

## chiliboard LCD Sandwich



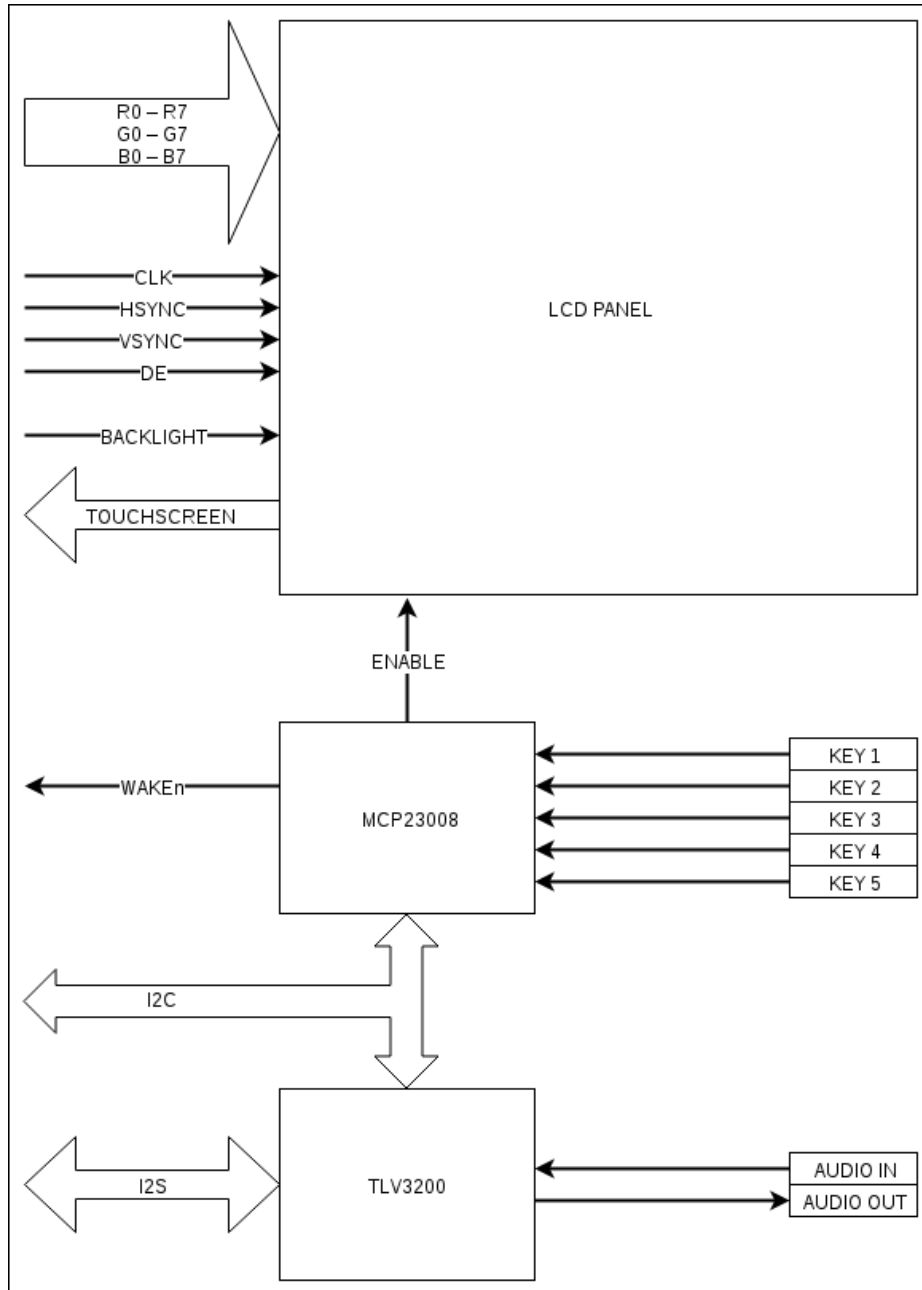
# 1. Features

## 1.1. Key features

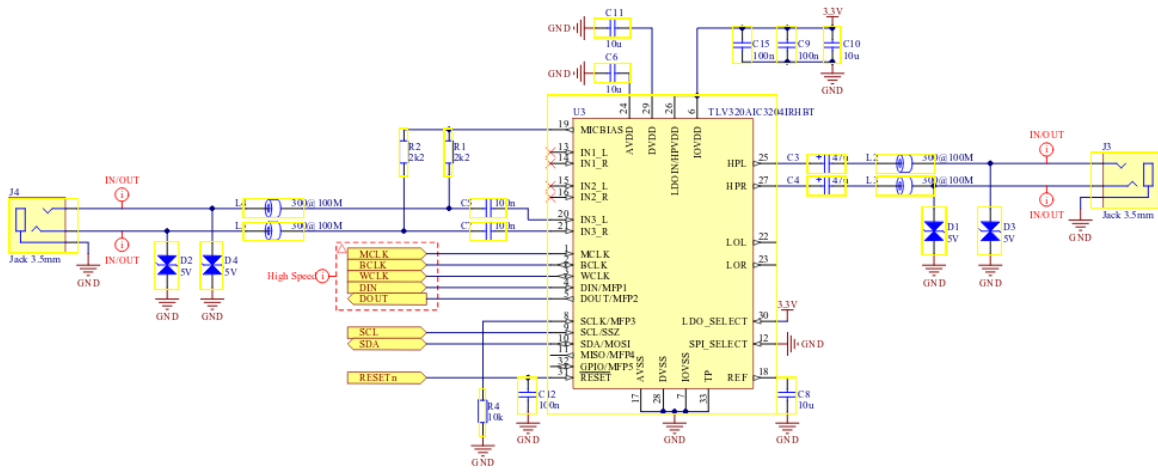
- Suitable for both: chiliboard and liteboard
- LCD panel with resolution 800 × 480 pxs and 24-bit color
- LCD screen parameters (Riverdi: RVT50AQTNR00):
  - 5-inch display size
  - Dimensions: 120.70 (L) × 75.80 (W) × 4.30 (H) mm
  - Viewing area: 108.0 (L) × 64.8 (H) mm
  - Resolution: 800 × 480 pxs
  - Panel type: LCD
  - Contrast ratio: 500:1
  - Brightness: 480cd/m<sup>2</sup>
- Resistive touchscreen
- Backlight control switch
- Build-in audio codec from Texas Instruments TLV320AIC3204
- Audio codec TLV320AIC3204 features:
  - Stereo Audio DAC with 100dB SNR
  - 4.1mW Stereo 48ksps Playback
  - Stereo Audio ADC with 93dB SNR
  - 6.1mW Stereo 48ksps ADC Record
  - PowerTune™
- Build-in expander from Microchip MCP2300 (5 buttons)
- Operating temperature range (C): -20 to 70

## 2. Functional Description

### 2.1. Block Diagram

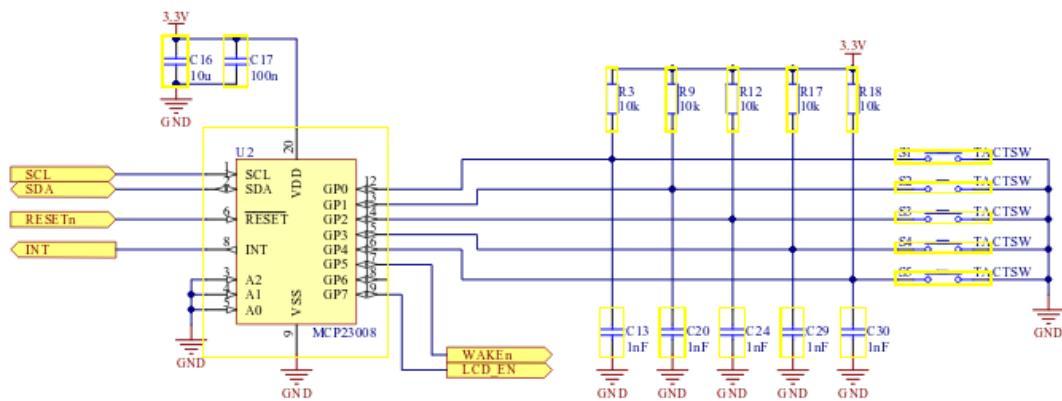


## 2.2. Audio codec block



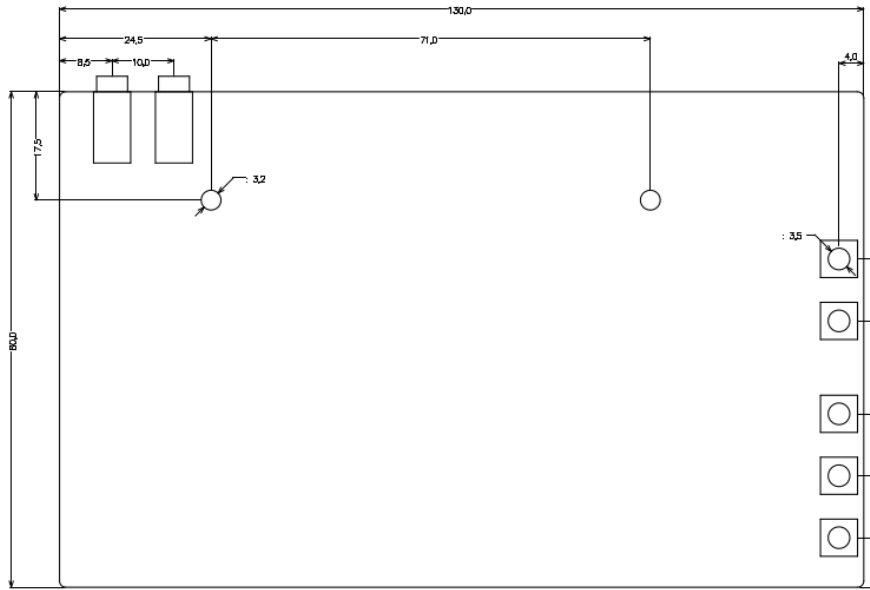
More information about audio codec is available on the Texas Instruments page:  
<http://www.ti.com/product/TLV320AIC3204>

## 2.3. Buttons block



More information about I/O expander is available on the Microchip page:  
[ww1.microchip.com/downloads/en/DeviceDoc/21919e.pdf](http://ww1.microchip.com/downloads/en/DeviceDoc/21919e.pdf)

## 2.4. Dimensions



More information is available on the wiki page: [http://wiki.chilisom.grinn-global.com/w/LCD\\_sandwich](http://wiki.chilisom.grinn-global.com/w/LCD_sandwich)  
 Order number: GEB.LCD.01.01

## 2.5. Connectors description

Signal name	Connector	Pin	Description
LCD R0	J7	36	LCD red color bit 0
LCD R1	J7	31	LCD red color bit 1
LCD R2	J7	29	LCD red color bit 2
LCD R3	J5	31	LCD red color bit 3
LCD R4	J5	32	LCD red color bit 4
LCD R5	J5	29	LCD red color bit 5
LCD R6	J5	30	LCD red color bit 6
LCD R7	J5	27	LCD red color bit 7
LCD G0	J7	35	LCD green color bit 0
LCD G1	J7	34	LCD green color bit 1

LCD G2	J5	28	LCD green color bit 2
LCD G3	J5	25	LCD green color bit 3
LCD G4	J5	26	LCD green color bit 4
LCD G5	J5	23	LCD green color bit 5
LCD G6	J5	24	LCD green color bit 6
LCD G7	J5	21	LCD green color bit 7
LCD B0	J7	38	LCD blue color bit 0
LCD B1	J7	33	LCD blue color bit 1
LCD B2	J7	32	LCD blue color bit 2
LCD B3	J5	22	LCD blue color bit 3
LCD B4	J5	19	LCD blue color bit 4
LCD B5	J5	20	LCD blue color bit 5
LCD B6	J5	17	LCD blue color bit 6
LCD B7	J5	18	LCD blue color bit 7
LCD BL+	J5	33	LCD backlight
LCD BL-	J5	36	LCD backlight
LCD CLK	J5	15	LCD clock
LCD HSYNC	J5	14	LCD horizontal sync
LCD VSYNC	J5	13	LCD vertical sync
LCD DE	J5	12	LCD enable
I2C SCL	J6	15	I2C clock
I2C SDA	J8	18	I2C data
RESETn	J5	34	reset
INT	J7	20	keyboard interrupt pin
TS X RIGHT	J6	25	touchscreen X-axis line
TS X LEFT	J6	26	touchscreen X-axis line
TS Y UP	J6	28	touchscreen Y-axis line
TS Y DOWN	J6	27	touchscreen Y-axis line

---

MCLK	J6	6	audio master clock
BCLK	J6	3	audio bit clock
WCLK	J6	4	audio word clock
DIN	J6	2	audio data input
DOUT	J6	1	audio data output

---

**Grinn sp. z o.o.**

POLAND

ul. Wagonowa 2

53-609 Wrocław

t. +48 71 716 40 99

m. office@grinn-global.com

www.grinn-global.com

© Copyright 2017 Grinn

All rights reserved. No part of this document may be photocopied or recorded on any electronic media without written permission of Grinn. The information contained in this documentation is subject to change without prior notice. We assume no liability for erroneous information or its consequences. Grinn reserves the right to change details in this publication without notice. Grinn makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and products descriptions at any time without notice. Grinn does not make any commitment to update the information contained herein. Trademarks used from other companies refer exclusively to the products of those companies. Product and company names herein may be the trademarks of their respective owners.