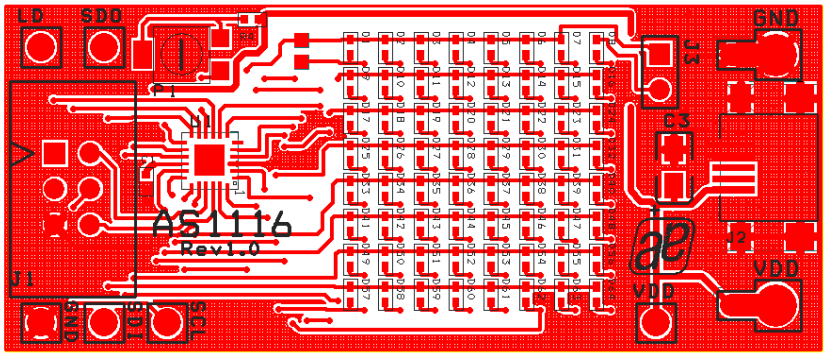


Figure 4: Top Layer

Copyright

Disclaimer

Devices sold by austriamicrosystems AG are covered by the warranty and patent indemnification provisions appearing in its Term of Sale. austriamicrosystems AG makes no warranty, express, statutory, implied, or by description regarding the information set forth herein or regarding the freedom of the described devices from patent infringement. Austriamicrosystems AG reserves the right to change specifications and prices at any time and without notice. Therefore, prior to designing this product into a system, it is necessary to check with austriamicrosystems AG for current information.
This product is intended for use in normal commercial applications. Applications requiring extended temperature range, unusual environmental requirements, or high reliability applications, such as military, medical life-support or life-sustaining equipment are specifically not recommended without additional processing by austriamicrosystems AG for each application. For shipments of less than 100 parts the manufacturing flow might show deviations from the standard production flow, such as test flow or test location.
The information furnished here by austriamicrosystems AG is believed to be correct and accurate. However, austriamicrosystems AG shall not be liable to recipient or any third party for any damages, including but not limited to personal injury, property damage, loss of profits, loss of use, interruption of business or indirect, special, incidental or consequential damages, of any kind, in connection with or arising out of the furnishing, performance or use of the technical data herein. No obligation or liability to recipient or any third party shall arise or flow out of austriamicrosystems AG rendering of technical or other services.

Contact Information

Headquarters
austriamicrosystems AG
Tobelbaderstraße 30
A-8141 Unterpremstätten - Graz, Austria
T. +43 (0) 3136 500 0
F. +43 (0) 3136 5692

For Sales Offices, Distributors and Representatives, please visit:
http://www.austriamicrosystems.com/contact