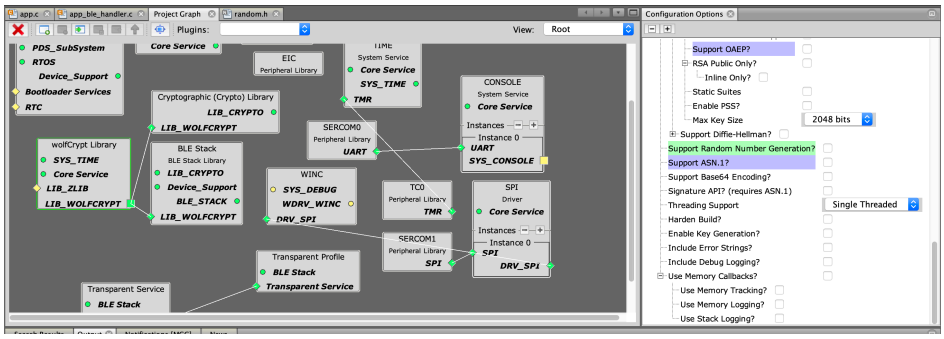
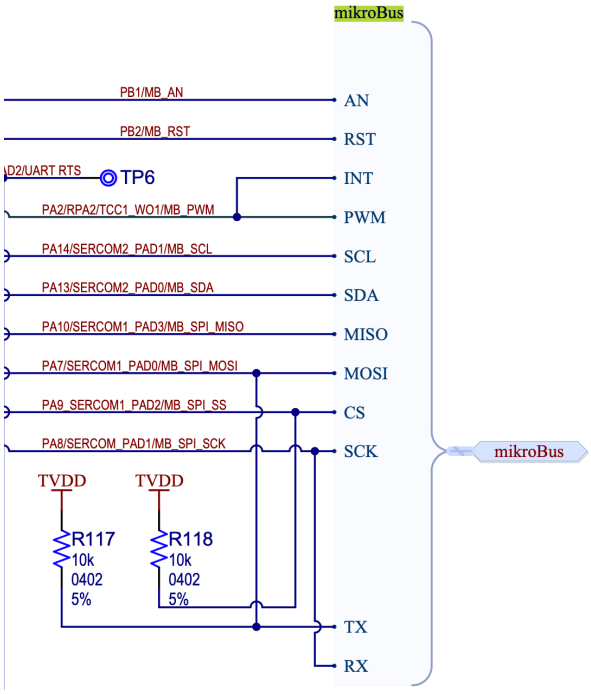
WBZ451 peripheral Transparent UART

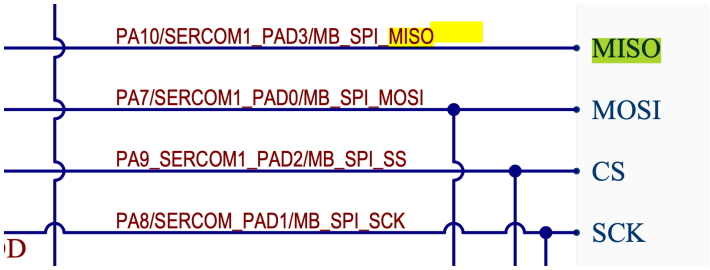
After adding WINC1500, TMR and SPI/SERCOM1, in WolfCrypt library, uncheck “support RNG”

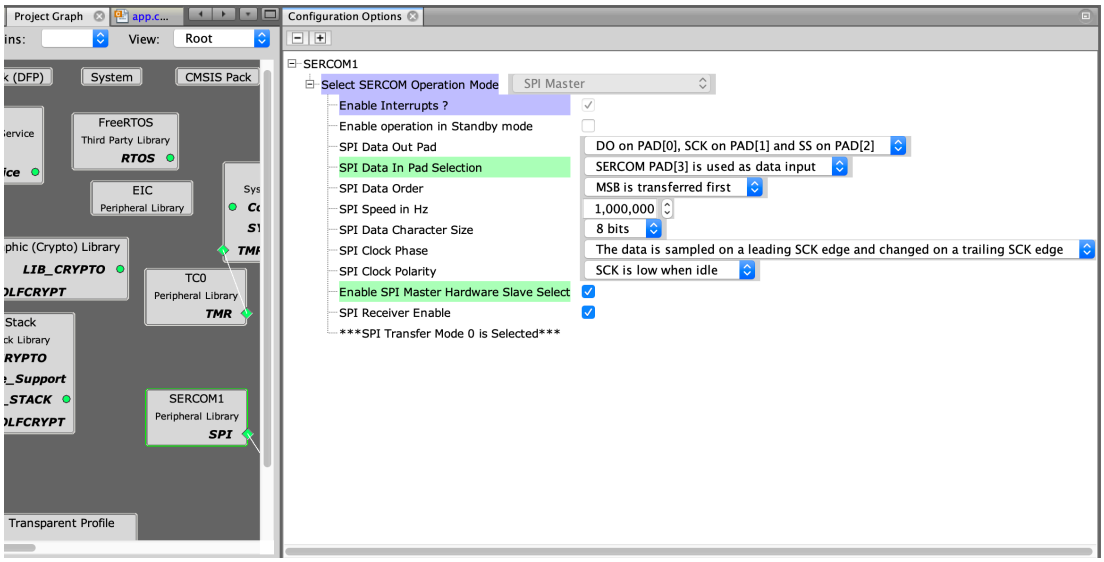


mikroBus interface



SERCOM1 configuration

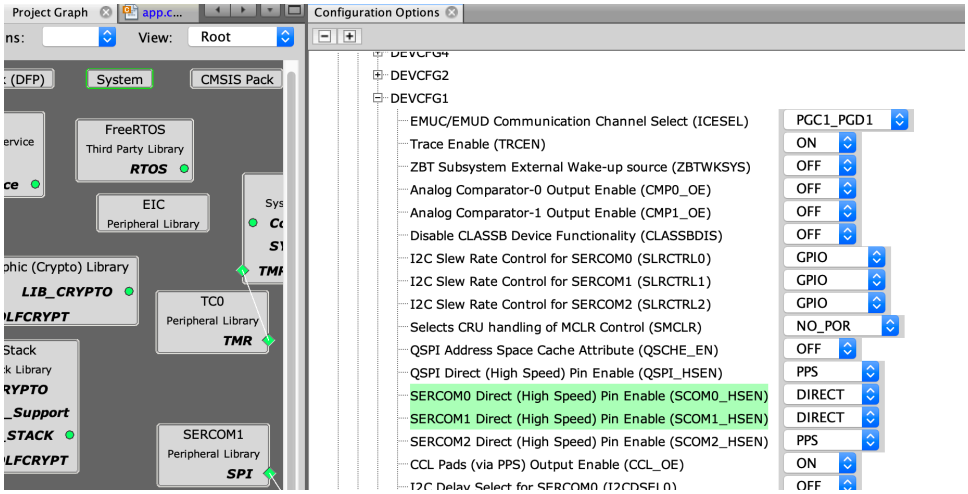




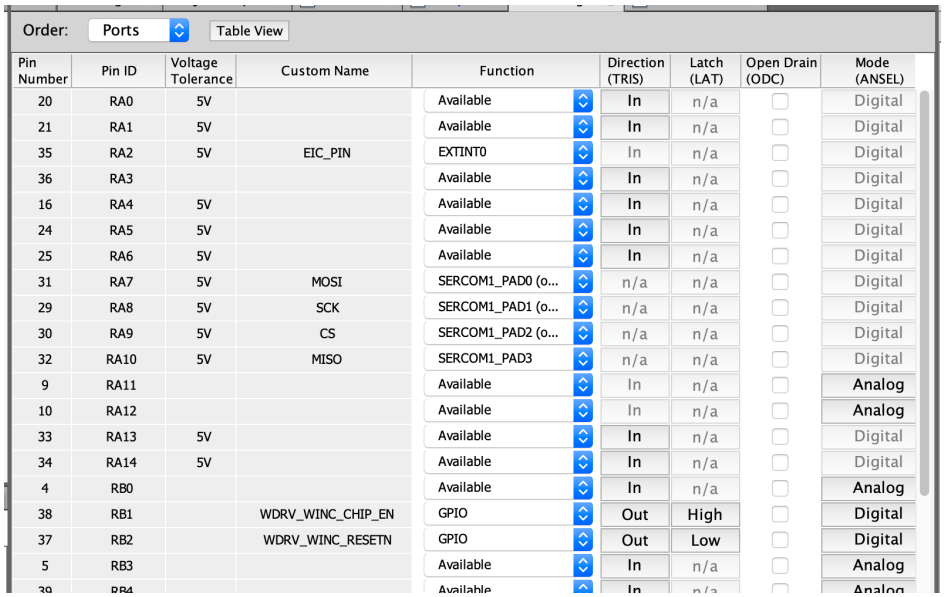
SERCOM1 Pin setup:

25	RA6	5V		Available	In	n/a		Digital
31	RA7	5V	MOSI	SERCOM1_PAD0 (o...	n/a	n/a		Digital
29	RA8	5V	SCK	SERCOM1_PAD1 (o...	n/a	n/a		Digital
30	RA9	5V	CS	SERCOM1_PAD2 (o...	n/a	n/a		Digital
32	RA10	5V	MISO	SERCOM1_PAD3	n/a	n/a		Digital
9	RA11			Available	In	n/a		Analog
10	RA12			Available	In	n/a		Analog

Enable DIRECT for SERCOM1

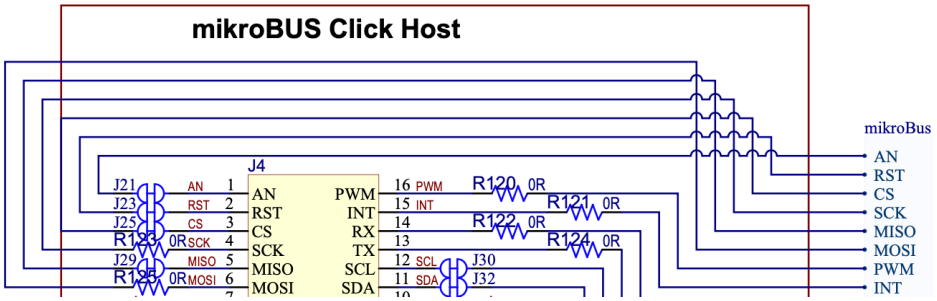


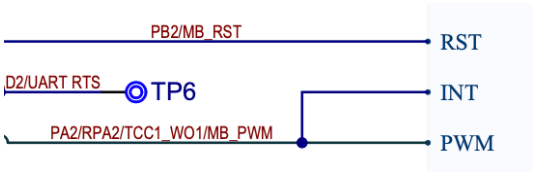
Configure WDRV_WINC_RESETN. (make sure you set to “Digital”)



WDRV_WINC_CHIP_EN

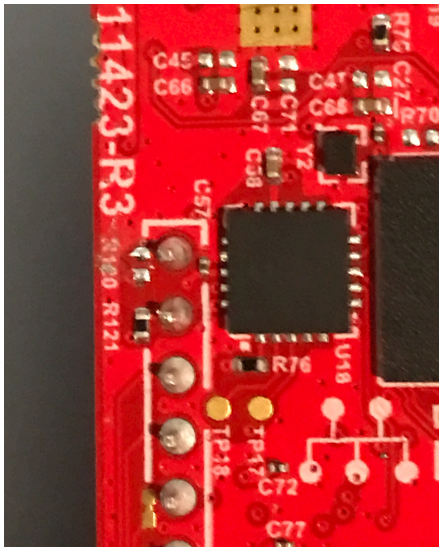
The WINC1500 Click Module Enable is on PWM pin, which is also connected to INT. We will leave the INT pin to generate the Interrupt, but to Enable (EN) the module, we will us AN (Click) connected on PB1 (WBZ)

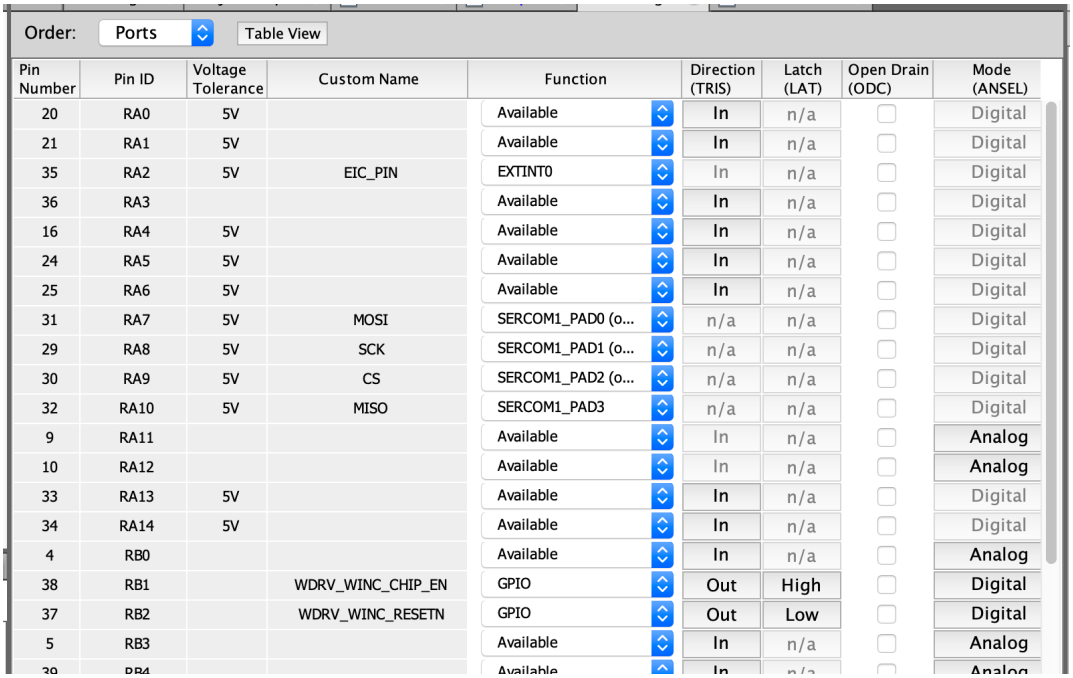




Board modification

Need to remove Resistor R120, and short AN to PWM on the WiFi7 Click…. AN is connected to PB1





Order: Ports Table View

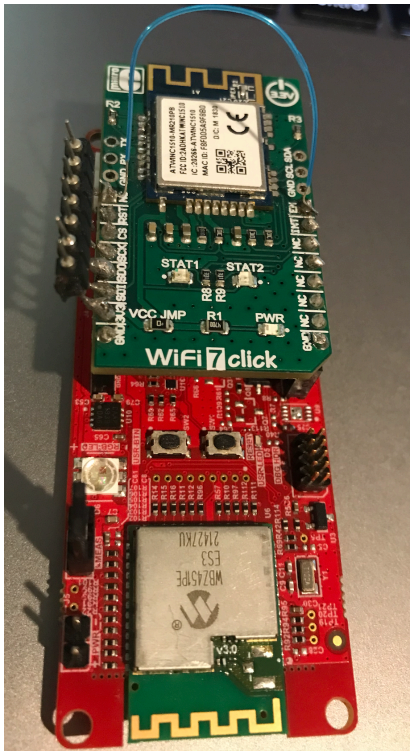
Pin Number	Pin ID	Voltage Tolerance	Custom Name	Function	Direction (TRIS)	Latch (LAT)	Open Drain (ODC)	Mode (ANSEL)
20	RA0	5V		Available	In	n/a		Digital
21	RA1	5V		Available	In	n/a		Digital
35	RA2	5V	EIC_PIN	EXTINT0	In	n/a		Digital
36	RA3			Available	In	n/a		Digital
16	RA4	5V		Available	In	n/a		Digital
24	RA5	5V		Available	In	n/a		Digital
25	RA6	5V		Available	In	n/a		Digital
31	RA7	5V	MOSI	SERCOM1_PAD0 (o...	n/a	n/a		Digital
29	RA8	5V	SCK	SERCOM1_PAD1 (o...	n/a	n/a		Digital
30	RA9	5V	CS	SERCOM1_PAD2 (o...	n/a	n/a		Digital
32	RA10	5V	MISO	SERCOM1_PAD3	n/a	n/a		Digital
9	RA11			Available	In	n/a		Analog
10	RA12			Available	In	n/a		Analog
33	RA13	5V		Available	In	n/a		Digital
34	RA14	5V		Available	In	n/a		Digital
4	RB0			Available	In	n/a		Analog
38	RB1		WDRV_WINC_CHIP_EN	GPIO	Out	High		Digital
37	RB2		WDRV_WINC_RESETN	GPIO	Out	Low		Digital
5	RB3			Available	In	n/a		Analog
39	RB4			Available	In	n/a		Analog

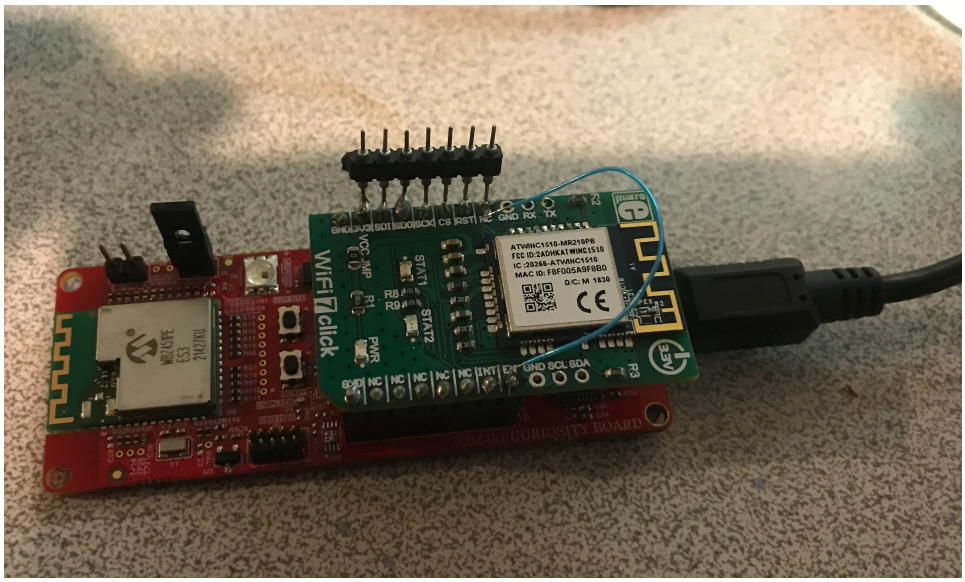
WIFI & Click pinout:

PINOUT DIAGRAM

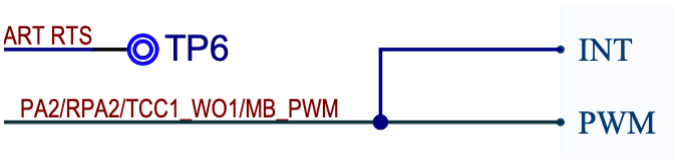
This table shows how the pinout on **WiFi 7 click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

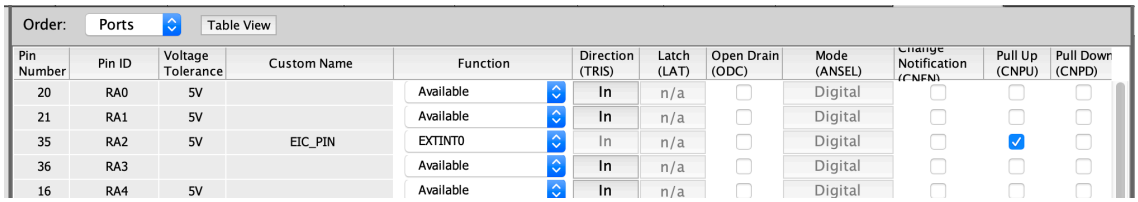
Notes	Pin	mikroBUS				Pin	Notes
	NC	1	AN	PWM	16	**EN**	Module Enable
Active-Low Hard Reset	**RST**	2	RST	INT	15	**INT**	Device Interrupt output
Chip select	**CS**	3	CS	TX	14	NC	
SPI Clock	**SCK**	4	SCK	RX	13	NC	
SPI Master Input Slave Output	**MISO**	5	MISO	SCL	12	NC	
SPI Master Output Slave Input	**MOSI**	6	MOSI	SDA	11	NC	
Power supply	**+3.3V**	7	3.3V	5V	10	NC	
Ground	**GND**	8	GND	GND	9	**GND**	Ground



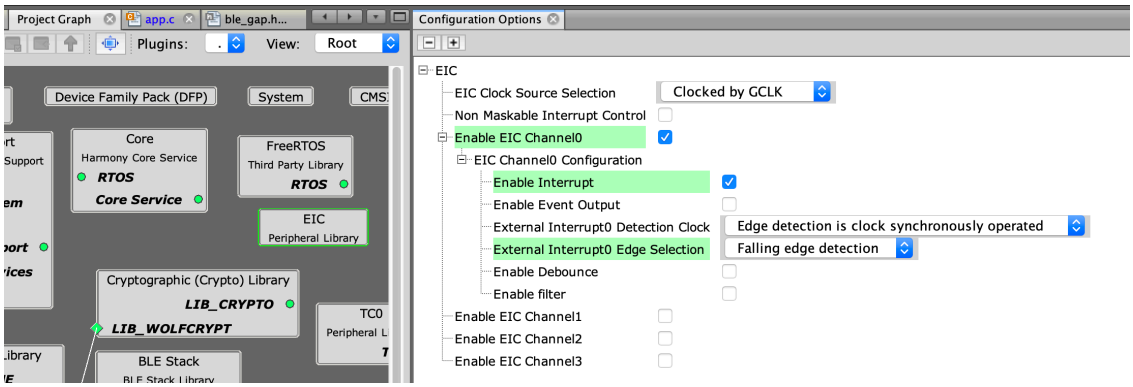


EIC_PIN Configuration





Enable EIC module for Channel 0, Enable Interrupt on Falling Edge!



Configure WINC to use EIC Channel 0