




EFR32MG12 Dual Band Radio Board
2.4 GHz / 434 MHz 10 dBm, VDCDC to PAVDD

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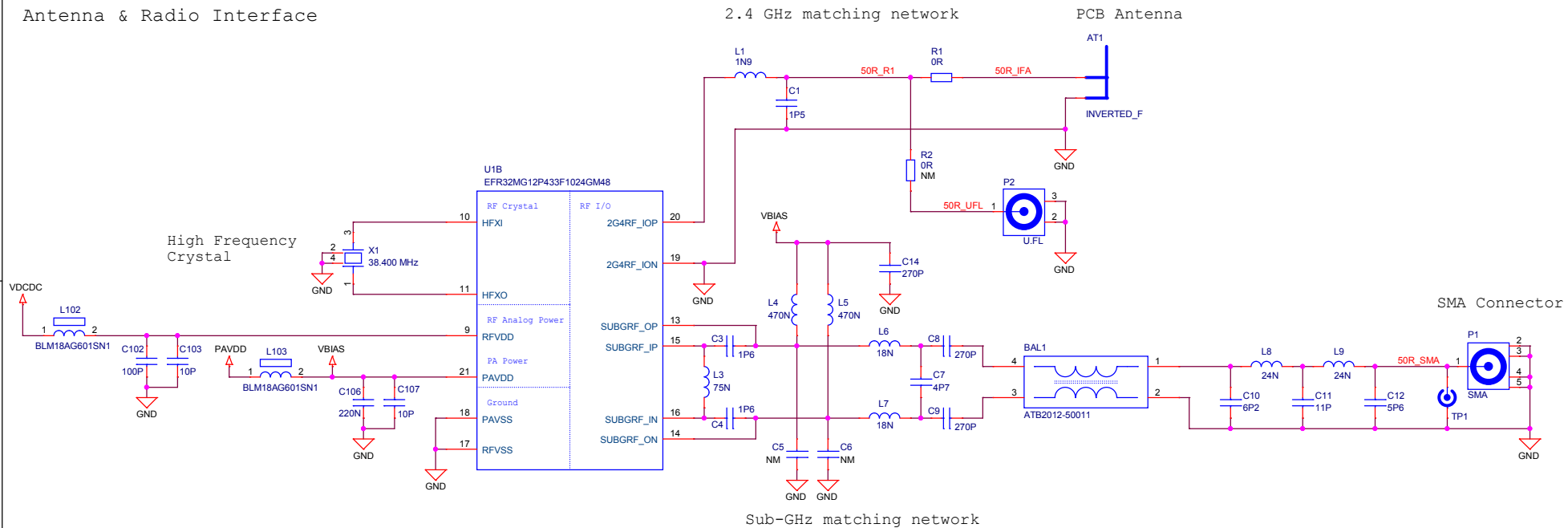
Revision History

Rev.	Description
A00	Initial revision.

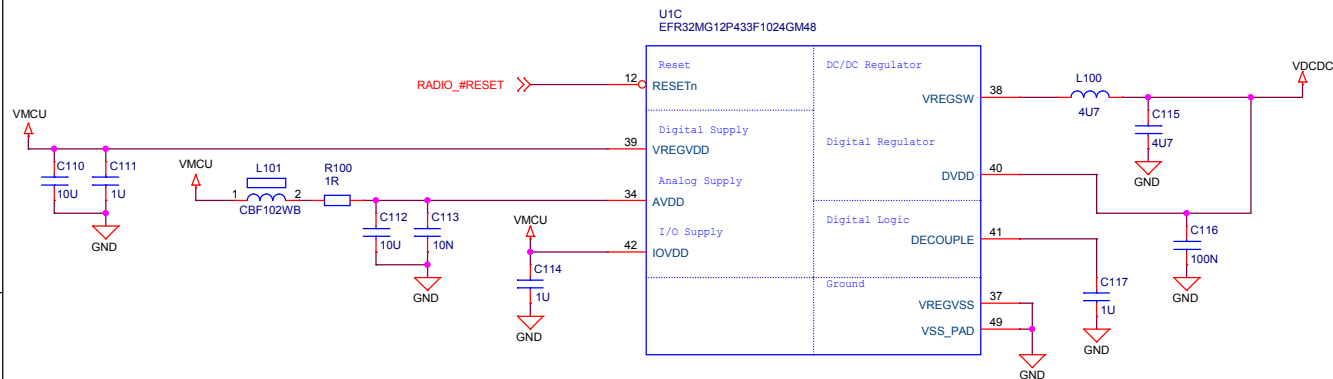
SCHEMATIC1

 SILICON LABS		Schematic Title	
		EFR32MG12 Dual Band 2400/434 MHz Radio Board	
Designed: <OrgAddr1>		Page Title	
Approved: <OrgAddr2>		Title Page	
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Antenna & Radio Interface

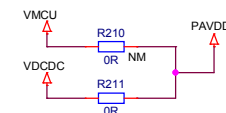


Power & Decoupling

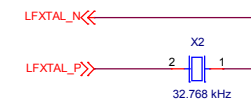


PAVDD Configuration

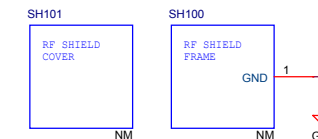
	Power Config 1 VMCU to PAVDD	Power Config 2 DCDC to PAVDD
R210	Mount	Not mount
R211	Not mount	Mount



Low Frequency Crystal



RF Shielding



SCHEMATIC1

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The diagram illustrates the pin mapping for the EFR32 peripheral, showing connections for various pins and components. The central component is the RP2000, which is connected to the EFR32 Pin, EFR32 Peripheral, EXP Header Connection, WSTK Breakout Pin, WSTK Peripheral Connection, and WSTK_FI[21..0].

Pin Mapping Details:

- RADIO_PA[5..0]:** EFR32 Pin, EFR32 Peripheral, EXP Header Connection, WSTK Breakout Pin, WSTK Peripheral Connection, WSTK_FI[21..0].
- RADIO_PB[15..11]:** EFR32 Pin, EFR32 Peripheral, EXP Header Connection, WSTK Breakout Pin, WSTK Peripheral Connection, WSTK_FI[21..0].
- RADIO_PC[11..6]:** EFR32 Pin, EFR32 Peripheral, EXP Header Connection, WSTK Breakout Pin, WSTK Peripheral Connection, WSTK_FI[21..0].
- RADIO_PD[15..13]:** EFR32 Pin, EFR32 Peripheral, EXP Header Connection, WSTK Breakout Pin, WSTK Peripheral Connection, WSTK_FI[21..0].
- RADIO_PF[7..0]:** EFR32 Pin, EFR32 Peripheral, EXP Header Connection, WSTK Breakout Pin, WSTK Peripheral Connection, WSTK_FI[21..0].

Connections:

- EFR32 Pin:** EFR32 Peripheral, EXP Header Connection, WSTK Breakout Pin, WSTK Peripheral Connection, WSTK_FI[21..0].
- EFR32 Peripheral:** EFR32 Pin, EXP Header Connection, WSTK Breakout Pin, WSTK Peripheral Connection, WSTK_FI[21..0].
- EXP Header Connection:** EFR32 Pin, EFR32 Peripheral, WSTK Breakout Pin, WSTK Peripheral Connection, WSTK_FI[21..0].
- WSTK Breakout Pin:** EFR32 Pin, EFR32 Peripheral, EXP Header Connection, WSTK Peripheral Connection, WSTK_FI[21..0].
- WSTK Peripheral Connection:** EFR32 Pin, EFR32 Peripheral, EXP Header Connection, WSTK Breakout Pin, WSTK_FI[21..0].
- WSTK_FI[21..0]:** EFR32 Pin, EFR32 Peripheral, EXP Header Connection, WSTK Breakout Pin, WSTK Peripheral Connection.

Other Connections:

- TP_VCOM_TX:** WSTK_F6, WSTK_F7, WSTK_F8, WSTK_F9.
- TP_VCOM_RX:** WSTK_F6, WSTK_F7, WSTK_F8, WSTK_F9.
- TP_VCOM_CTS:** WSTK_F6, WSTK_F7, WSTK_F8, WSTK_F9.
- TP_VCOM_RTS:** WSTK_F6, WSTK_F7, WSTK_F8, WSTK_F9.
- TP_DBG_TCK_SWCLK:** WSTK_F1, WSTK_F0, WSTK_F2, WSTK_F3.
- TP_DBG_TMS_SWCLK:** WSTK_F1, WSTK_F0, WSTK_F2, WSTK_F3.
- TP_DBG_TDO_SWO:** WSTK_F1, WSTK_F0, WSTK_F2, WSTK_F3.
- TP_DBG_TDI:** WSTK_F1, WSTK_F0, WSTK_F2, WSTK_F3.
- TP_DBG_RESET:** WSTK_F4, WSTK_F5, WSTK_F6, WSTK_F7.

I/O Port Pins

U1A
EFR32MG12P433F1024GM48

RADIO_PA[5..0] << PA0 / PA1 / PA2 / PA3 / PA4 / PA5 /

RADIO_PB[15..11] << PB11 / PB12 / PB13 / PB14 / LFX TAL_N PB15 / LFX TAL_P

RADIO_PC[11..6] << PC6 / PC7 / PC8 / PC9 / PC10 / PC11 /

RADIO_PD[15..13] << PD13 PD14 PD15

RADIO_PF[7..0] << PF0 / PF1 / PF2 / PF3 / PF4 / PF5 / PF6 / PF7 /

Serial Flash

FLASH_MOSI << D2
FLASH_SCLK << E1
FLASH_SCS << A3

VMCU

U100A
MX25R8035F
SI / SIO0 SO / SIO1
SCLK CS#
WP# / SIO2 RESET# / SIO3

C3 >> FLASH_MISO

R103
330K

U100B
MX25R8035F
VCC A1
GND B2

C124
100N

GND

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Schematic Title
EFR32MG12 Dual Band 2400/434 MHz Radio

Page Title
I/O Port Connections

Designed: <OrgAddr1> Approved: <OrgAddr2>

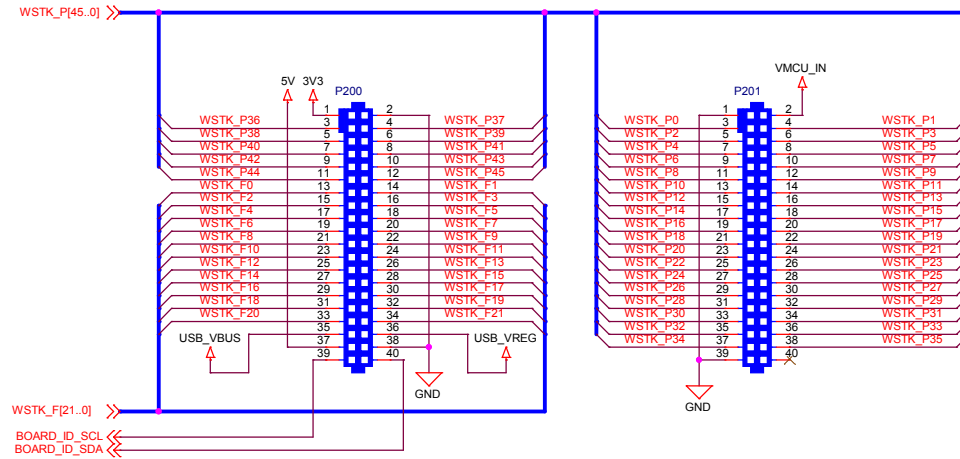
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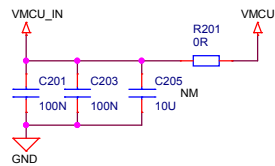
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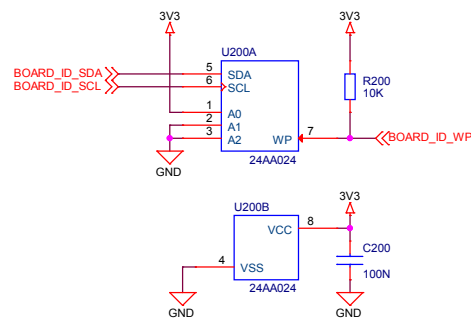
WSTK Connectors



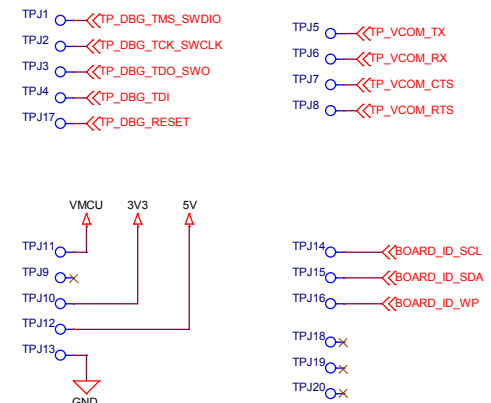
WSTK Power Decoupling




Board Identification



Test Points



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