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Demo Board Manual

AS1130

132 LED, I²C Interfaced, Cross-Plexing Driver with scrolling Function

www.austriamicrosystems.com

General Description

AS1130 Demo Board Description

Figure 1: Board Description - Supply

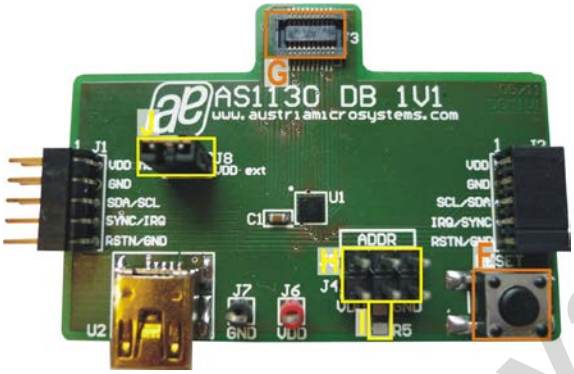


Figure 2: Board Description – Jumpers

Supply 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 AS1130 with 5V. Connect to a standard USB port. This Connector is not used for data transfer. Not needed if jumper **"J8"** is set.
D	**J1**	Line In Connector	Can be connected to OUT **"E"** of the previous board or to *USB Programmer Board*.
E	**J2**	Line Out Connector	Can be connected to IN **"D"** of the next board.

Notes:

- Use only the Connectors VDD **"A"** and GND **"B"** or USB Connector **"C"**. Never use both supply possibilities at the same time!
- If the *AS1130 Demo Board* is connected to the *USB Programmer Board* and jumper **"J"** is set, no extra Supply is needed.

Figure 3: Pin Assignment I/O - Connector

Jumper Description

Label	Name	Description	Info	
F	**RESET**	Reset Button		
G	**J3**	Connector to LED boards.		
H	**J5**	ADDR		**VDD:** Address is set to 0110 111
				**R5:** Address is depending on R5
				**GND:** Address is set to 0110 000
I	**R5**	User resistor for addressing		1MΩ or floating: 0110 000 470kΩ: 0110 001 220kΩ: 0110 010 100kΩ: 0110 011 47kΩ: 0110 100 22kΩ: 0110 101 10kΩ: 0110 110 4.7kΩ or GND: 0110 111
J	**J8**	VDD for AS1130		**VDD ext:** The AS1130 is supplied via the connectors VDD **"A"** and GND **"B"** or USB Connector **"C"**.
				**MCU:** The AS1130 is supplied via the USB programmer board

USB Programmer Board Description

The Programmer board is equipped with a PIC24FJ64GB and is used for communication between Software and *AS1130 Demo Board*.

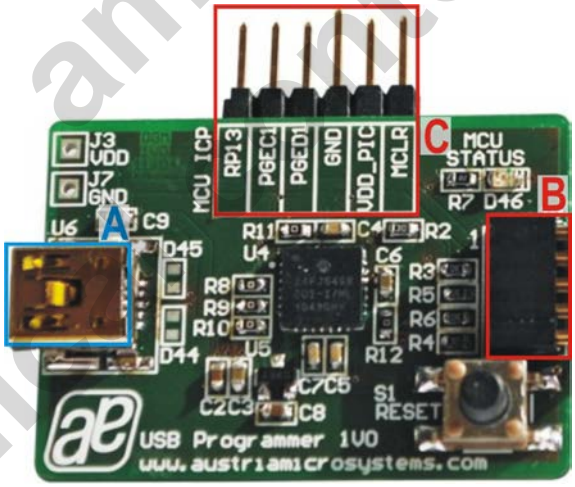


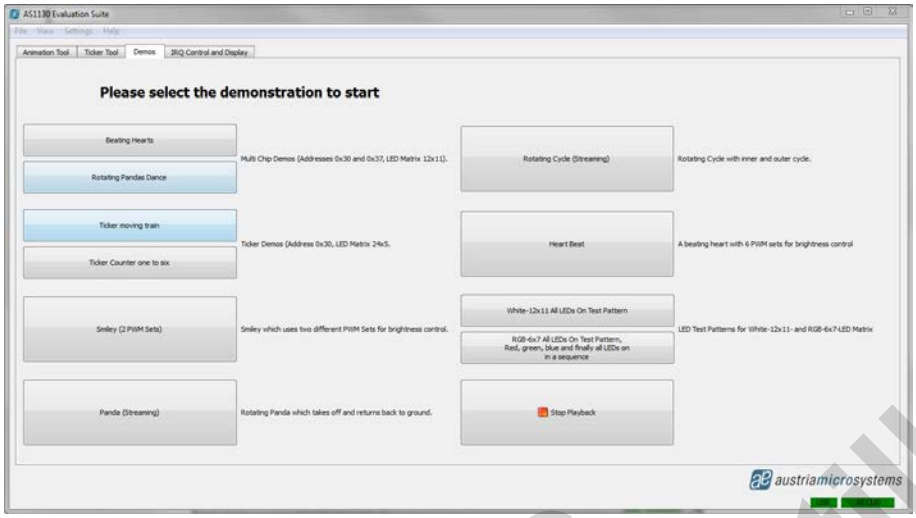
Figure 4: USB Programmer Board Description

Connector Description

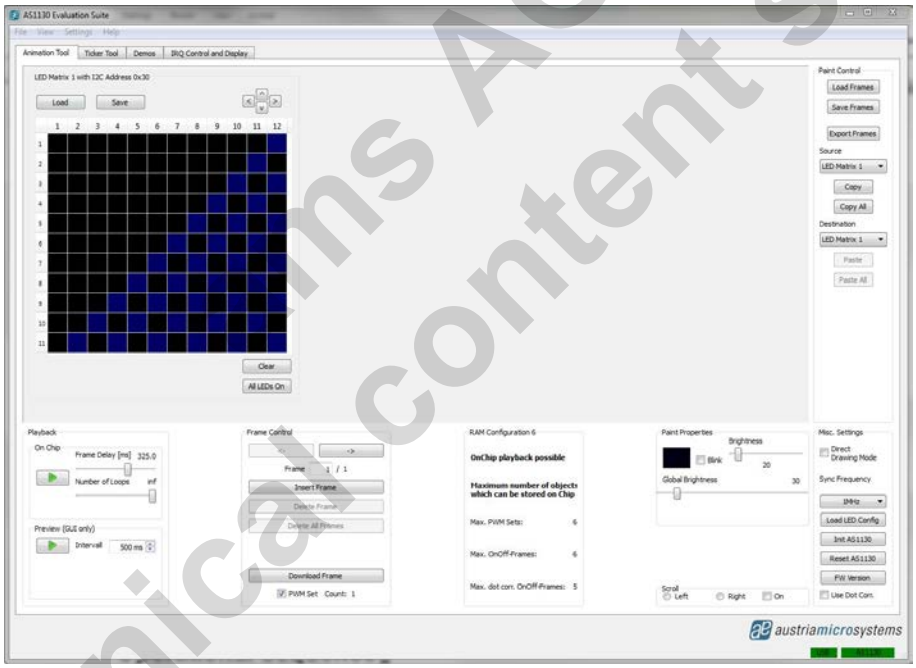
Label	Name	Description	Info
A	**U6**	Mini USB 5-pin Connector	Supplies the *USB Programmer Board* and the *AS1130 Demo Board* with 5V. Connect to a standard USB port. This Connector is also used for data transfer between the Software and the Demo System.
B	**J2**	Line Out Connector	Can be connected to IN **"D"** of the AS1130 Demo Board.
C	**MCU ICP**	Microcontroller Interface	For details see PIC24FJ64GB datasheet.

Quickstart Software

Before starting the software make sure that the USB Programmer board is connected to the AS1130 demo board and connected to the PC. After start-up the software is configured (per default) to work with the 12x11 Matrix. On the third tab 'Demos' there are one-click-demos. Just click the demonstration you want to display and it will be shown on the 12x11 Matrix right away. To stop the demonstration, click the Stop Playback button.



To draw your own movies or frames go to the first tab 'Animation Tool'.



Operational sequence

This demo board comes with the AS1130.

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 AS1130 from http://www.austriamicrosystems.com.
2. Connect the I/O - Interface **"D"** to a Microcontroller or via the *USB Programmer Board* to a Computer. For interfacing please see the corresponding datasheet of the AS1130.
3. First connect the *AS1130 Demo Board* to the *USB Programmer Board.* Than connect the USB Programmer Board via connector **"A"** to a powered USB port. Connector "**A**" is also used for I /O Interface communication.

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

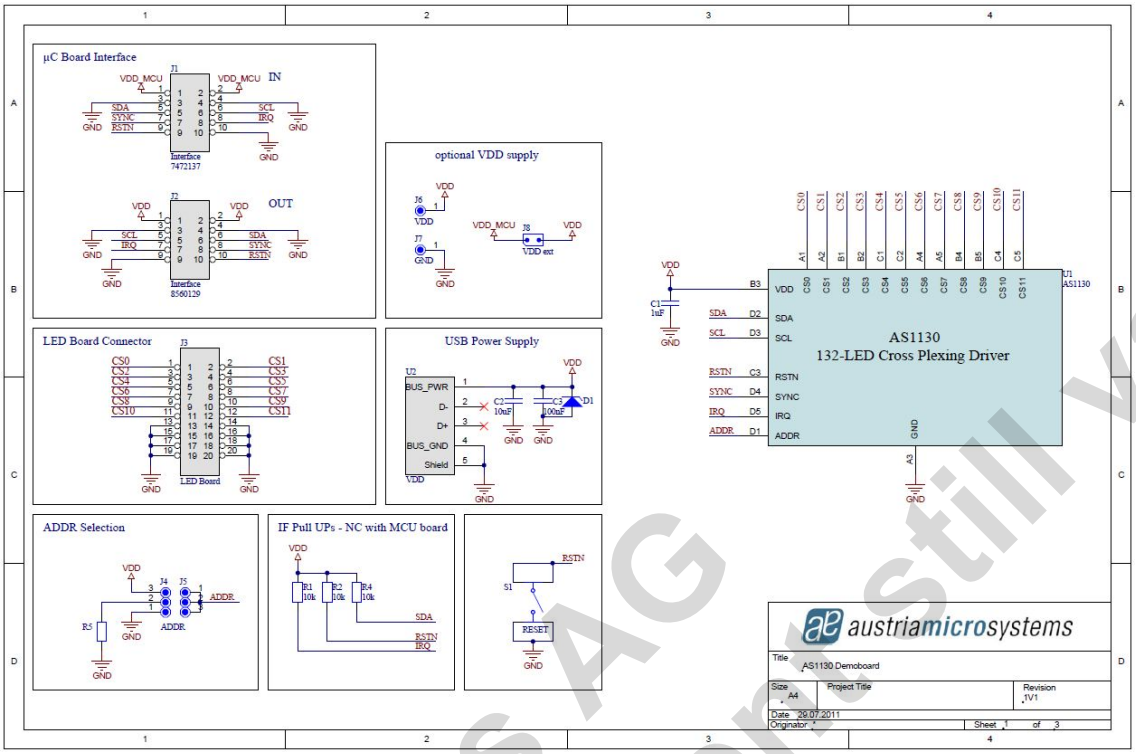


Figure 5: Schematic

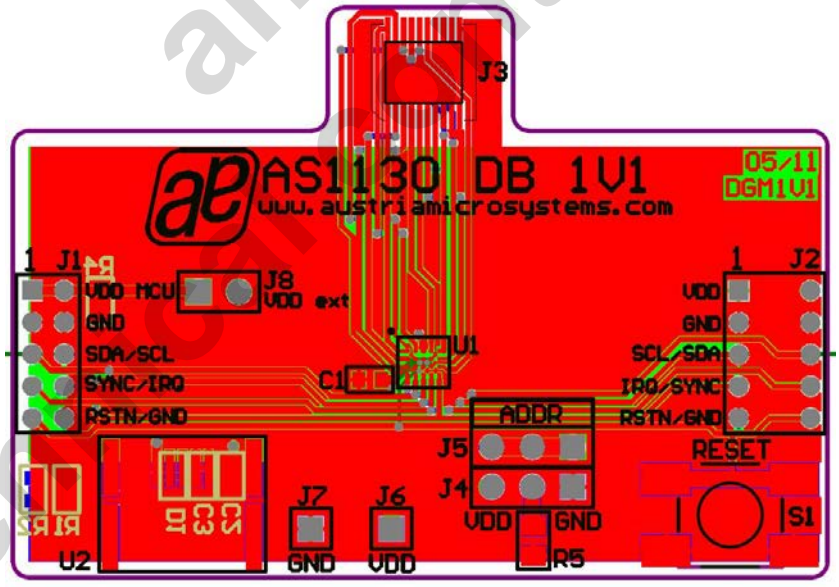


Figure 6: Top and Bottom Layer

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