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**Revisions**

Rev	Date	Description
X1	16-Sep-2010	Initial Release
X2	17-Sep-2010	Review Feedbacks Implemented
X3	22-Sep-2010	SPI Flash updated
X4	23-Sep-2010	Test Points added for all power nets
X5	24-Sep-2010	Test Point TP4 is removed
X6	27-Sep-2010	Chip Antenna and RF Coaxial connector introduced
X7	28-Sep-2010	Test Header added for the SDIO signals
A	04-Oct-2010	R23 is changed from DNP to loaded component.Final Prototype release
AX1	17-Feb-2011	Refer Notes for Design changes
B	21-Feb-2011	Final Prototype release
C	4-Mar-2011	GPIO11 connected to pin F1 of U3. SPI_CS/TP10 connected to pin E1 of U3.

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Designer: K.Mangula		ICAP Classification: FCP: FIUQ: X PUBI:	
Drawn by: K.Mangula(LnT)		<b>TWR-WIFI-AR4100</b>	
Approved: Shelaby, Lawrence		<b>Title Page</b>	
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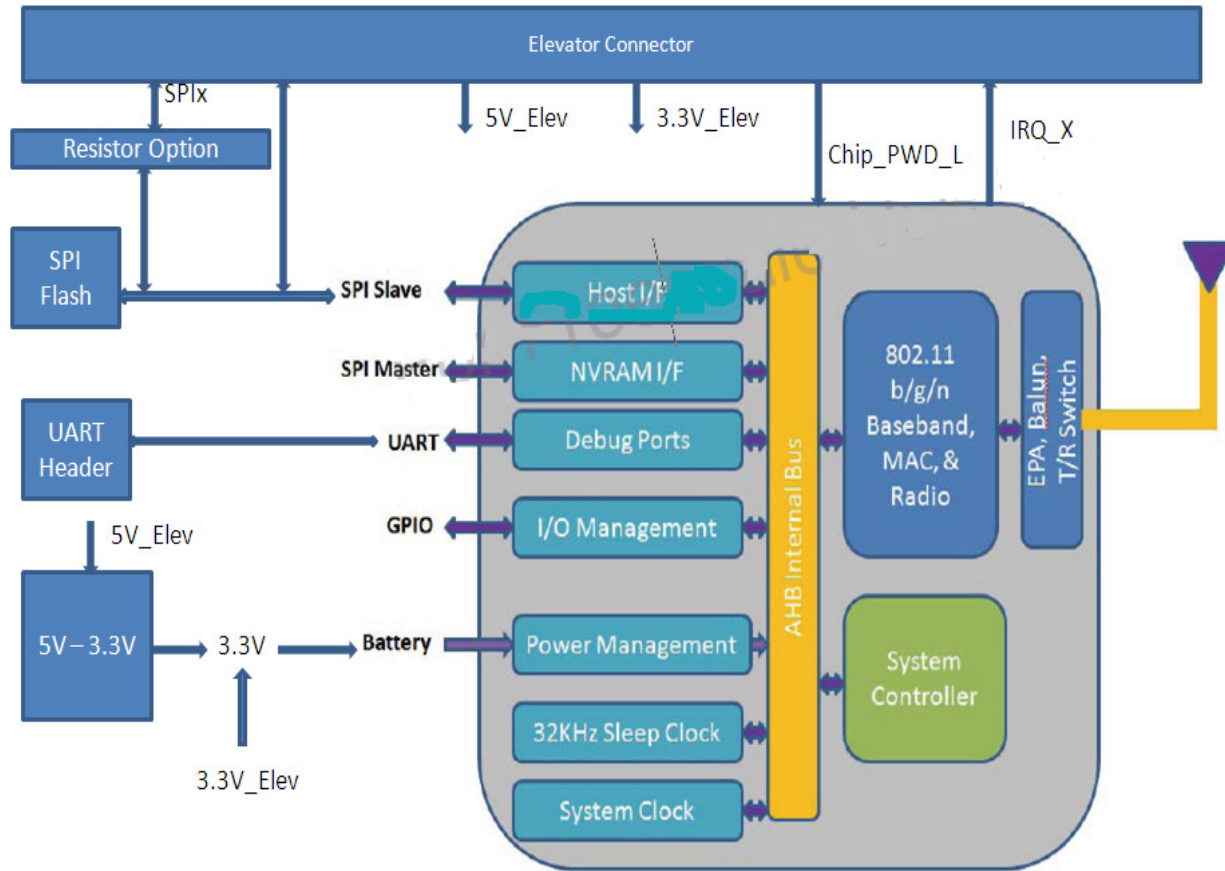
Item #	Component Reference	Component Value	Schematic and Default Configuration Changes	Explanation
1A	J1		Note added for Jumper to short pin 1 and 2 together	Using 3.3v source on Riser Cards.
1B	U1, C2, R1, R2, C3		DNP	Use 3.3v source on Tower Elevator boards. Eliminate 5v regulator. Change BOM. Mark U1, C2, R1, R2, C3 as DNP. J1 default jumper to connect pin 1,2
1C	U2		IN pin of U2 changed to VDD-CORE-3V3	Use 3.3V source from Tower elevator boards
1D	J2		Note added for jumper to short pin 1 and 2	Using ext 1.8v v regulator
3	R36		Change R36 to DNP	Internal SIP Module pulldown so this resistor is redundant.
5	J21, R43, C15		DNP	Remove Silkscreen label
6A	R32, R33, R34, R35	0 Ohm	Made populated to connect Flash SPI interface	Connect Serial Flash on board to AR4100 SPI Host Port.
6B	R21, R22	DNP	DNP R21, R22	Connect Serial Flash on board to AR4100 SPI Host Port.
7	J10		12 pin connector kept as it is but jumper added for connecting to DEBUG_UART_RXD	Wake_on_wriless pin is DEBUG_UART_RXD. Need to put a jumper connector on DEBUG_UART_RXD trace to connector ( Do not short)
8	J17, J18, J19		DNP	Not supporting WOW
9	C6	10uFd	Changed C6 Cap value to 10uFd..	Eliminate power supply noise.
10A	R18	3.6nH	Changed to 3.6nH inductor from 0 ohm resistor	
10B	R18		Change R18 on Schematic to L2	
11A	C12	1.5nH	Change to 1.5nH inductor from no stuff	Chip antenna tuning.
11B	C12		Change C12 on Schematic to L3	
14	R23	0 ohms	Change to 0 ohms from no stuff	Serial flash must have VCC.
15A			AR4100 Symbol Changes	See below ( 36-55)
15B			Change schematic and PCB layout with correct names for Product build. Don't hold up Proto build.	See below ( 60-76)
24	L1	4.7uH	Change the value to 4.6uH and should be DNP	Need package change? DNP for external PMU
27			Connect primary elevator GPIO1 (Pin B21) and GPIO9 (Pin A9) through series restor(DNP) to AR4100 GPIO0, GPIO2	Connect primary elevator GPIO1 (Pin B21) and GPIO9 (Pin A9) through series restor(DNP) to AR4100 GPIO0, GPIO2
29A	C1, C5	4.7uFd	Chane the value to 4.7uF and Change to 0603 package	
29B	L5	3.9nh	to add a shunt inductor (3.9nH, 0201) external to the RF input/output pad	
31	R38		Stuff R38 with Zero Ohm resistor.	Enable the Tx on the UART.
33B	U2		Add Pull up resistor option on EN & connect to WIFI_CHIP_PWD_B through series resistor (DNP))	
33D	Primary elevator Connector		Add jumper option to VDD_3V3_ELEV	Ability to measure power consumption with external 3.3V to Catalina
34A			Note added for J16 to short pin 1 and 2 as default	
34B			Note added for J12 to short pin 1 and 2 as default	
34C			Note added for J23 - Short Pin 1&2 as default	



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 Drawing Title: **TWR-WIFI-AR4100**  
 Page Title: **Notes**

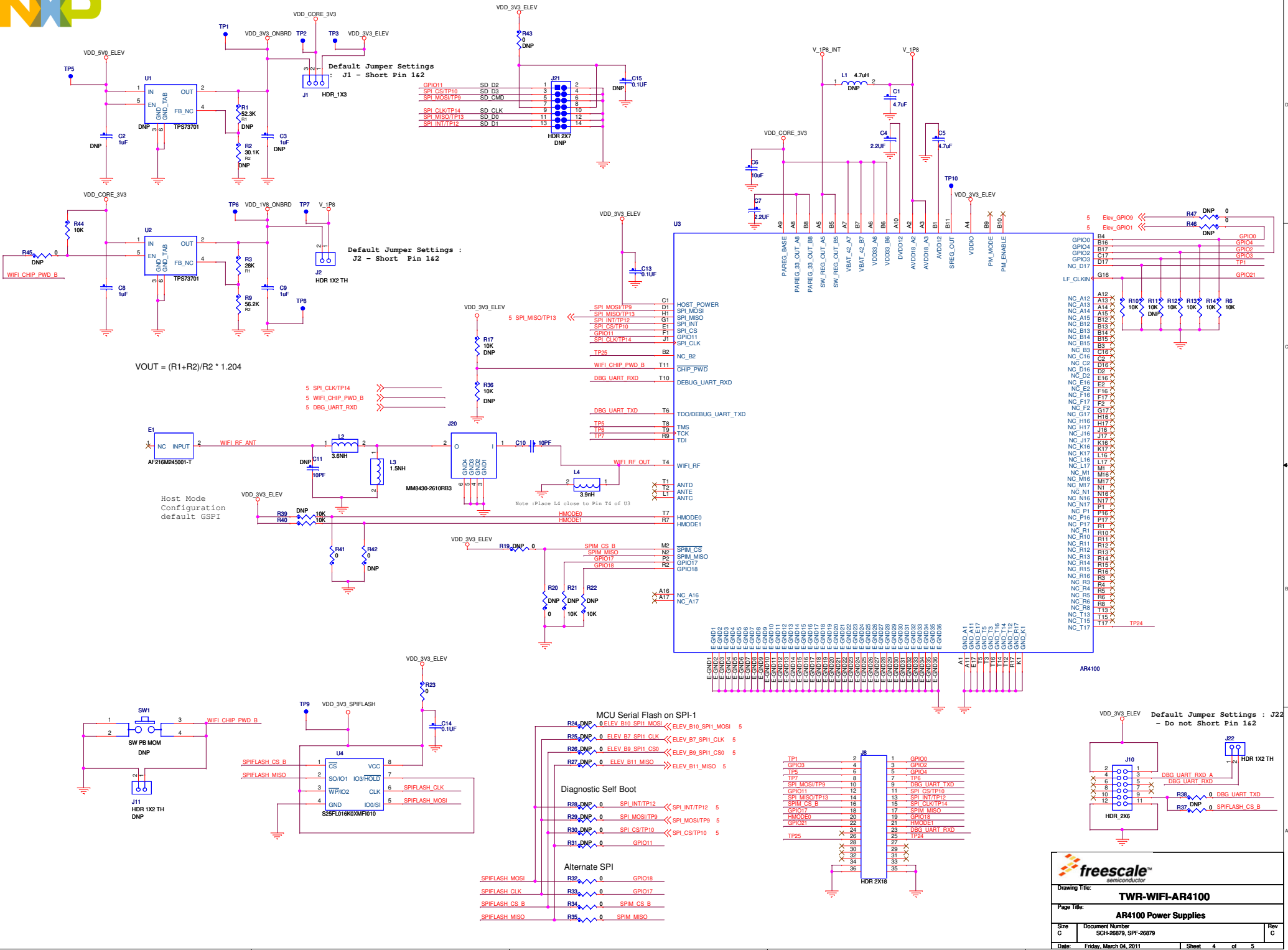
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### Block Diagram





# AR4100, Power Supplies





# Tower Elevator Connectors

