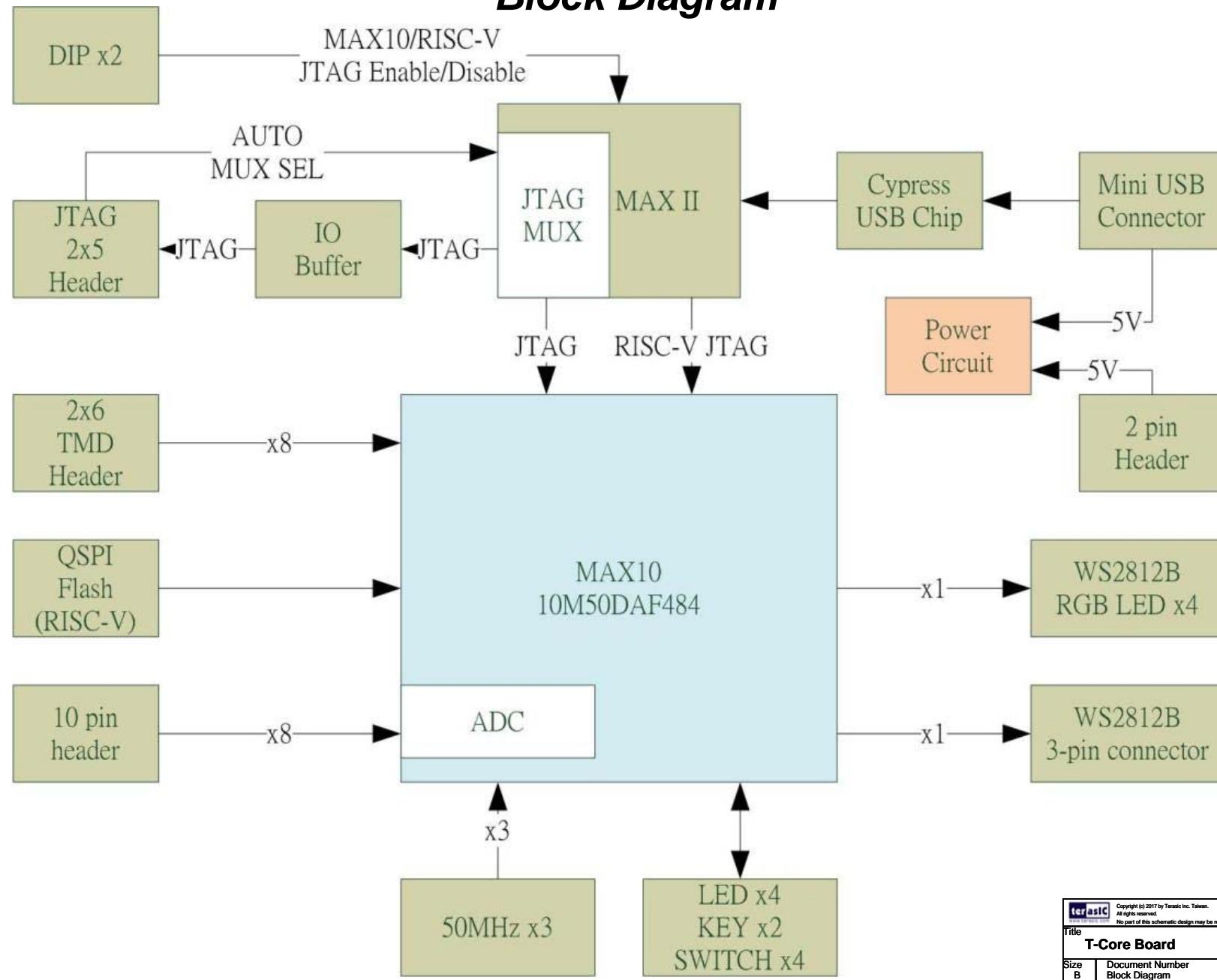


5 4 3 2 1

T-Core MAX10 Development Board

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Block Diagram

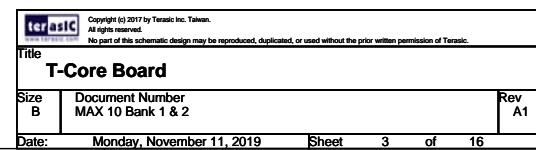
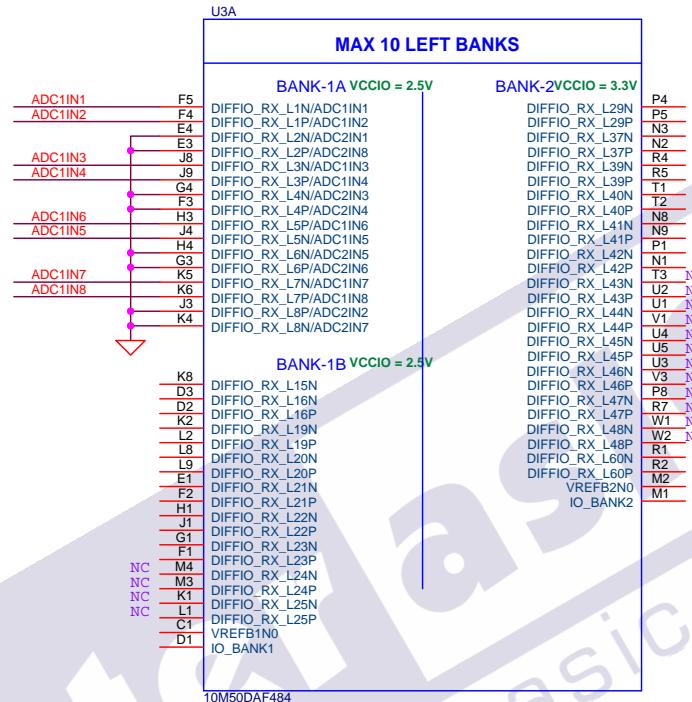


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Title T-Core Board		
Size B	Document Number Block Diagram	Rev A1
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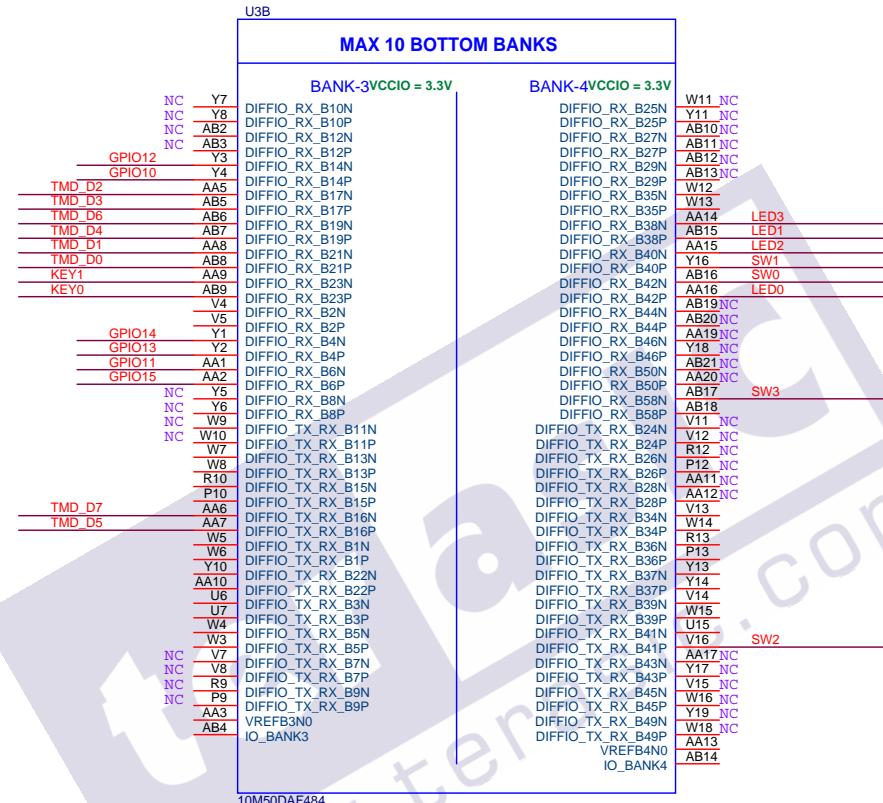
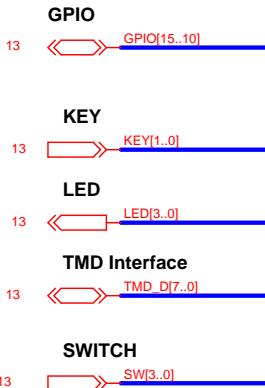
MAX10 Bank 1 & 2

Analog input interface

12

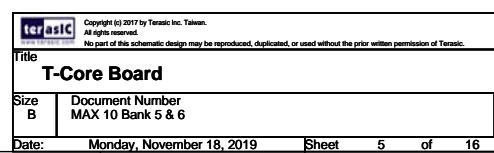
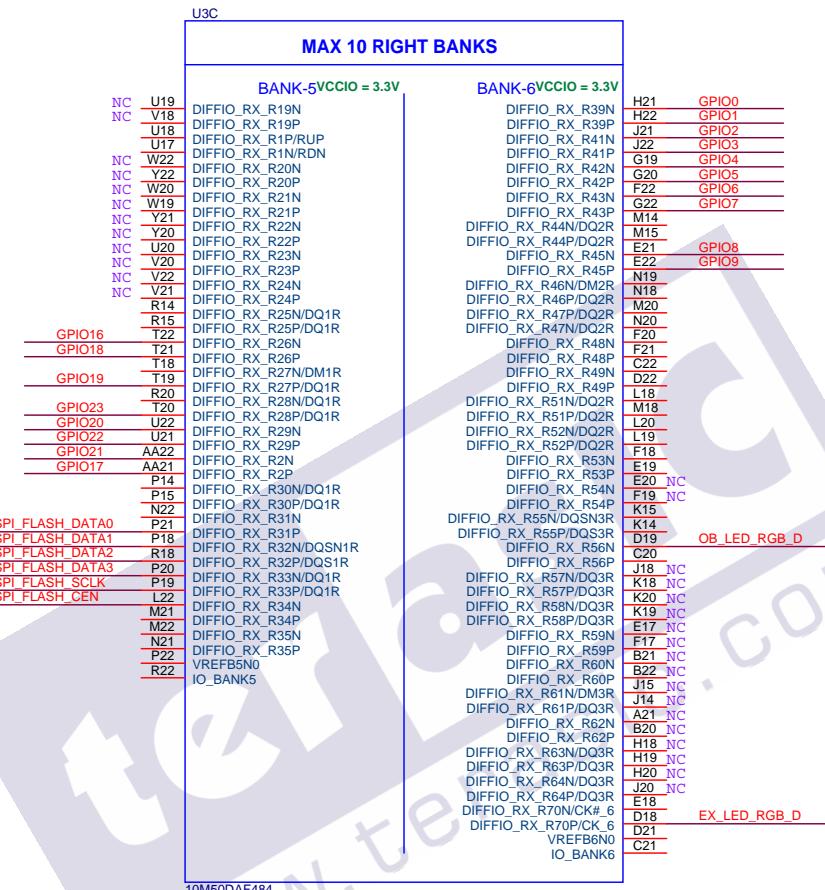
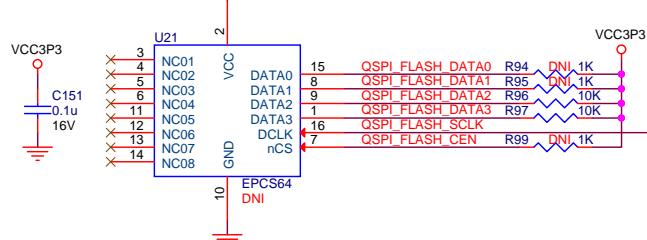
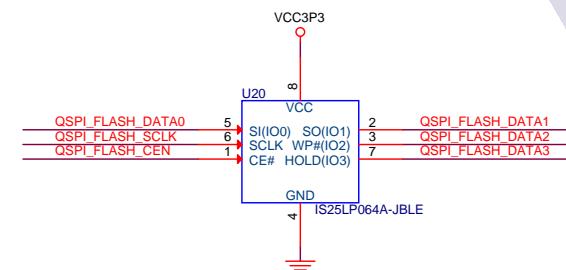
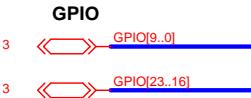
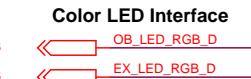


MAX10 Bank 3 & 4



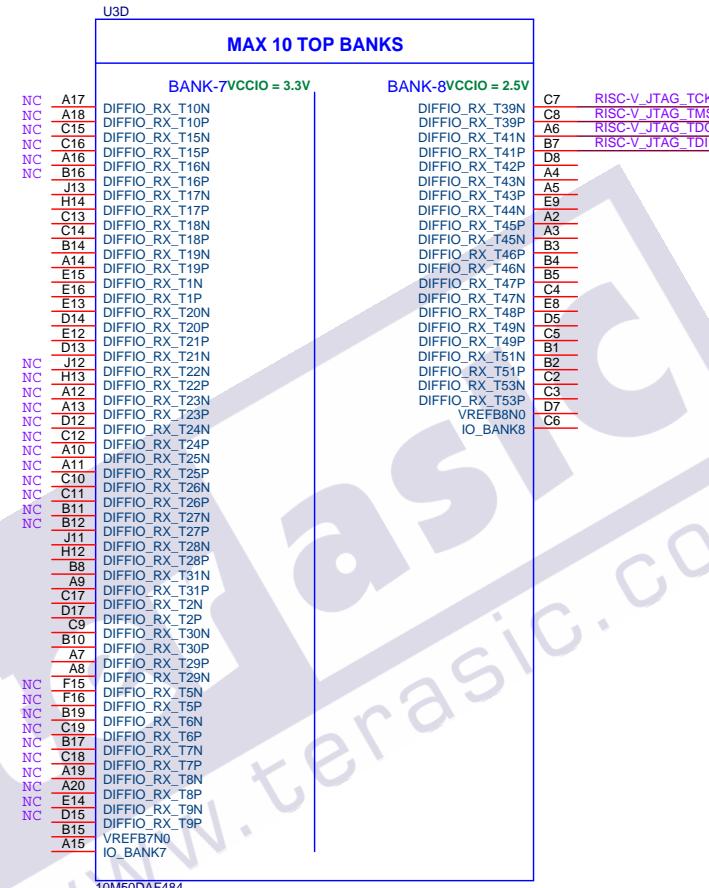
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Title		
T-Core Board		
Size B	Document Number MAX 10 Bank 3 & 4	Rev A1
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MAX10 Bank 5 & 6

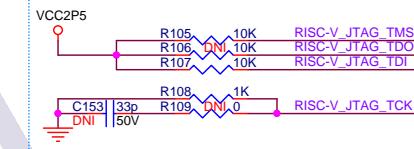


MAX10 Bank 7 & 8

JTAG to RISC-V (2.5V)

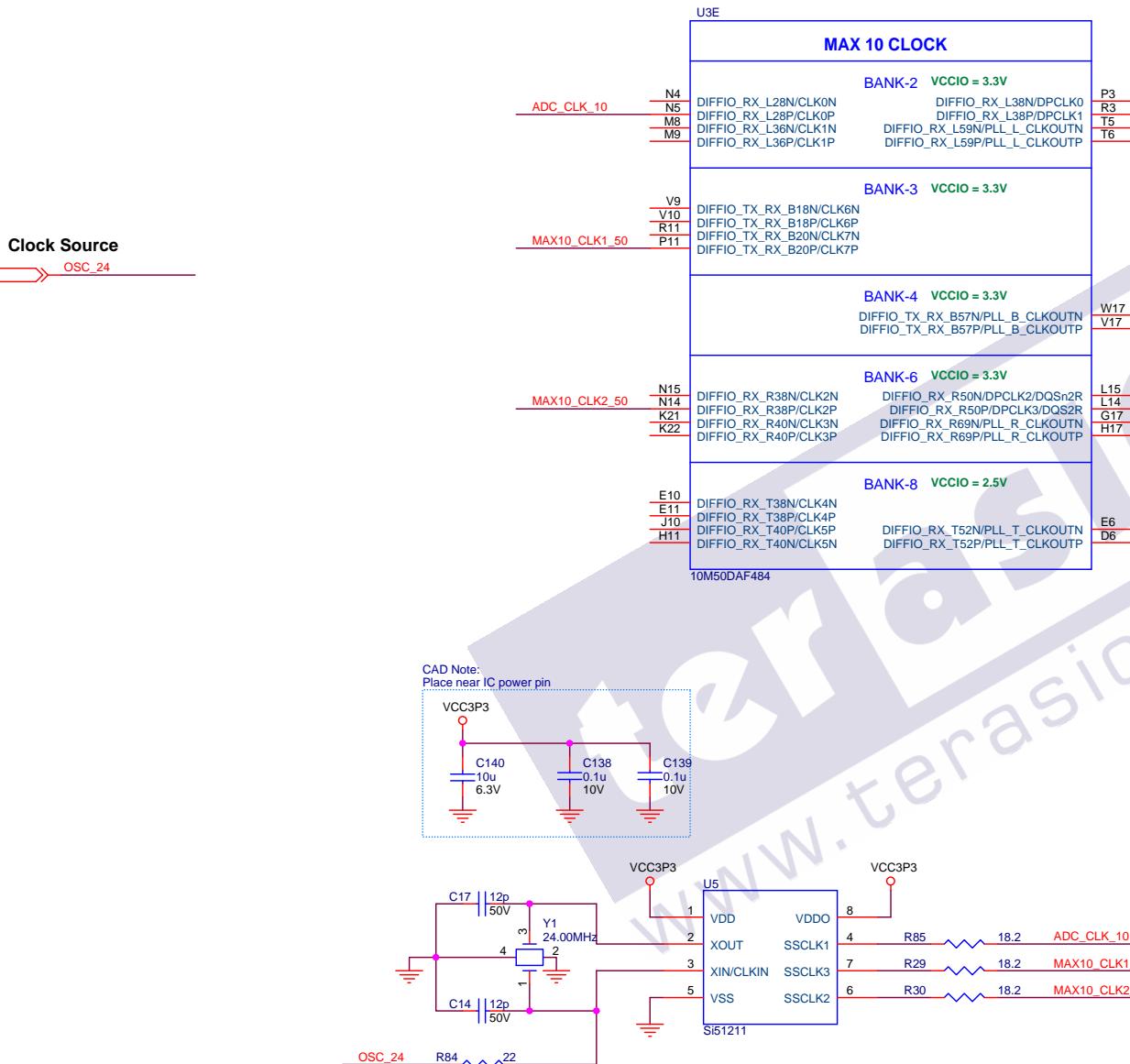


CAD Note:
Place close to MAX10



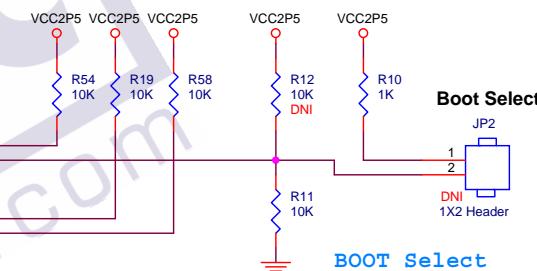
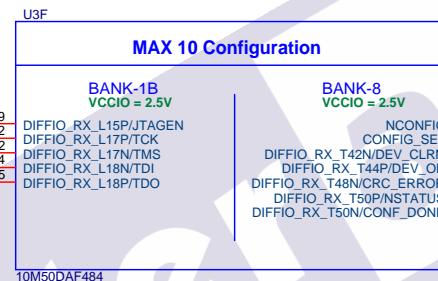
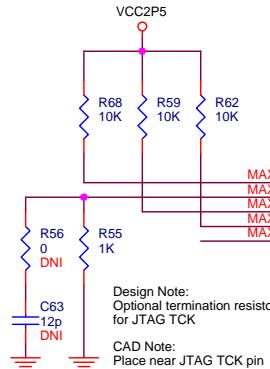
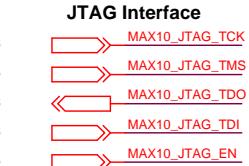
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Title	T-Core Board		
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B	MAX 10 Bank 7 & 8	A1	
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MAX10 Clock



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Title: T-Core Board			
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B	MAX 10 Clocks	A1	
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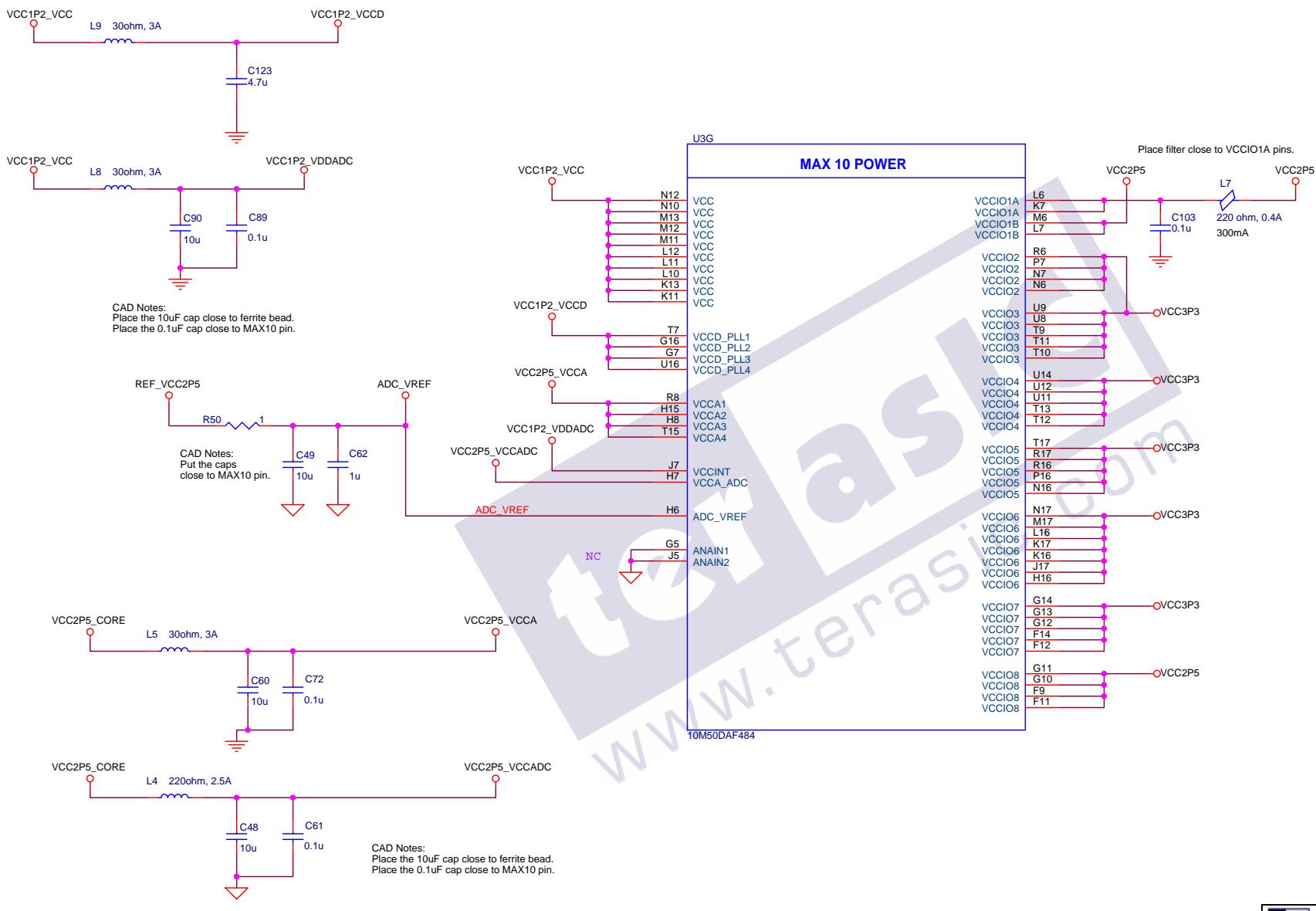
MAX10 Configuration



BOOT Select
Default Disable (Jumper Open)
OPEN = configuration image 0 (Low)
SHORT = configuration image 1 (High)

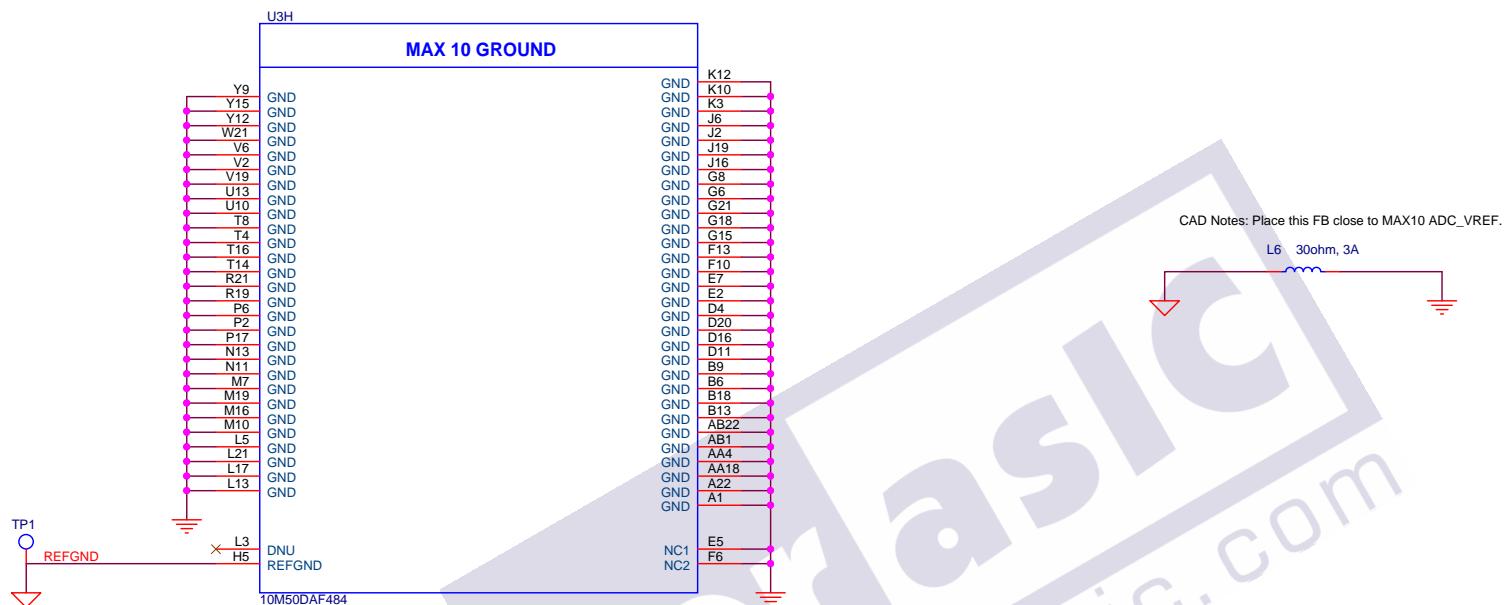
T-Core Board		
Size	Document Number	Rev
B	MAX 10 Configuration	A1
Date:	Monday, November 11, 2019	Sheet 8 of 16

MAX10 Power

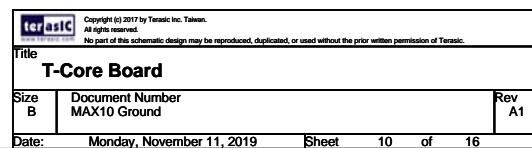


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Title		
T-Core Board		
Size B	Document Number MAX10 Power	Rev A1
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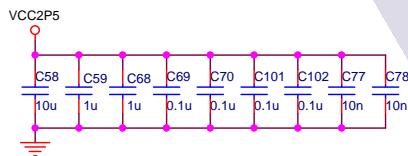
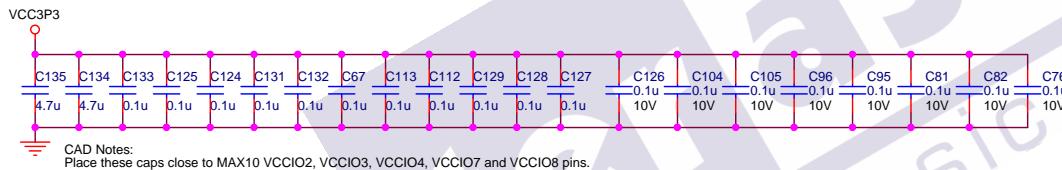
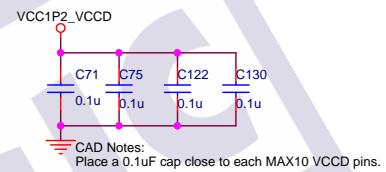
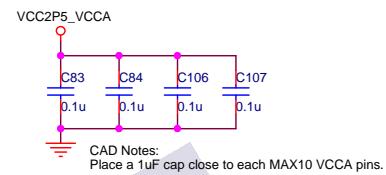
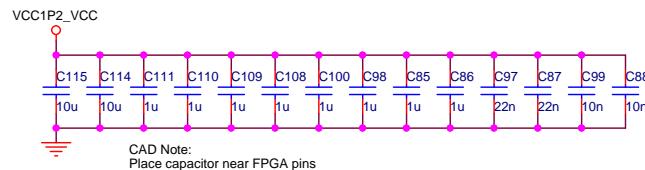
MAX10 Ground



1. Use REFGND as ground reference.
2. Route analog input signal adjacent to AVSSREF as possible



MAX10 Decoupling

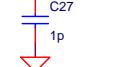


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Title		
T-Core Board		
Size B	Document Number MAX10 Decoupling	Rev A1
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Analog input interface

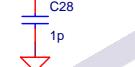
3 ADC1IN[8..1]

ADC1IN2 R7 10 ADC_IN1



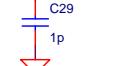
C27
1p

ADC1IN3 R6 10 ADC_IN2



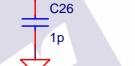
C28
1p

ADC1IN4 R5 10 ADC_IN3



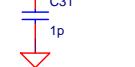
C29
1p

ADC1IN1 R8 10 ADC_IN0



C26
1p

ADC1IN6 R3 10 ADC_IN5



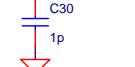
C31
1p

ADC1IN7 R1 10 ADC_IN6



C33
1p

ADC1IN8 R4 10 ADC_IN7

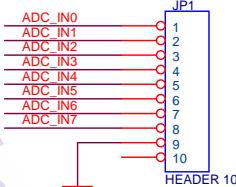


C30
1p

ADC1IN5 R2 10 ADC_IN4



C32
1p



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Title		
T-Core Board		
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B	Analog Expansion Header	A1
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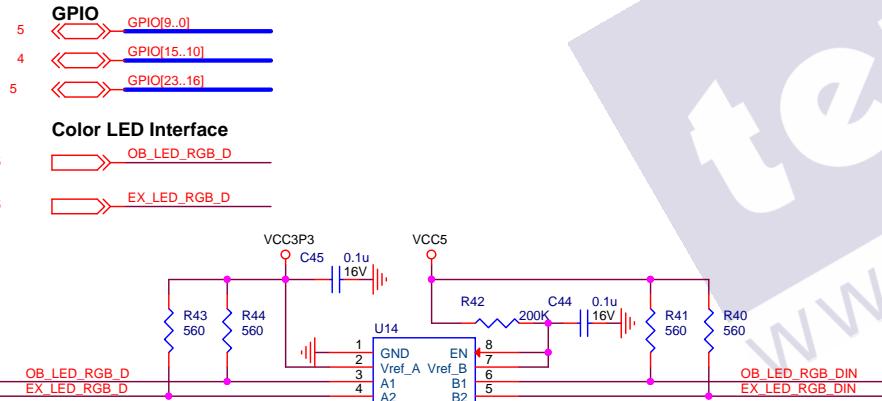
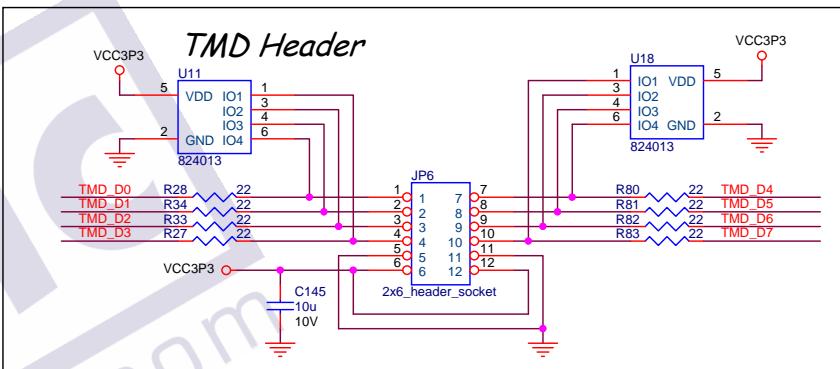
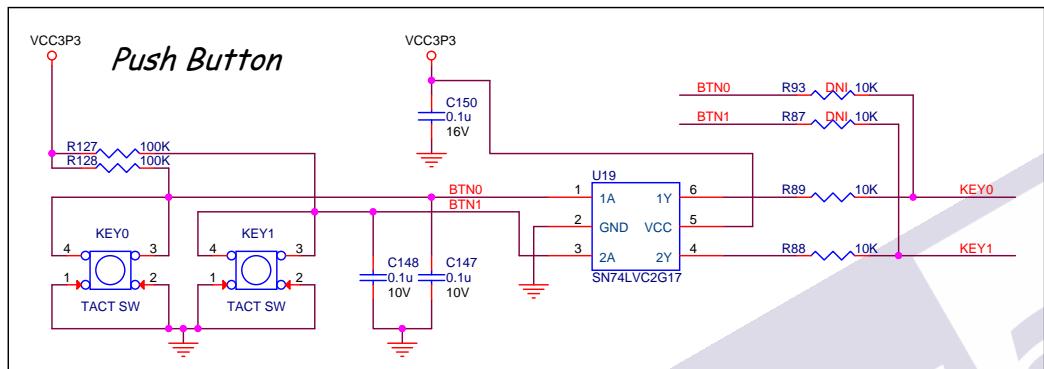
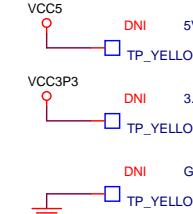
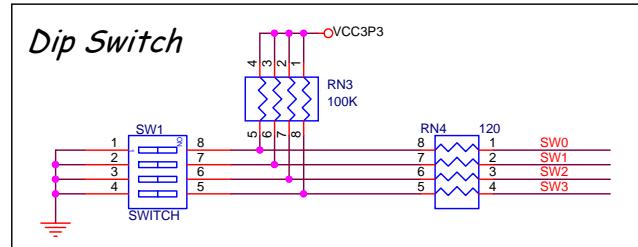
User IO, Button, Switch and LED

SWITCH
 4

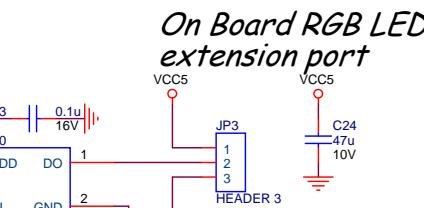
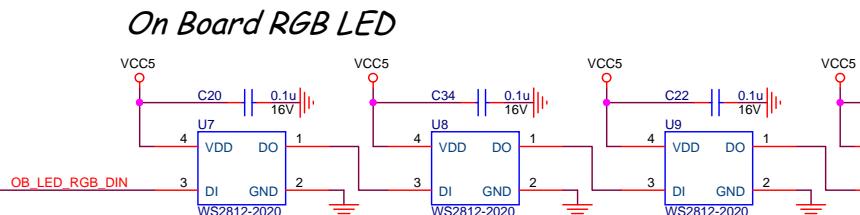
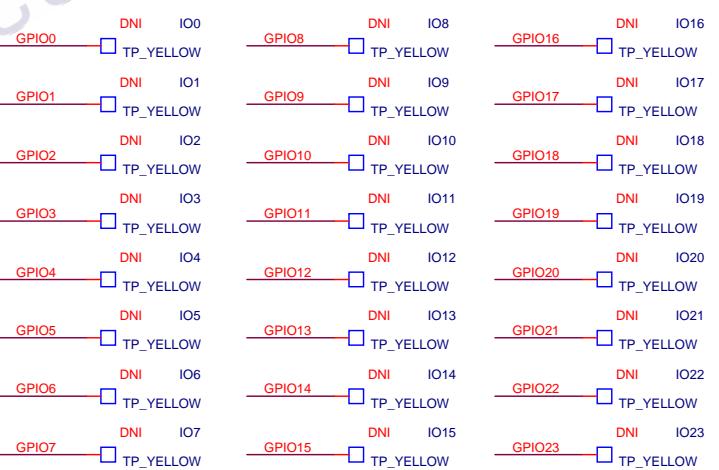
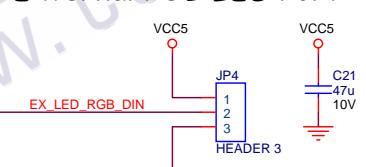
KEY
 4

LED
 4

TMD Interface
 4



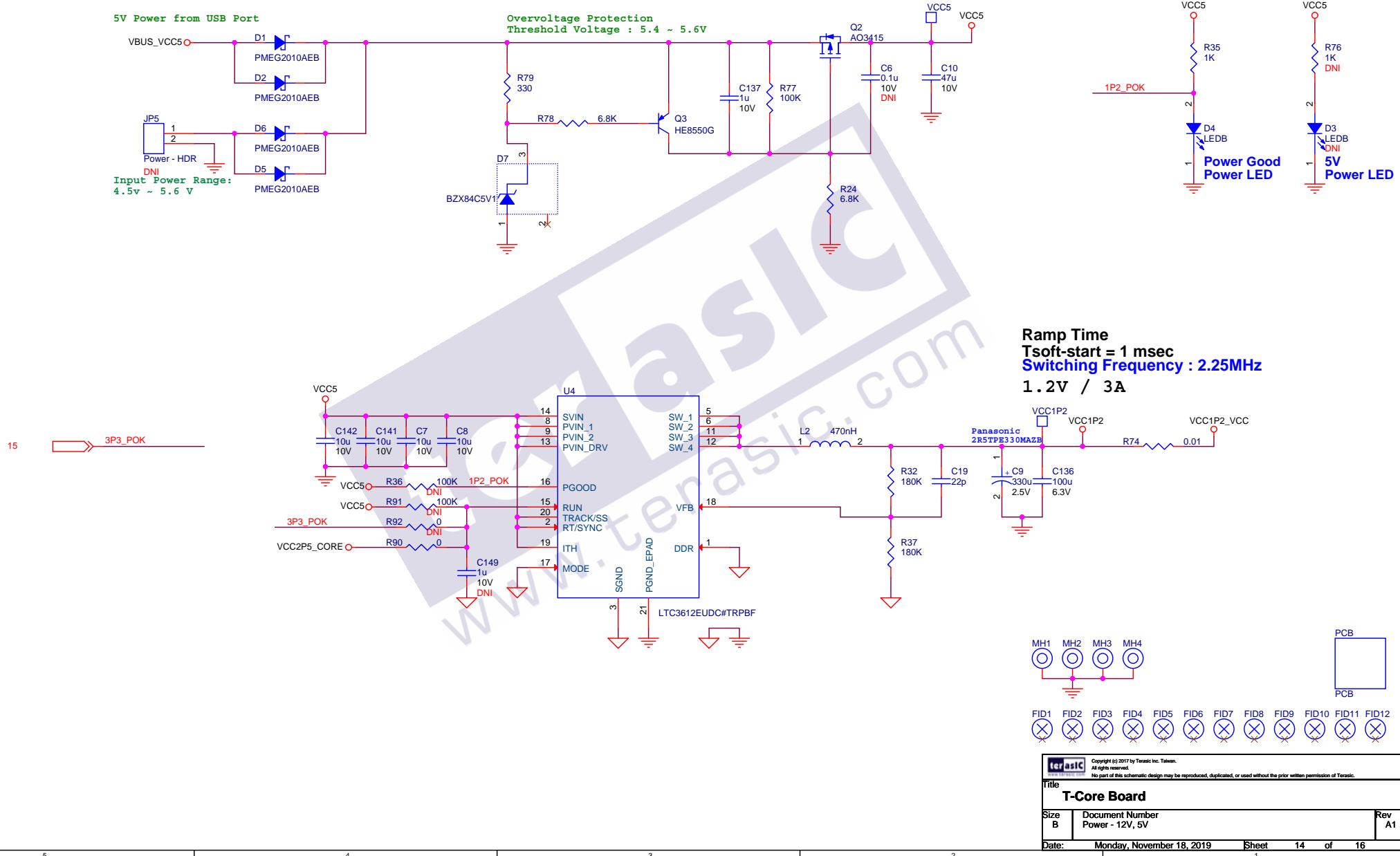
External RGB LED Port



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Title	
T-Core Board	
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B	LED, User I/O and Interface
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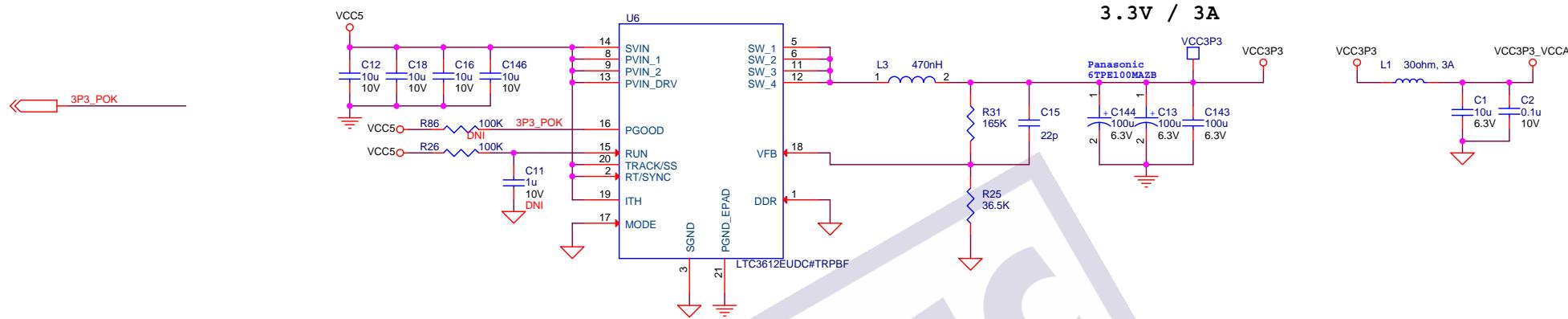
Power - 5V_DCIN / 1.2V

Power up Sequence:
VCC5 ---> VCC2P5, VCC3P3 ---> VCC1P2_VCC

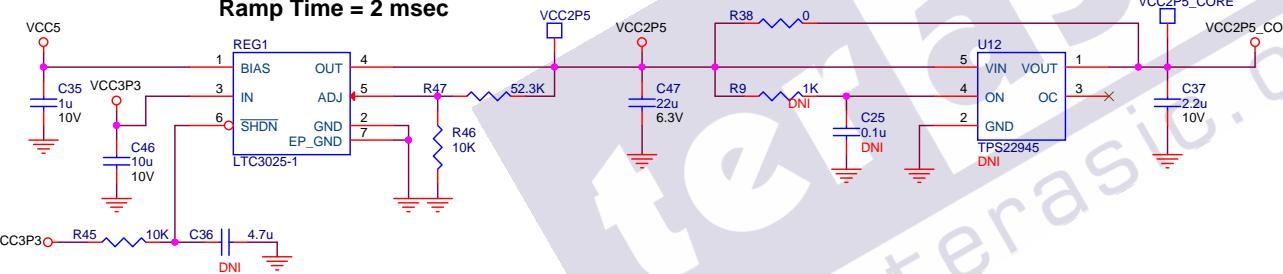


Power - 3.3V / 2.5V

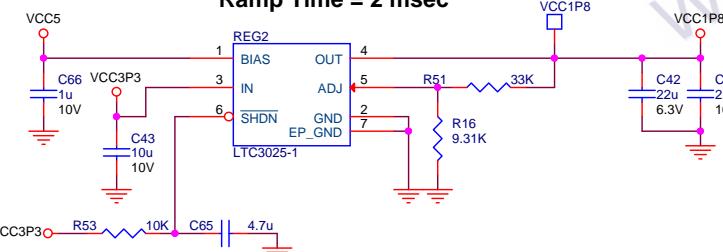
Ramp Time
Tsoft-start = 1 msec
Switching Frequency : 2.25MHz
3.3V / 3A



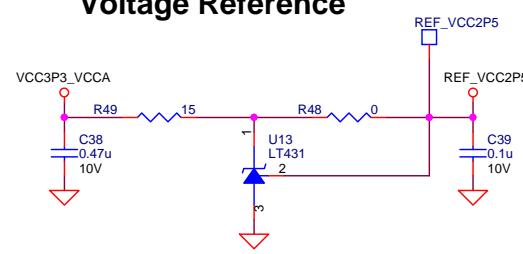
2.5V / 0.5A
Ramp Time = 2 msec



1.8V / 0.5A
Ramp Time = 2 msec



Voltage Reference



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Size B	Document Number Power - 1.8V, 2.5V, 3.3V	Rev A1
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