

Prototyping Functions

- Step-by-step Functionality (Demos)
 - I2C/SMBus (Wire)

Joe George, Northeast Digital Field Applications
Texas Instruments
Americas Sales and Marketing

Prototyping Functions

- Step-by-step Functionality (Demos)
 - GP Output (GPIO – General Purpose I/O)->Square Wave->Clock
 - Read A/D
 - I2C/SMBus (Wire)
- Optional WiFi
 - STA (station)
 - AP (access point)
- Optional Energia
- UI
 - Button (GP Input - GPIO, add debounce)
 - LCD Display (“Hello”)
 - Music
- UI - Serial Interface (i.e. Putty for echo “Hello World”)

Example Pin Map – I2C/SMBus



LaunchPad with MSP430G2553

Revision 1.5

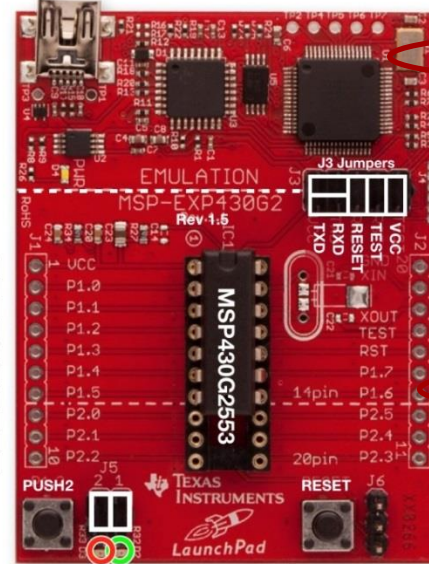
Flash 16 KB
RAM 512 B

Serial	Hardware
ADC	10 bits
Use pins numbers only!	
Default I ² C = (1)	
Software I ² C (1) master only	
PWM 4 or 14 or 19	
PWM 9 or 10	
PWM 12 or 13	

+3.3V				1
RED_LED		A0	P1_0	2
	RXD	A1	P1_1	3
	TXD	A2	P1_2	4
PUSH2		A3	P1_3	5
		A4	P1_4	6
	SCK (B0)	A5	P1_5	7
	CS (B0)		P2_0	8
	SCL (1)		P2_1	9
	SDA (1)		P2_2	10

temperature A10

Rei Vilo, 2012-2018
embeddedcomputing.weebly.com
 version 2.1 2015-09-13



Hardware
Pin number

I ² C
SPI
analogRead() digitalRead() and digitalWrite() digitalRead(), digitalWrite() and analogWrite()

20				GROUND
19	P2_6			XIN
18	P2_7			XOUT
17				TEST
16				RESET
15	P1_7	A7	SDA (0) MOSI (B0)	
14	P1_6	A6	SCL (0) MISO (B0)	GREEN_LED
13	P2_5			
12	P2_4			
11	P2_3			
	GND			
	GND			
	+3.3V			

- Gotta send some I2C commands? (GUI tools nice for eval but not proto)

- <http://www.energia.nu/pinmaps/msp-exp430g2/>

Demo – I2C

- Step-by-step Functionality (Demo) - SMBus (I2C) setup for Battery Charger
 - I2C (Wire Write/Read I2C) – Energia Wire master_writer (with "Wire Slave Receiver" BQ24725) and I2C Bus Analyzer

