

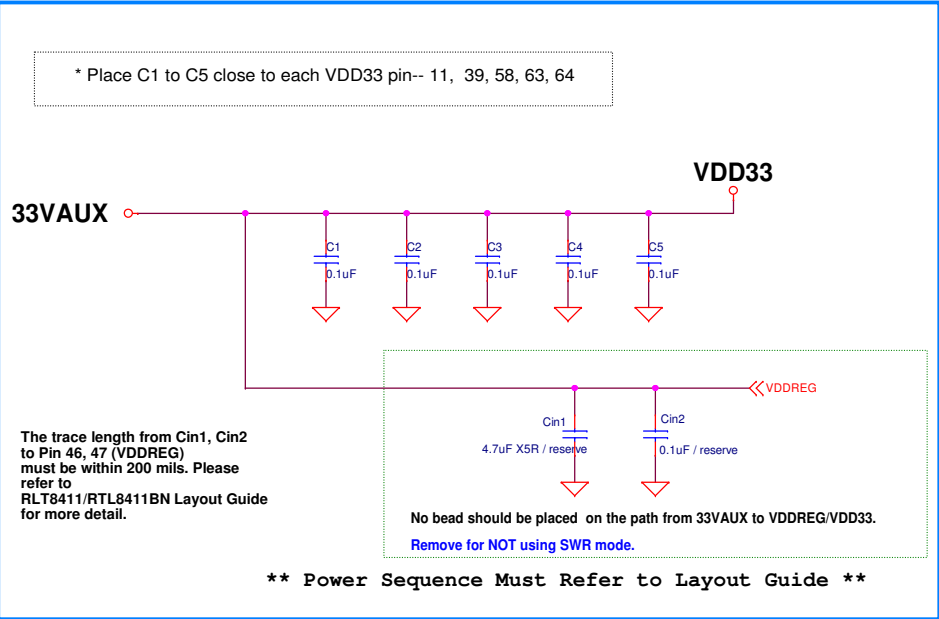
# RTL8411/RTL8411BN 64 Pin Reference Schematic V104

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Realtek Semiconductor Corp.		
No.2, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan		
Title		
RTL8411/8411BN Reference Schematic : Index		
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3.3V Power



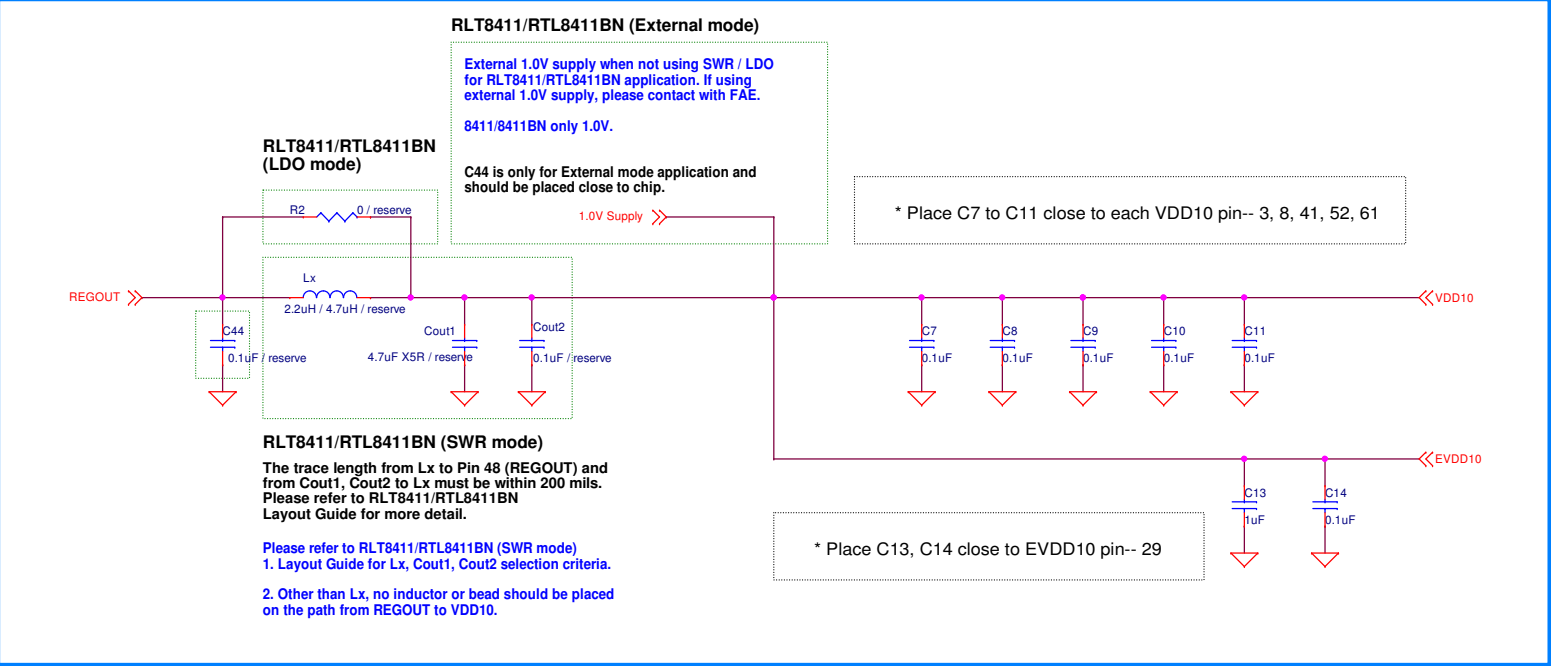
Power-Supply Configuration Table

	mode	Cin1,2	R2	Lx	Cout1,2	R30	R33	C44	
	SWR	O	X	O	O	O	X	X	
	LDO	X	O	X	X	X	O	X	
	External	X	X	X	X	X	O	O	

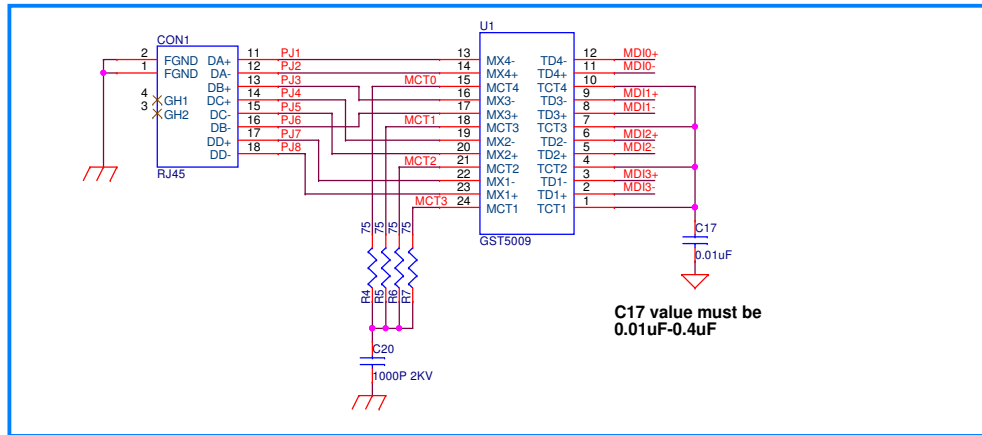
**\*\* If only one 1.0V supply source is selected. You may do the following option to save RBOM \*\***

1. SWR mode only  
=> R30 short
2. LDO mode only  
=> R2, R33 short
3. External Supply only  
(1) R33 => short

1.0V Power

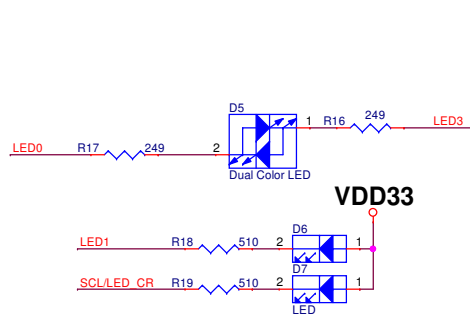


## Connector



## LED

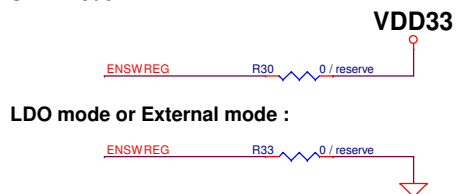
### Dual Color LED :



\*Only support LED0+LED3 Dual Color LED combination

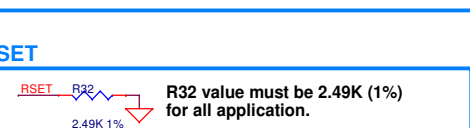
## Power Mode

### SWR mode :

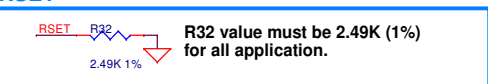


Refer to the page of "Power" for more detailed configuration of R30, R33 when using different 1.0v supply source

### LDO mode or External mode :

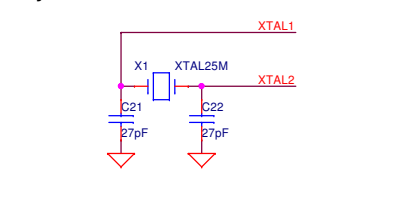


## RSET



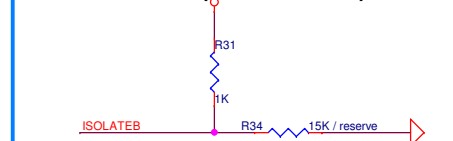
## Clock Source

### Crystal :



## Main Power

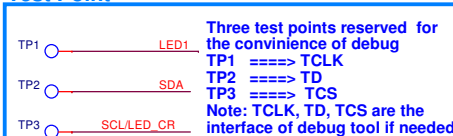
### VCC33 ( Main Power )



Consider VCC33 may be connected to Main Power or chipset/bios's GPO, the pull-low resistor R34 can be NC only when Main Power or chipset/bios's GPO can ensure to drive the ISOLATEB pin to a voltage level < 0.8V at the system state S3~S5.

If the ISOLATEB pin can not be well-controlled to a voltage level < 0.8V at S3~S5, the pull-low resistor R34 is needed to make sure the LAN chip is well isolated.

## Test Point

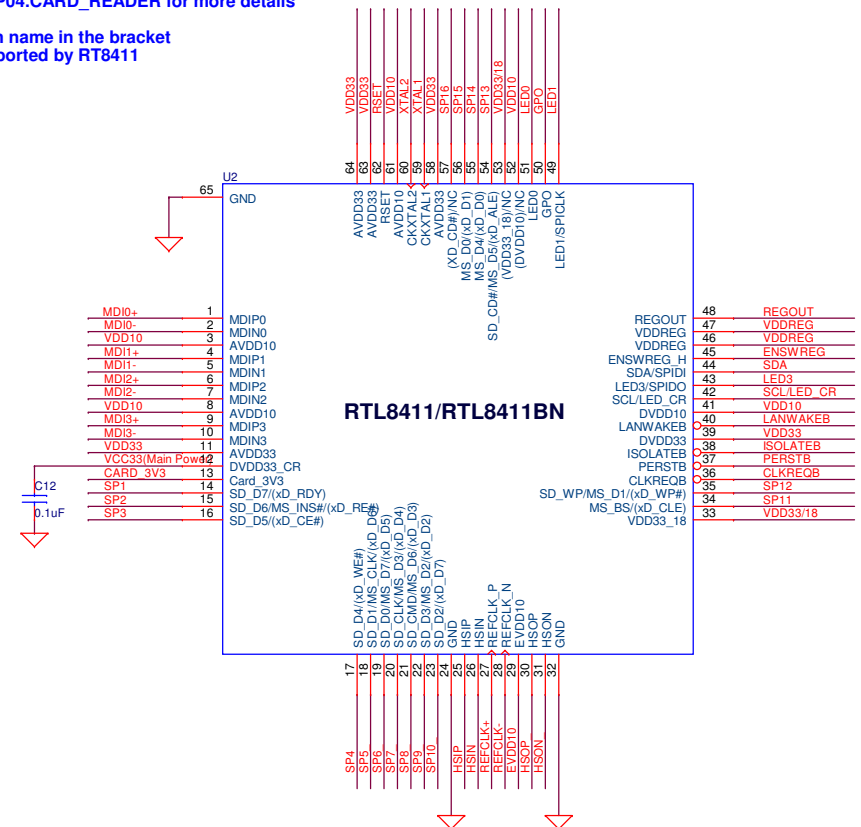


## RTL8411/RTL8411BN

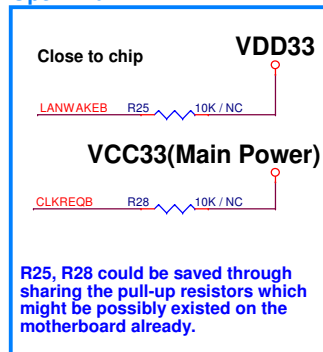
\*xD function only supported by RTL8411

To make PCB routing easier, xD relative circuit could be removed if only use RTL8411BN. Refer to P04.CARD\_READER for more details

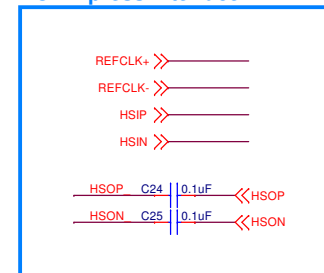
\*Function name in the bracket only supported by RT8411



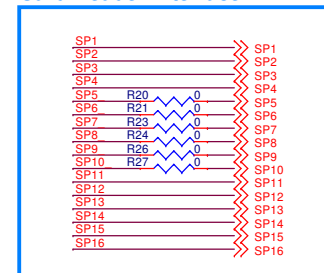
## Open Drain



## PCI Express Interface

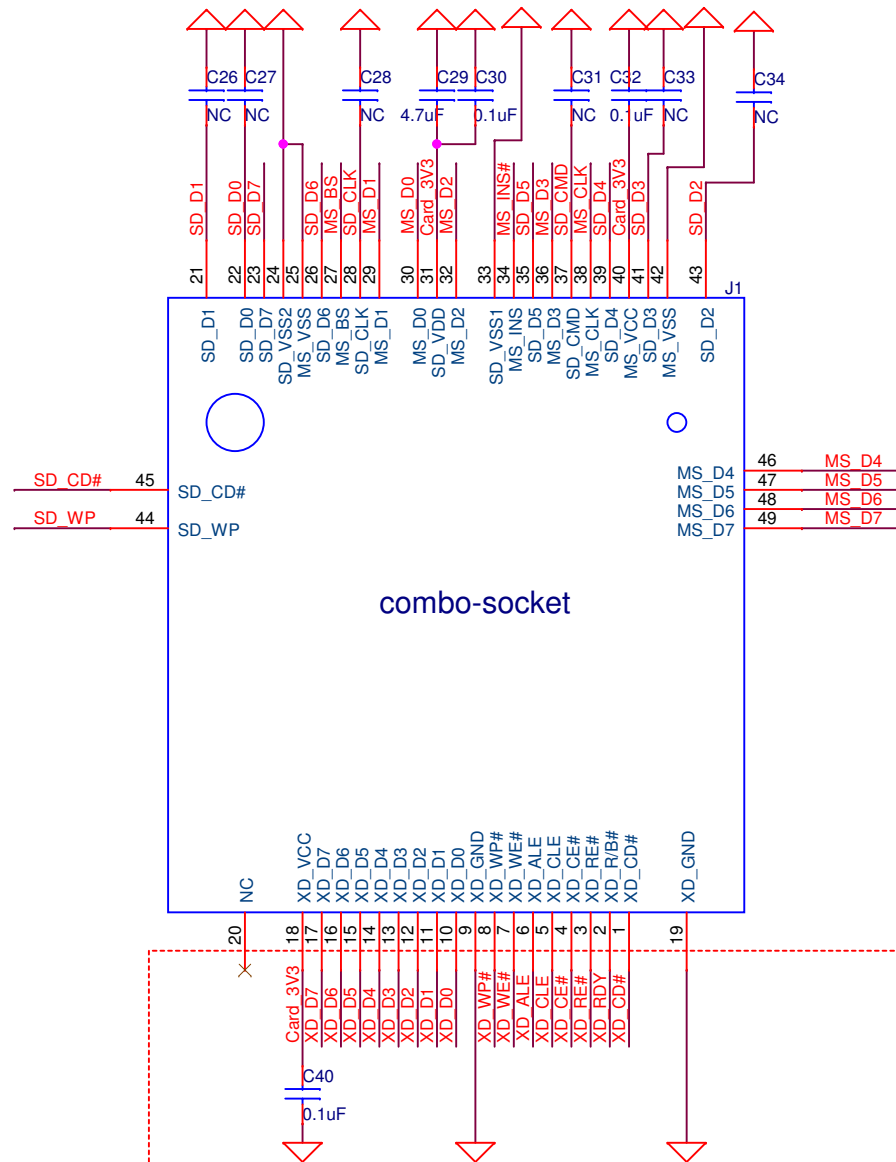


## Card Reader Interface



## Card Reader

### Flash Card Socket for reference

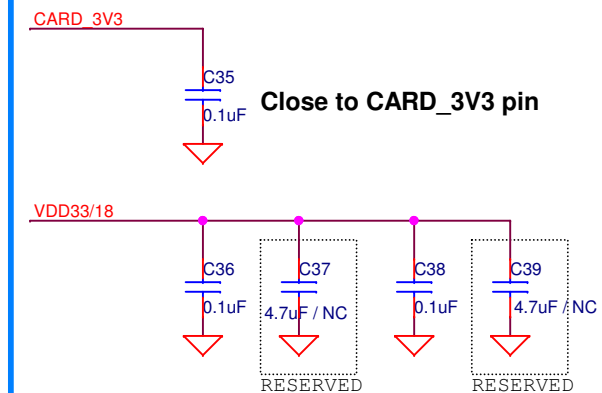


## Share Pin

SP1	SD D7	MS INS#	xD RDY
SP2	SD D6		xD RE#
SP3	SD D5		xD CE#
SP4	SD D4		xD WE#
SP5	SD D1	MS CLK	xD D6
SP6	SD D0	MS D7	xD D5
SP7	SD CLK	MS D3	xD D4
SP8	SD CMD	MS D6	xD D3
SP9	SD D3	MS D2	xD D2
SP10	SD D2		xD D7
SP11		MS BS	xD CLE
SP12	SD WP	MS D1	xD WP#
SP13	SD CD#	MS D5	xD ALE
SP14		MS D4	xD D0
SP15		MS D0	xD D1
SP16			xD CD#

\*For RTL8411BN do not support xD card, the xD relative nets name in the red dashed box could be deleted if only use RTL8411BN

## Power



- \* Place C36, C37 close to VDD33/18 pin-- 33
- \* Place C38, C39 close to VDD33/18 pin-- 53 (C38,C39 are only for RTL8411, PIN53 of RTL8411BN is NC.)

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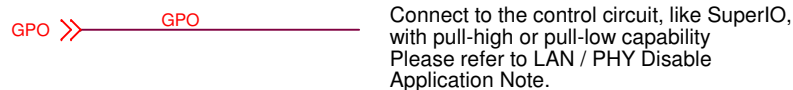
Title  
RTL8411/8411BN Reference Schematic : CARD READER

Size A4 Document Number  
RTL8411\_8411BN\_REFERENCE\_SCHEMATIC\_V104.DSN

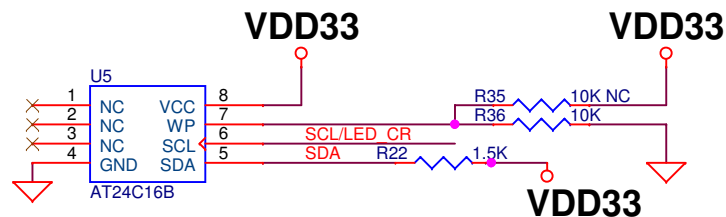
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## Reserved for LAN / PHY Disable Function

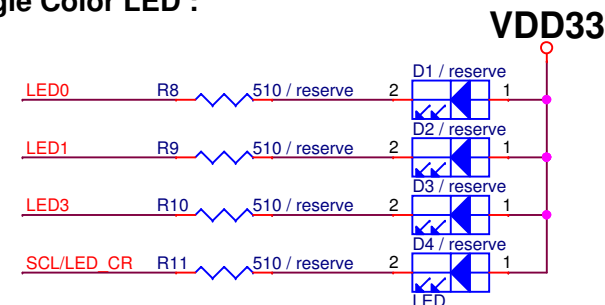


## TWSI ( Optional )



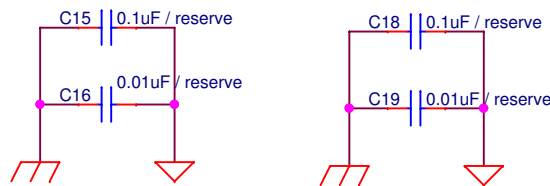
## Optional LED Configuration

### Single Color LED :



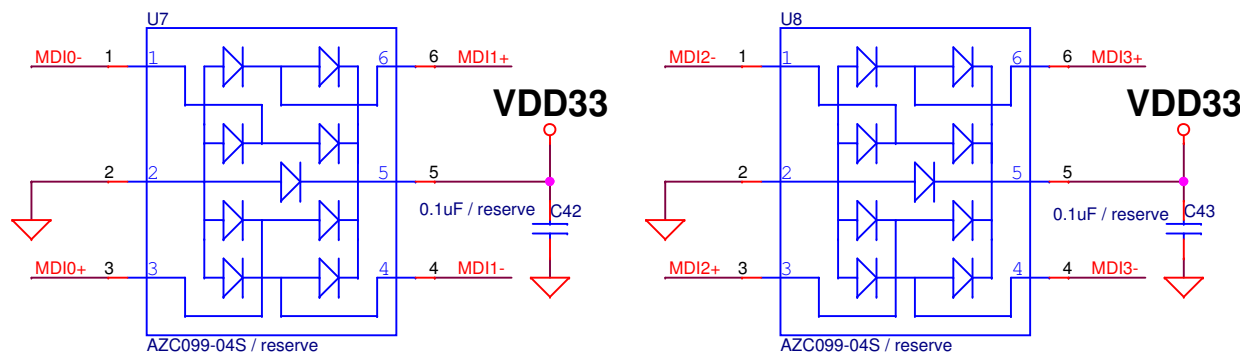
R8, R9, R10, R11 and D1, D2, D3, D4 Reserved for only Single Color LED Configuration ( optional )

## Reserved for Noise Isolation



C15, C16, C18, C19 Reserved for Noise Isolation between Chassis GND and System GND ( optional )

## Reserved for TVS Component



U7, U8 and C42, C43 are reserved for Surge and Cable ESD ( optional )

## Reserved for External Clock Source



XTAL2 is the external clock input pin.  
\*Only 25Mhz external clock is supported  
XTAL1 must be floating when using oscillator or external clock.

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Title		
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Change Notes

Initial Version

- 1. Modify from RTL8411\_8111\_REFERENCE\_V103

Change Notice from V100 to V101

- 1. PIN12 always connect to main power, delete MS card detection circuit (Page 3)

Change Notice from V101 to V102

- 1. Add the comment for ISOLATEB (Page 3)
- 2. Add the comment for Test Point (Page 3)

Change Notice from V102 to V103

- 1. Modify system state S3~S5 for ISOLATEB (Page 3)

Change Notice from V103 to V104

- 1. Add notes for 3.3V & switching regulator circuits. (page 2)

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RTL8411/8411BN Reference Schematic : Change Notes		
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