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**Contact information:**

**Headquarters:**

ams AG

Tobelbaderstrasse 30

8141 Unterpremstaetten, Austria

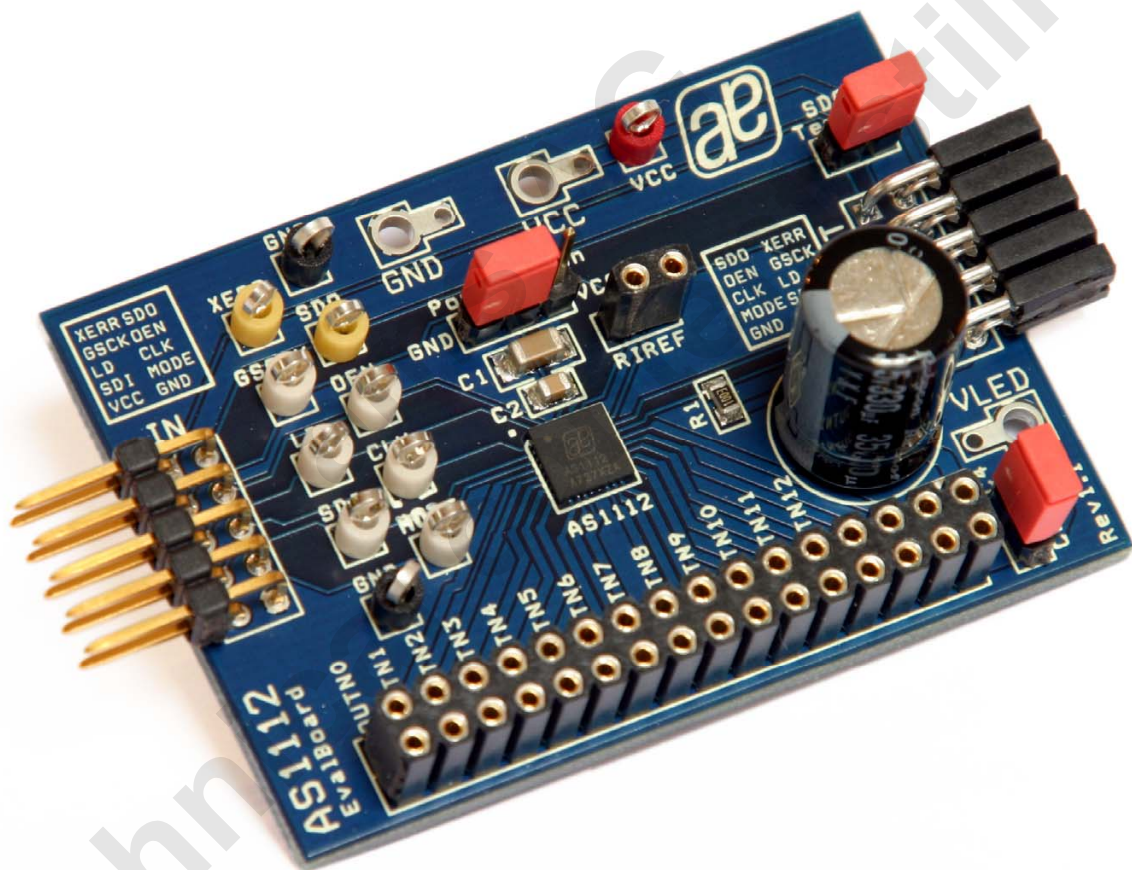
Tel: +43 (0) 3136 500 0

e-Mail: [ams\\_sales@ams.com](mailto:ams_sales@ams.com)

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# AS1112

## Evaluation Board Application Note



## General Description

### Board Description

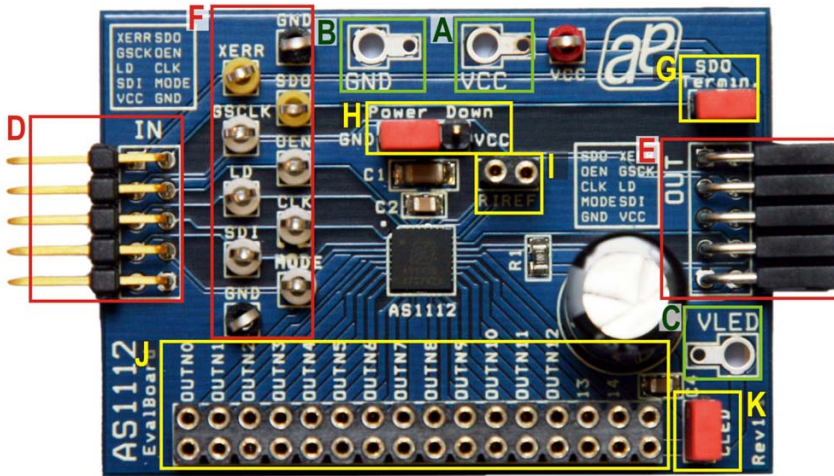


Figure 1: Evalboard Description

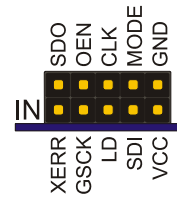


Figure 2: Input Line (D)

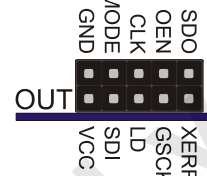


Figure 3: Output Line (E)

### Supply Description

Label	Name	Description	Info
A	VCC	Power Supply Connectors for VDD and Ground.	+3.0V to +5.5V
B	GND		
C	VLED	Supply Voltage for the LED's	The output current drivers of the AS1112 can handle up to +15V.

### Connector Description

Label	Name	Description	Info
D	IN	Line In Connector	Can be directly connected to OUT (E) of the previous board.
E	OUT	Line Out Connector	Can be directly connected to IN (D) of the next board.
F		Measurement Points	Description follows below.
	XERR	Error Output	0: Open or Temp. Error Detected 1: Normal Operation
	GSCK	Greyscale Clock	Reference clock for greyscale PWM control.
	LD	Data Latch	(MODE = GND): the greyscale register receives new data. (MODE = VCC): the dot correction register receives new data.
	SDI	Serial Data Input	
	GND	Ground	
	SDO	Serial Data Output	
	OEN	Output Enable	0 = OUT <sub>n</sub> outputs are controlled by the greyscale PWM control. 1 = OUT <sub>n</sub> outputs are forced off; the greyscale counter is reset.
	CLK	Serial Data Clock	
	MODE	Mode Select	Input with internal pulldown MODE = GND: Selects greyscale mode MODE = VCC: Selects dot correction mode

### Components Connectors Description

Label	Name	Description	Info
G	SDO Termin.		This jumper must be set if only a single board is in use, or on the last board in a daisy chain.
H	Power Down		Input with internal pulldown 0 = normal operation mode 1 = powerdown mode
I	Rext	External Resistor	Place resistor here to set the load current.
J	OUTN0-15	Output Current Drivers	Connector for LED's. Upper side interfaces with the output drivers of the AS1112 while the bottom line connects to VLED.
K	CLED	Decoupling Capacity of LEDs	Jumper to (dis)connect the onboard capacity.

## Operational sequence

1. If not present get the [datasheet](#) for the AS1112 from [www.austriamicrosystems.com](http://www.austriamicrosystems.com). Use the IC on the evaluation board only with the recommended settings and values as described in the [datasheet](#).
2. Place an external resistor in Rext "I" to set the LED current. If another capacitance than 330µF 35V is needed it is possible to disconnect the onboard capacity through the Jumper CLED "K". Connect the LEDs with the output current drivers "J".
3. Connect a +3.0V to +5.5V power supply (VDD "A" and GND "B" or via Line IN "D").
4. Connect a voltage supply to VLED "C". The output drivers sustain a maximum voltage of +15V at the pin.
5. Connect the Serial Data Interface via Line IN "D". For the data format of the serial interface please see the datasheet of the AS1112.

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

## Layout of demoboard

### Board schematics and layout

Figure 3: Schematics

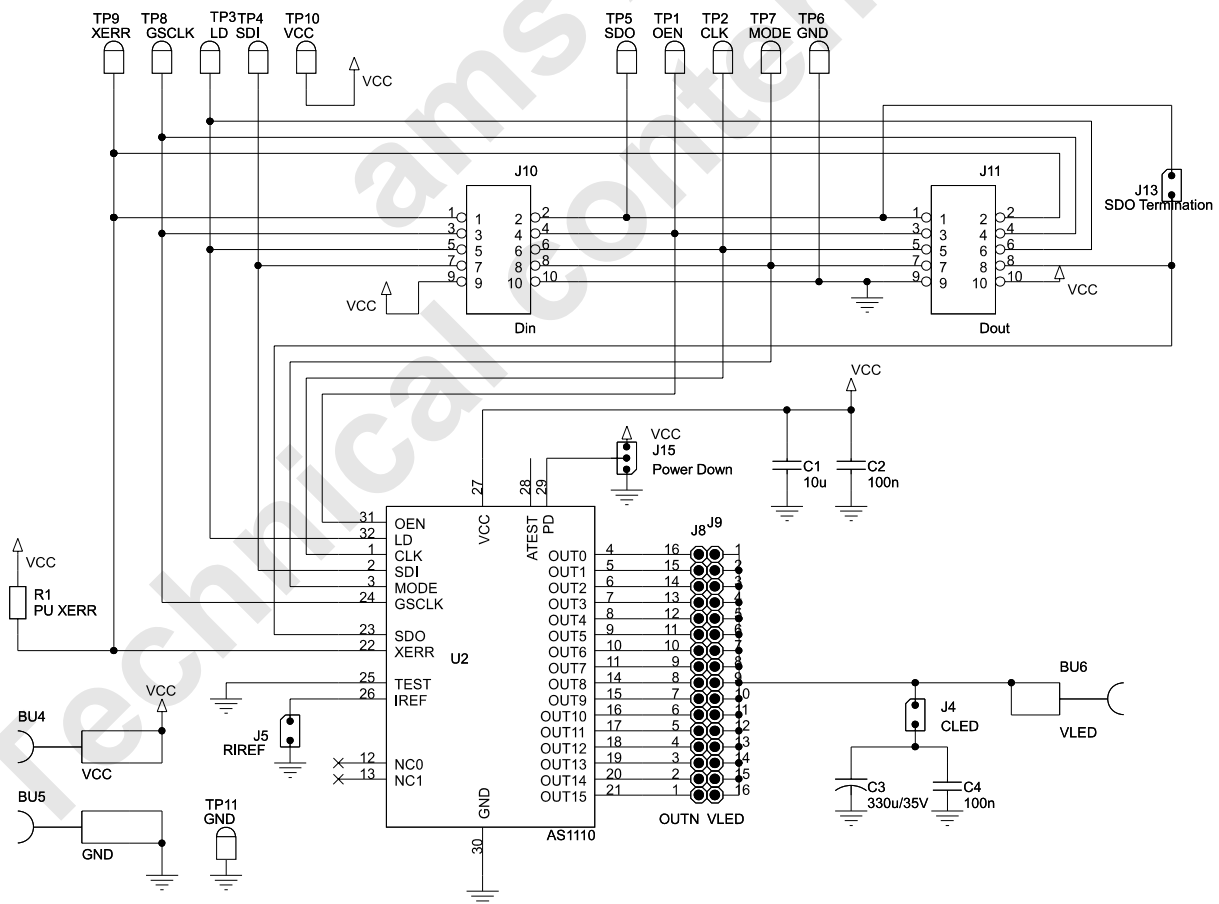


Figure 4: Top view

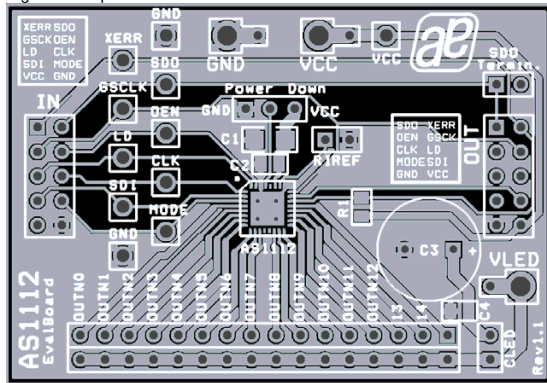
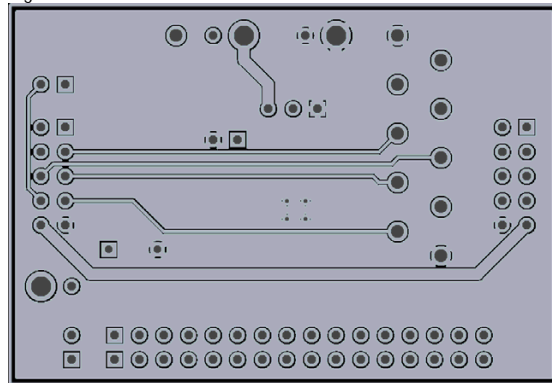


Figure 5: Bottom view



### Recommended parts

Label	Info	Type	Manufacturer
<b>C1</b>	10 $\mu$ F, $\pm$ 10%, 16V, X7R	GRM31CR71C106KAC7	<a href="#">Murata</a>
<b>C2, C4</b>	0.1 $\mu$ F, $\pm$ 10%, 50V, X7R	GRM21BR71H104KA01	<a href="#">Murata</a>
<b>C3</b>	330u, 35V, Electrolytic Condensator		

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## Contact Information

### Headquarters

austriamicrosystems AG  
A-8141 Schloss Premstätten, Austria  
T. +43 (0) 3136 500 0  
F. +43 (0) 3136 5692

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