

Product Document



austriamicrosystems AG

is now

ams AG

The technical content of this austriamicrosystems document is still valid.

Contact information:

Headquarters:

ams AG

Tobelbaderstrasse 30

8141 Unterpremstaetten, Austria

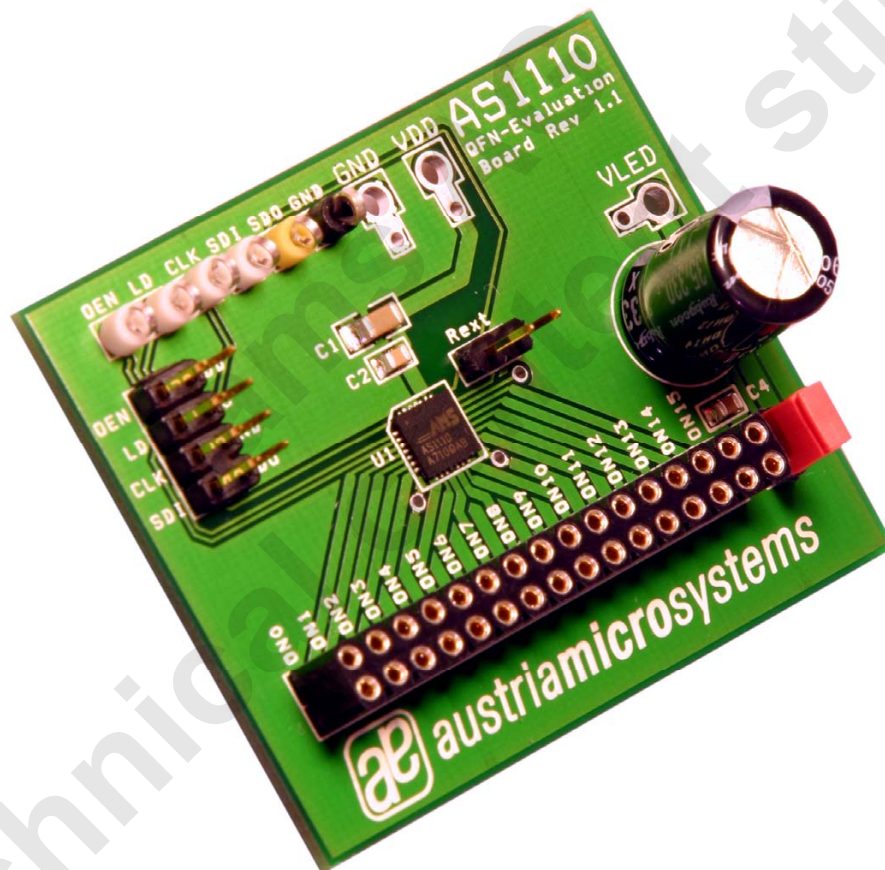
Tel: +43 (0) 3136 500 0

e-Mail: ams_sales@ams.com

Please visit our website at www.ams.com

AS1110

Evaluation Board Application Note



General Description

Board Description

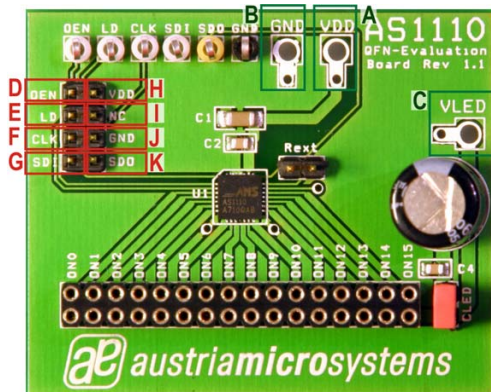


Figure 1: Board Description

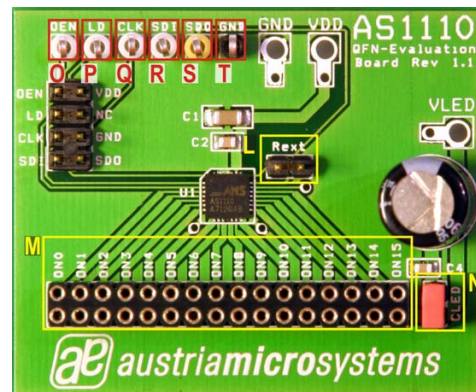


Figure 2: Board Description

Connector Description

Label	Name	Description	Info
A	VDD	Power Supply Connectors for VDD	+3.0V to +5.5V
B	GND	and Ground.	
C	VLED	Supply Voltage for the LED's	The output current drivers of the AS1110 can handle up to +15V.

Connector Description

Label	Name	Description	Info
D	OEN	Output Enable	0: Output drivers enabled; 1: Output drivers disabled
E	LD	Serial Data Load	Data transferred at the rising edge.
F	CLK	Serial Data Clock	
G	SDI	Serial Data Input	
H	VDD	Positive Supply Voltage	
I	NC	Not connected	
J	GND	Ground	
K	SDO	Serial Data Output	

Components Connectors Description

Label	Name	Description	Info
L	Rext	External Resistor	Place resistor here to set the load current.
M	ON0-7	Output Current Drivers	Connector for LED's. Upper side interfaces with the output drivers of the AS1110 while the lower side connects to VLED.
N	CLED	Decoupling Capacity of LEDs	Jumper to (dis)connect the onboard capacity.

Measurement Points Description

Label	Name	Description	Info
O	OEN	Output Enable	0: Output drivers enabled; 1: Output drivers disabled
P	LD	Serial Data Load	Data transferred at the rising edge.
Q	CLK	Serial Data Clock	
R	SDI	Serial Data Input	
S	SDO	Serial Data Output	
T	GND	Ground	

Operational sequence

1. If not present get the [datasheet](#) for the AS1110 from 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 "L" to set the LED current. If another capacitance then 330µF 35V is needed it is possible to disconnect the onboard capacity through the Jumper CLED "N". Connect the LEDs with the output current drivers "M".
3. Connect a +3.0V to +5.5V power supply (VDD "A" and GND "B" or VDD "H" and GND "J").
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. For the data format of the serial interface please see the [datasheet](#) for the AS1110.

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

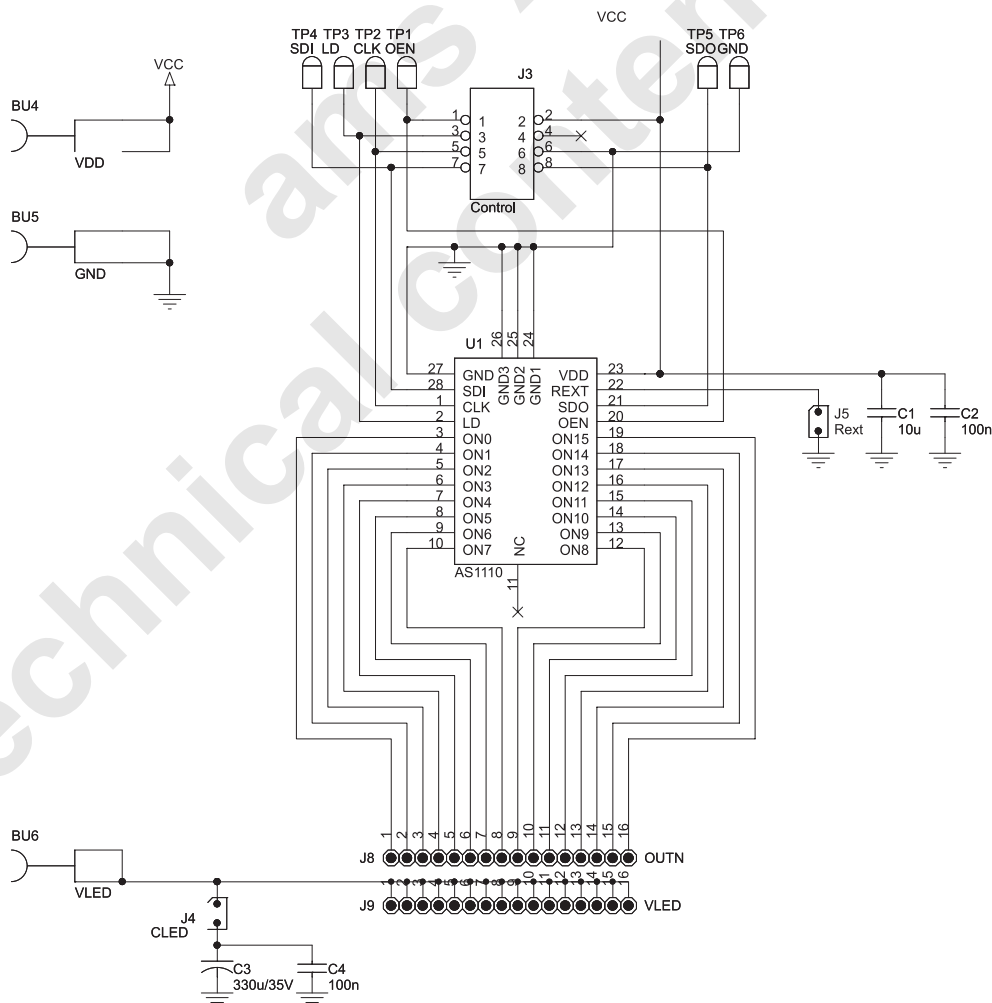


Figure 4: Top view

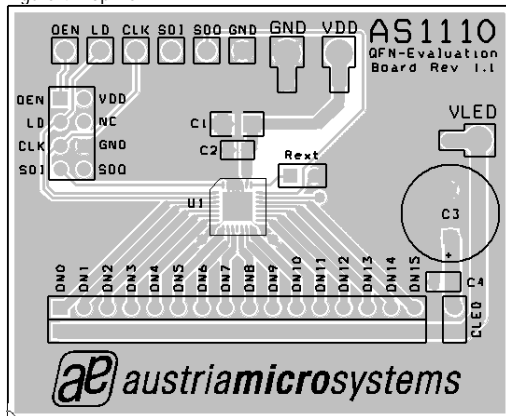
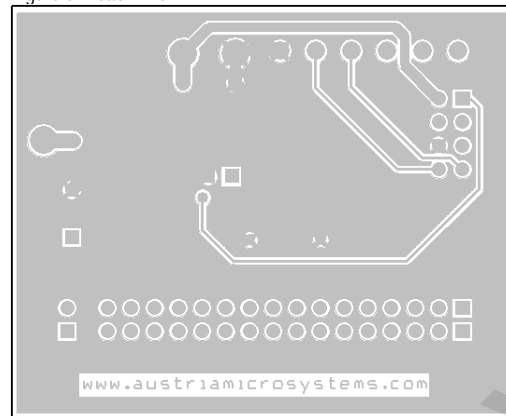


Figure 5: Bottom view



Recommended parts

Label	Info	Type	Manufacturer
C1	10 μ F, \pm 10%, 16V, X7R	GRM31CR71C106KAC7	Murata
C2, C4	0.1 μ F, \pm 10%, 50V, X7R	GRM21BR71H104KA01	Murata
C3	330u, 35V, Electrolytic Condensator		

Copyright

Copyright © 1997-2007, austriamicrosystems AG, Schloss Premstaetten, 8141 Unterpremstaetten, Austria-Europe. Trademarks Registered ®. All rights reserved. The material herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner.

All products and companies mentioned are trademarks or registered trademarks of their respective companies.

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 lifesustaining 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
A-8141 Schloss Premstätten, 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>