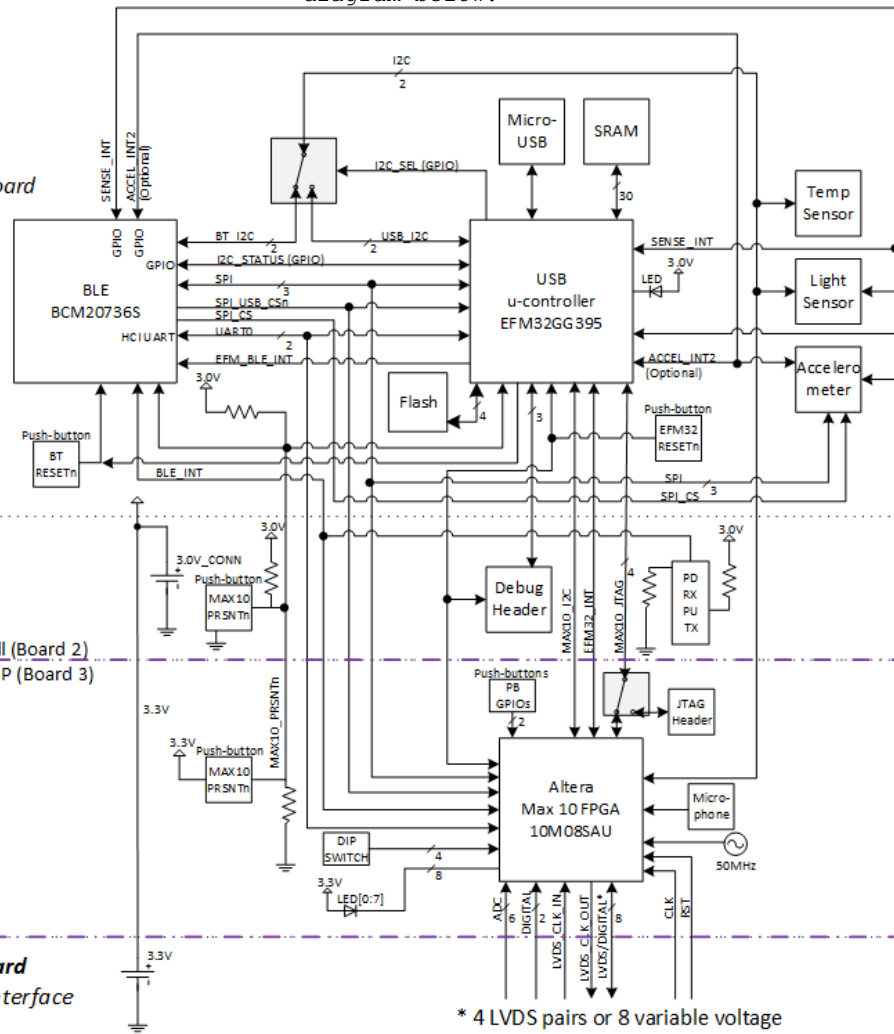


This schematic is "Board 3" of the complete demonstration board, shown in the block diagram below.



- * 4 LVDS pairs or 8 variable voltage single-ended I/Os

REV	DATE	PAGES	DESCRIPTION
A0.01	08/28/2014	ALL	Still a lot to do.
A0.02	09/08/2014	ALL	Remove SRAM, update Max 10 pinout, add adj regulator, misc.
A0.03	09/12/2014	1-3	Update block diagram, add microphone and 50MHz clock.
A0.04	09/12/2014	ALL	Update block diagram. Add push-buttons. Add 3.3V power mux.
A0.05	09/16/2014	ALL	Add power block diagram. Change SW1 to U6. Change footprint names for J2. Change J5 to TH part. Update Max 10 VREF pins.
A0.06	09/16/2014	3	Update block diagram. Change J2 pinout so that the pcb footprint can be updated such that pin 1 aligns with the notch in the connector.
A0.07	09/30/2014	3	Add IR LED. Change op-amp to LT6220. Add power muxing for VCCIO_VAR rather than jumper voltage select.
A0.08	10/7/2014	2-3	Add mounting hole symbols for BOM. Add pull-up to op-amp in DNI LVDS_I_CLK_PALVD5_I_CLK_N 100-ohm resistor. Update LVDS notes on sheet 2.
A0.09	10/8/2014	2-3	Move IR_LED to pin K10. Change op-amp input pull-up to 10K, not DNI.
A0.10	10/9/2014	3	Add 0603 pull-up and pull-down resistor options to UART_RX.
B1.01	12/10/2014	3	Add Capacitor to Microphone Amp Feedback. Fix IRDA polarity
B1.02	12/12/2014	3-4	Changed Microphone Gain, and Variable IO Switch Points
B1.03	12/16/2014	4	Change IO Voltage Switch Points
B1.04	01/21/2015	3	Changed R45 to 1K from 10K

PAGE	DESCRIPTION
1	Title, Notes, Block Diagram, Rev. History
2	Max 10
3	CONNECTOR & IO
4	POWER

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Title	IoT Development Kit - Max 10 Board
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Size
B

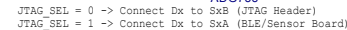
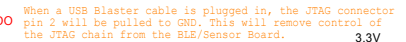
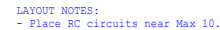
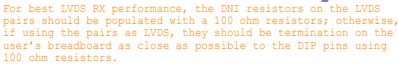
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Rev	
B1.04	

Date: Wednesday, January 21, 2015 Sheet 1 of 4

1

ANALOG[1:5] still needs to be verified in Quartus.
When using ANAIN1 you cannot use GPIO on banks 1A or 1B.
3.0V/3.3V not recommended (HB) in bank 8 when using ADC. Only 28% of bank 8 will be available for usage. Table 3-4, 3-5.
Disable JTAG when using ADC.



Title	IoT Development Kit - Max 10 Board
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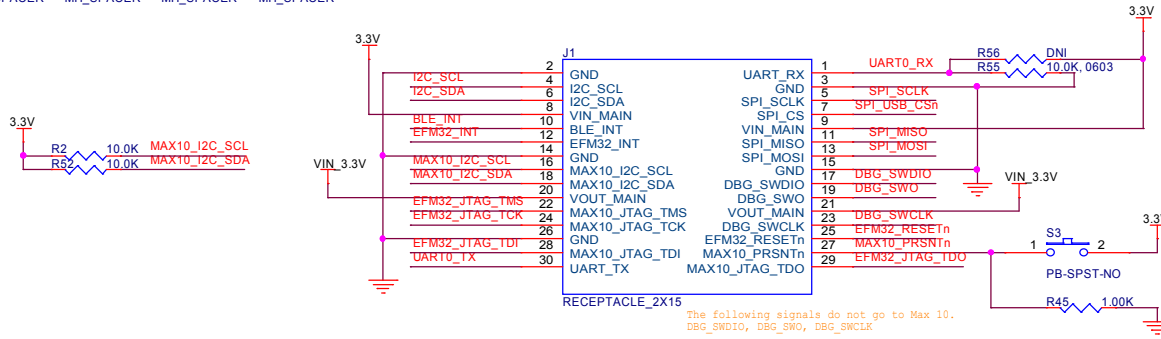
Size	Document Number
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Size B	Document Number 150-00003-B1
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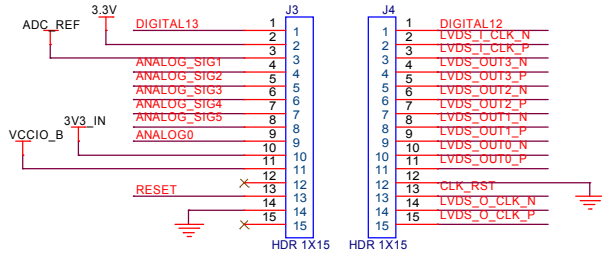
Date: Wednesday, January 21, 2015 Sheet 2

CONNECTOR & IO

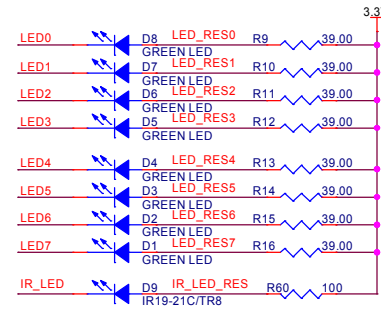
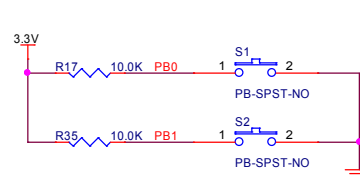
MH1
MH2
MH3
MH4
MH_SPACER MH_SPACER MH_SPACER MH_SPACER



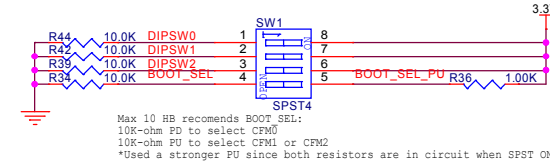
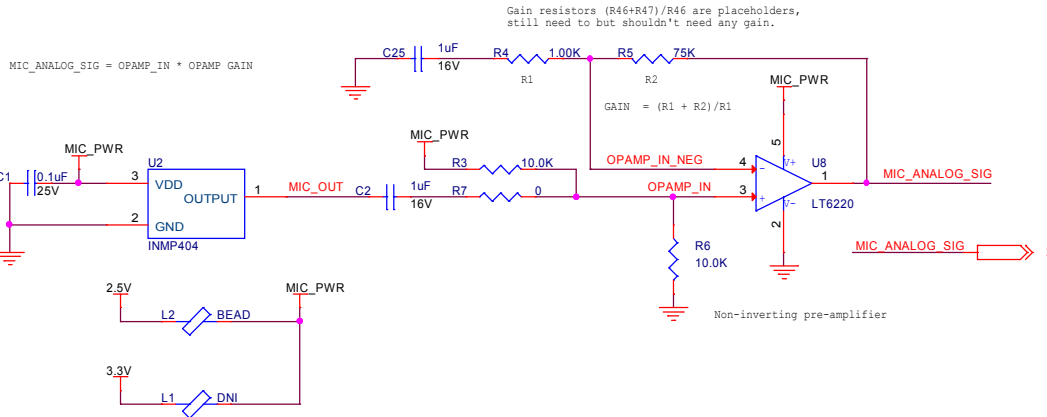
EFM32_JTAG_TCK
EFM32_JTAG_TMS
EFM32_JTAG_TDI
EFM32_JTAG_TDO
EFM32_RESETn
EFM32_INT
BLE_INT
SPI_SCLK
SPI_USB_CSn
SPI_MOSI
SPI_MISO
UART0_RX
UART0_TX
I2C_SCL
I2C_SDA
MAX10_I2C_SCL
MAX10_I2C_SDA



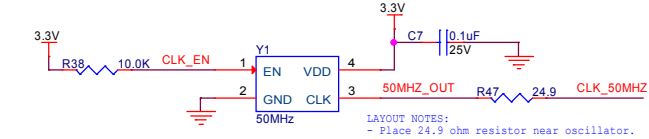
DIGITAL12
DIGITAL13
ANALOG0
ANALOG_SIG1:5
RESET
CLK_RST
LVDS_I_CLK_N
LVDS_I_CLK_P
LVDS_O_CLK_N
LVDS_O_CLK_P
LVDS_OUT3_N
LVDS_OUT3_P
LVDS_OUT2_N
LVDS_OUT2_P
LVDS_OUT1_N
LVDS_OUT1_P
LVDS_OUT0_N
LVDS_OUT0_P



LED0:71
IR_LED



PB0:1
DIPSW0:21
BOOT_SEL
CLK_50MHZ

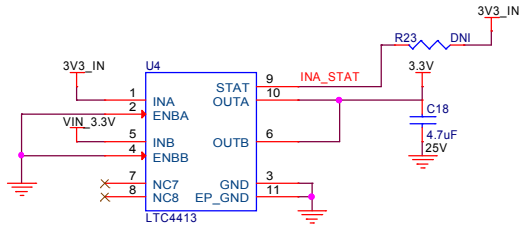


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Title IoT Development Kit - Max 10 Board			
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POWER

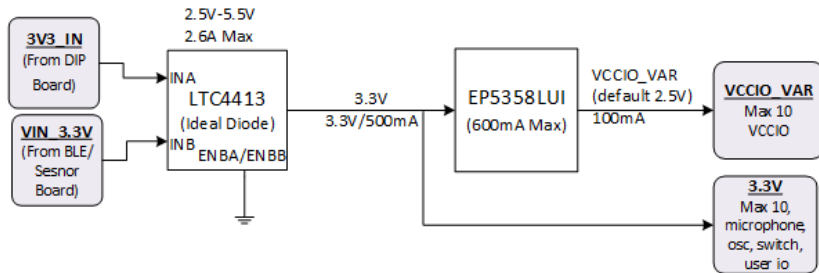
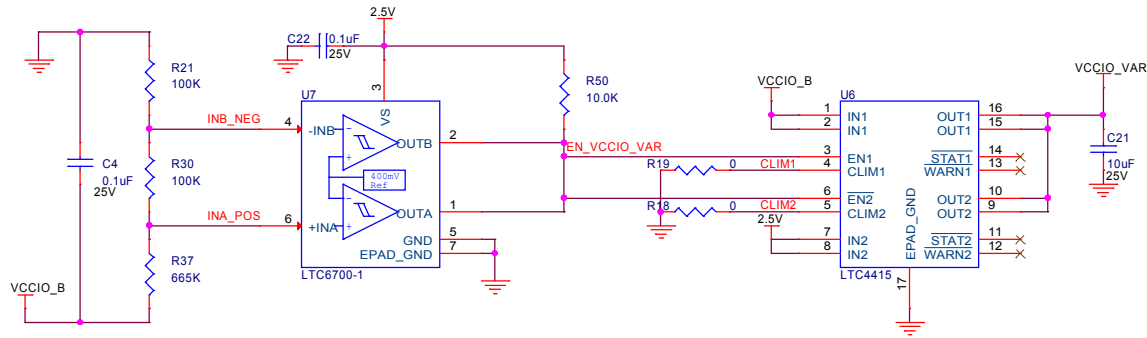
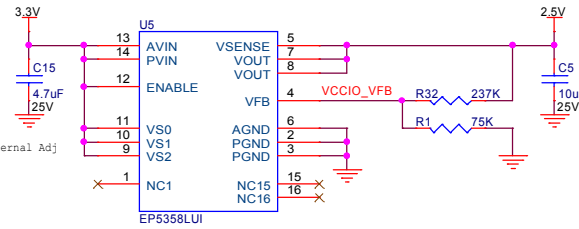
VCCIO_VAR power rail selection for Max 10.

- 2.5V (From EP5358LUI)
- VCCIO_B = 1.8V - 3.3V (From DIP connector pins)
- VCCIO_VAR = VCCIO_B, unless not available then 2.5V



Multiplex (OR) 3.3V input from DIP pins (3V3_IN)
OR from BLE/Sensor Board (VIN_3.3V).

VS[2:0] = 111
SETS VOUT = External Adj



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