

BUGBASE LCD PIM

VERSION HISTORY

VER #	DATE	ACTION	DESCRIPTION OF CHANGES	AUTHOR	REVIEWED BY	APPROVED BY
0.01	03 SEPT 2009	DRAFT	DRAFT	MISTRAL DESIGN TEAM		
1.0	15 SEPT 2009	IIR1 COMMENTS UPDATED & BASELINED	1. ACCELEROMETER AND TOUCH SCREEN INTERRUPT PULLED UP TO 1.8V INSTEAD OF 3.3V TO ELIMINATE A LEVEL TRANSLATOR. 2. ACCELEROMETER PART NUMBER CHANGED FROM ML8953 TO ML8953A 3. ALL PU-PD RESISTORS ON OMAP GPIO PINS CHANGED TO 100K TO REDUCE POWER CONSUMPTION. 4. LED ON VBAT REMOVED 5. LCD PIM CONNECTOR CHANGED BACK TO THE ONE USED IN EARLIER DESIGN DUE TO LACK OF REQUIRED MATING HEIGHT. 6. BOTH PU-PD OPTIONS PROVIDED FOR ADDRESS OF DEVICES ON I2C. 7. CONNECT BACKLIGHT PWM THROUGH A LEVEL TRANSLATOR AND ACCELEROMETER TEST PINS TO GROUND THROUGH 0E RESISTORS. 8. UPDATED BLOCK DIAGRAM TO REFLECT THE ABOVE CHANGES.	MISTRAL DESIGN TEAM	PRASAD ACHAR, SOUMYA K S	AVINASH
1.1	25 SEPT 2009	IIR2 COMMENTS UPDATED	1. ADD SERIES DAMPING ON SPI CLOCK 2. ADD TWO BULK AND TWO 0.01uF CAPACITORS FOR LEVEL TRANSLATOR VOLTAGES. 3. CHANGE VREF SUPPLY OF TOUCH CONTROLLER TO 3.3V AND SUPPLY THROUGH A BEAD	MISTRAL DESIGN TEAM	HARSHITH	AVINASH
1.2	30 SEPT 2009	IIR3 COMMENTS UPDATED & BASELINED	1. LCD_RESB, LCD_SHUT, ACC_RESET_3V3, SPI_nCS0 pulls connected before buffer. 2. BL_PWM_3V3 driven by both level translator and bug base pwm output. DNI shifted to output of buffer. 3. Existing C36 25V 0603 cap changed to 50V 0805 part 4. Level translator added for touch screen controller interrupt pin. 5. Removed DNI option to select the EEPROM address 6. 0.1uF cap added on J2.31 7. Added 0.01uF DNI de-caps near touch controller on TS lines for noise filtering 8. Accelerometer POR circuit removed and pull-dn resistor added at level-translator input. 9. Series termination added on LCD data lines after level translator. 10. S-Video and Accelerometer test points removed	MISTRAL DESIGN TEAM	AJIT, AVINASH	AVINASH
1.3	17 DEC 2009	Revision number updated	Revision number updated	MISTRAL DESIGN TEAM	AVINASH	AVINASH
1.31	29 APR 2010	UPDATED	Alternate part used for obsolete component ECJ-1VB1A106M.	HARSHITH	AVINASH	AVINASH

REV NO.	NATURE OF CHANGE	APPROVED BY	DATE	 Mistral Solutions [P] Ltd. #60 Adash regent,100 Feet Ring Road, Domlur Extension Bangalore 560 071, Ph : +91-80-30912600, Fax :+91-80-2535 6444	Title VERSION HISTORY				
					Drawn by: MISTRAL DESIGN TEAM Date: Tuesday, June 16, 2009	Approved by: AVINASH Date: Thursday, May 06, 2010	Size: C	Document Number MS_BUGLABS_LCD_PIM_SCH	Rev 1.31
					Design file path:	Date: Thursday, May 06, 2010	Sheet 1 of 8		

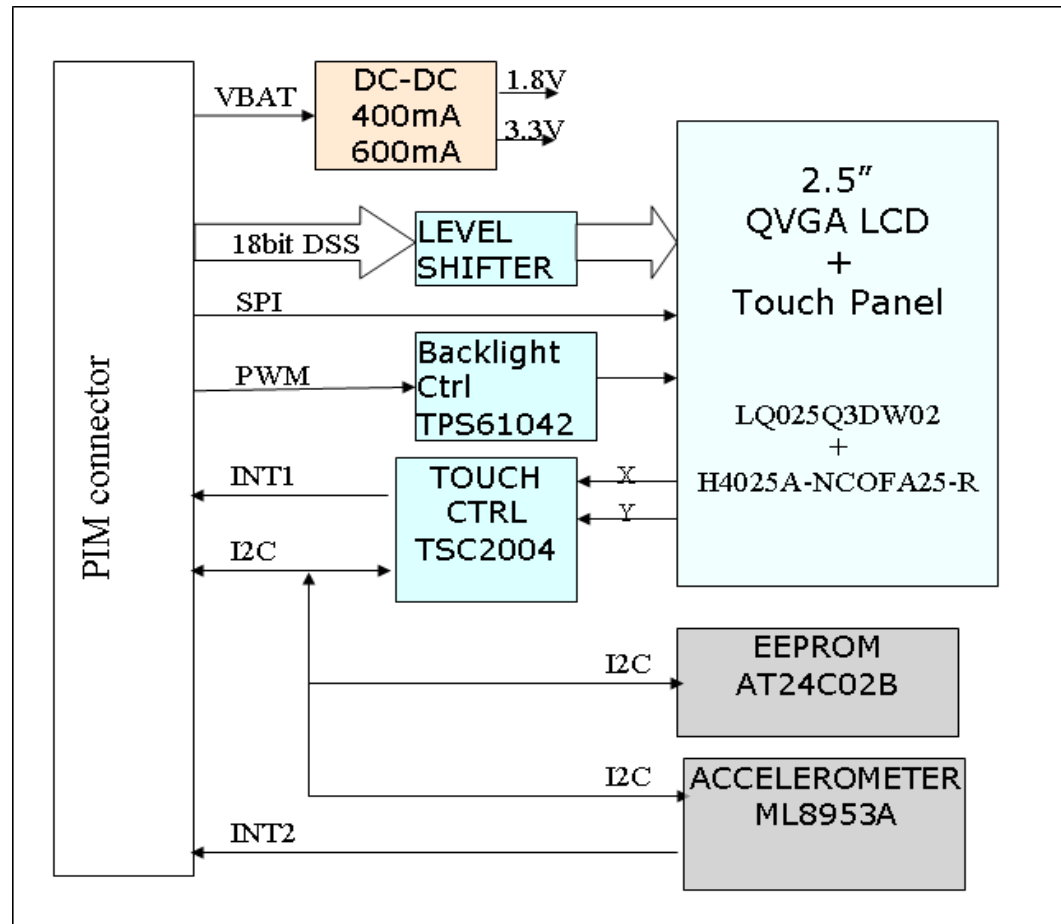
BUGBASE LCD PIM MODULE

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REV	A
VERSION	1.31

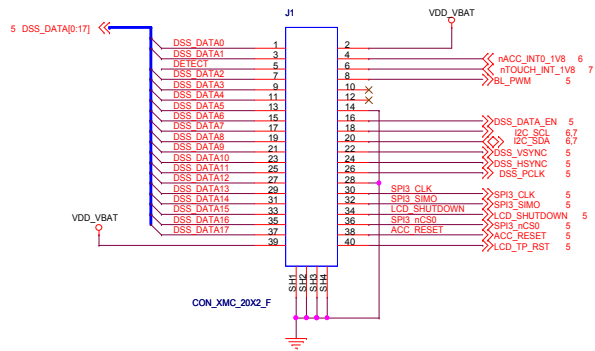
BLOCK DIAGRAM



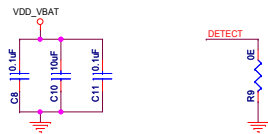
I2C SLAVE ADDRESS

TOUCH CONTROLLER	0x90, 0x91
EEPROM	0xA0, 0xA1
ACCELEROMETER	0x2E, 0x2F

PIM CONNECTOR

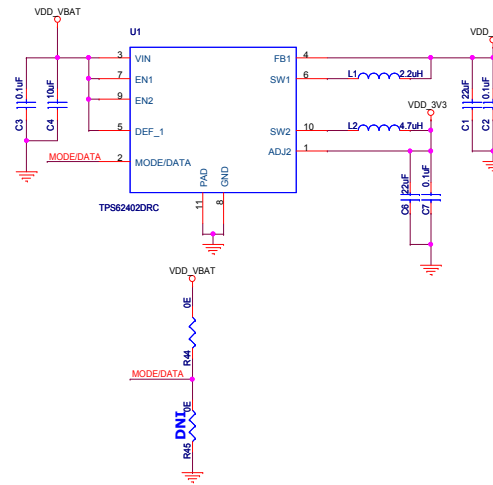


THIS CONNECTOR PLACEMENT IS REVERSED WRT OTHER PIM CONNECTORS



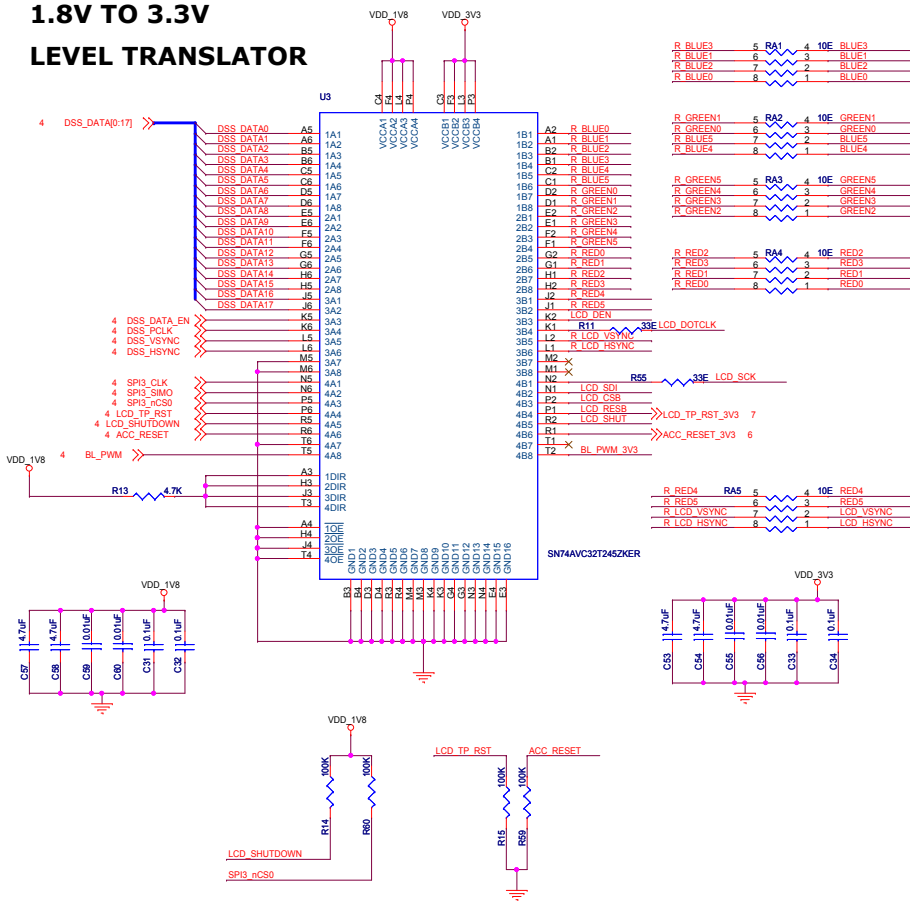
BUCK CONVERTER

VDD_1V8 -> 1.8V/400mA
VDD_3V3 -> 3.3V/600mA

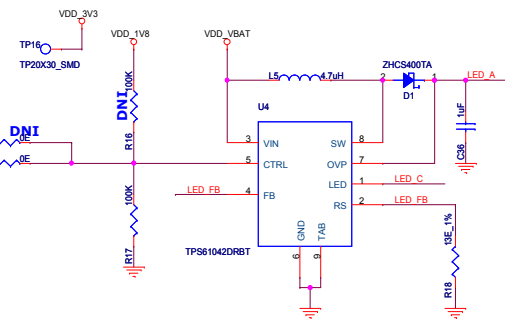


REV. NO.	NATURE OF CHANGE	APPROVED BY	DATE	Mistral Solutions [P] Ltd.		Title	
				#60 Adarsh regent, 100 Feet Ring Road, Domlur Extension		POWER & PIM CONNECTOR	
				Bangalore 560 071, Ph : +91-80-30912600, Fax : +91-80-2535 6444		MS_BUGLABS_LCD_PIM_SCH	
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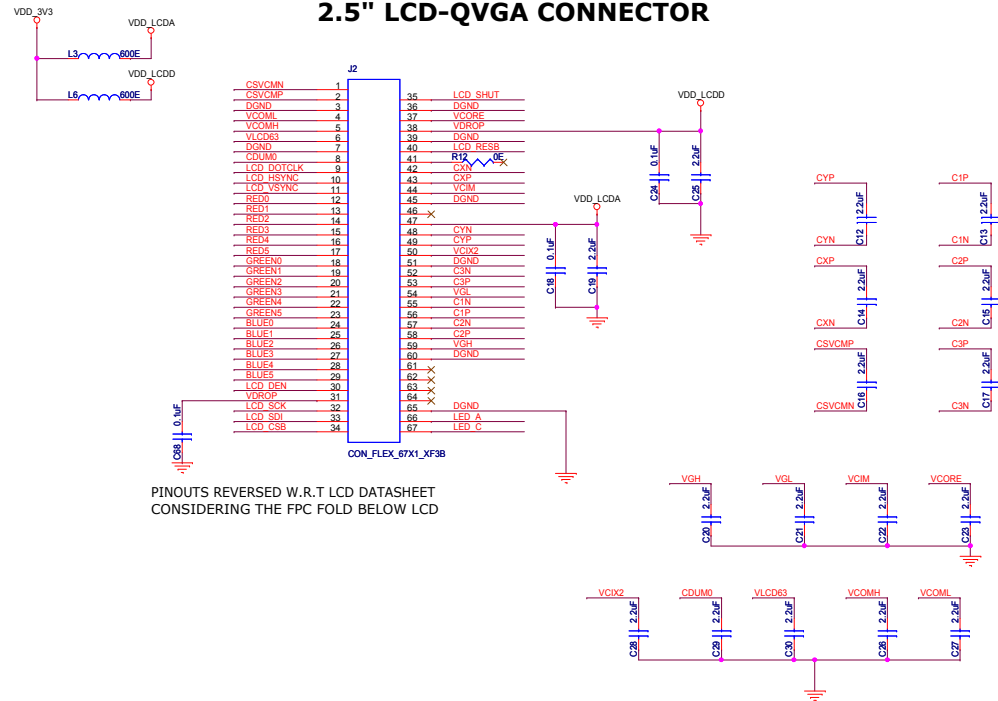
1.8V TO 3.3V LEVEL TRANSLATOR



BACKLIGHT DRIVER



2.5" LCD-QVGA CONNECTOR



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				Drawn by: MISTRAL DESIGN TEAM Date: Tuesday, June 16, 2009	Approved by: AVINASH Date: Thursday, May 06, 2010	Size C	Document Number MS_BUGLABS_LCD_PIM_SCH	Rev 1.31
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EEPROM - 2K

The diagram shows the electrical connections for an AT24C02B-TH-B EEPROM. The chip's VCC pin (U5-8) is connected to VDD_3V3 via a 4.7k resistor (R41). The VCC pin (U5-4) is also connected to VDD_EEPROM. The SDA pin (U5-5) is connected to the I2C_SDA line (4,7) through a 4.7k resistor (R20). The SCL pin (U5-6) is connected to the I2C_SCL line (4,7) through a 4.7k resistor (R23). The WP pin (U5-7) is connected to the WRITE_PROTECT line. The chip is labeled AT24C02B-TH-B.

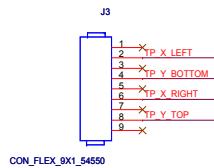
ACCELEROMETER

The schematic diagram illustrates the connection of the ML8953A-01AFC205B accelerometer. Key components and connections include:

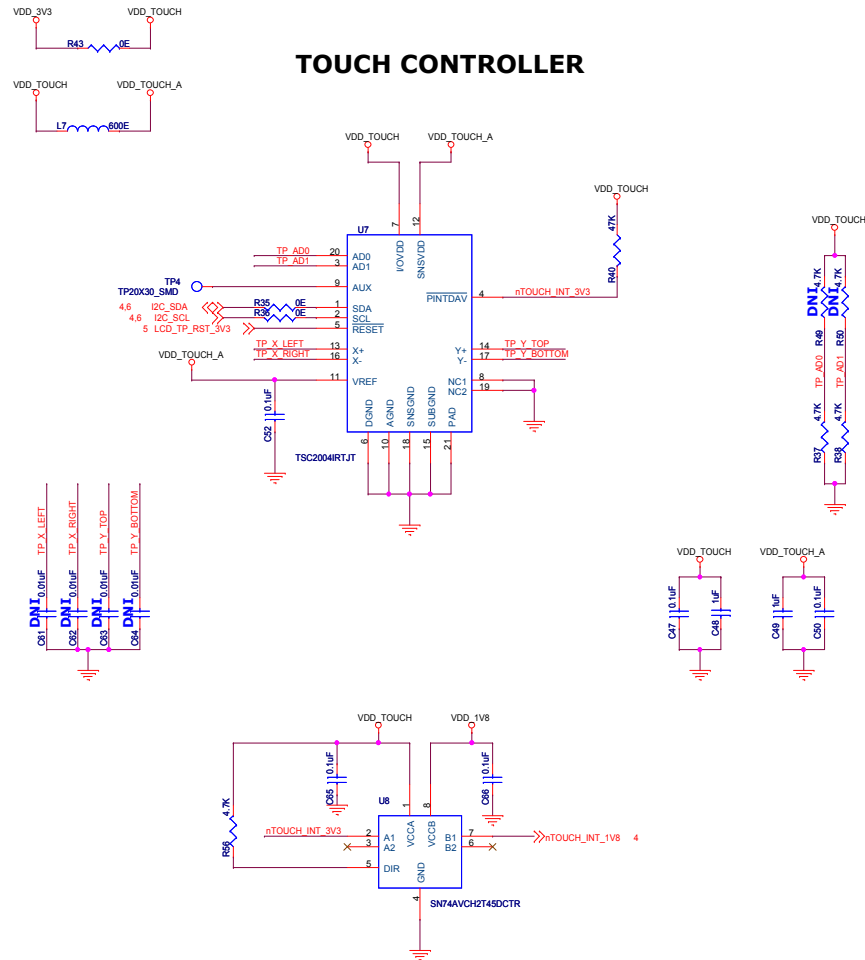
- Power Supply:** VDD_3V3 and VDD_ACC are connected to the chip's power pins.
- I2C Interface:** I2C_SDA and I2C_SCL are connected to the chip's I2C pins.
- Reset:** The RESET pin is connected to ACC_RESET_3V3.
- Output:** The REGOUT pin is connected to a 4.7k resistor and a 10uF capacitor.
- Test Points:** TEST0, TEST1, and TEST2 are connected to the chip's test pins.
- Capacitors:** Various capacitors (C46, C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62, C63, C64, C65, C66, C67, C68, C69, C70, C71, C72, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91, C92, C93, C94, C95, C96, C97, C98, C99, C100) are used for decoupling and timing.

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TOUCH CONNECTOR



TOUCH CONTROLLER



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