

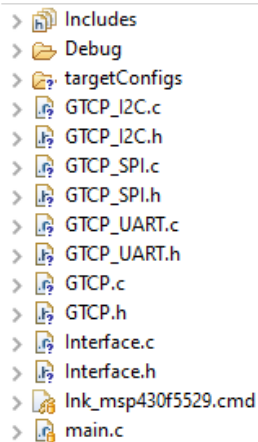
MSP430™ GT-CP Code Library Evaluation Instructions

Getting Started

Preface: This code library only works with the MSP430F5529 and MSP430FR6989 hosts.

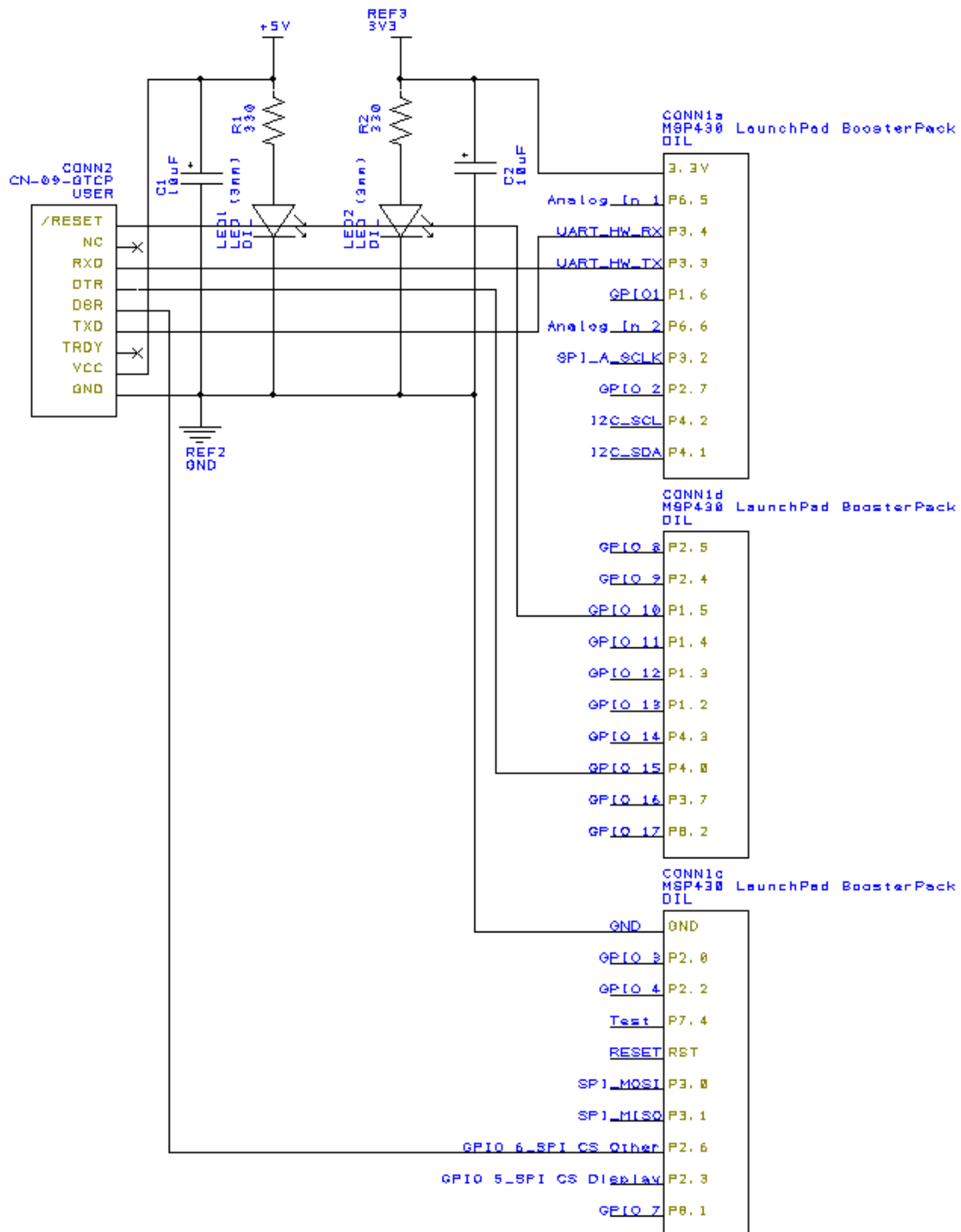
1. **Download** [Code Composer Studio](#) (CCS).
2. **Install** CCS on your workstation.
3. **Launch** CCS.
4. **Create** a new workspace.
5. With your workspace created, **create** a new project by going to **File > New > CCS Project**.
6. In the “New CCS Project” dialog box, **choose** “MSP430F5529” as the **target**.
7. **Use** the most recent compiler version and choose an empty project (with main.c).
8. In the workspace window, **expand** the “main.c” node.
9. **Right click** on your project node in the project explorer window and choose **Add Files...** .
10. **Add** all of the library files to the project.
 - a. Added files should include:
 - i. GTCP_I2C.c
 - ii. GTCP_I2C.h
 - iii. GTCP_SPI.c
 - iv. GTCP_SPI.h
 - v. GTCP_UART.c
 - vi. GTCP_UART.h
 - vii. GTCP.c
 - viii. GTCP.h
 - ix. Interface.c
 - x. Interface.h

11. Your project’s file list should look like this:



12. Connect the GT-CP to the MSP430F5529 host board using one of these three interfaces
 - a. UART

Wiring Diagram with MSP430F5529



UART Wiring Pin Assignments (MSP430F5529)

Serial Interface (CN9)	
GT-CP Pin	MSP430™ Pin
1	P1.5
2	Nothing
3	P3.3
4	P4.0
5	P2.6
6	P3.4
7	Nothing
8	External 5V
9	GND

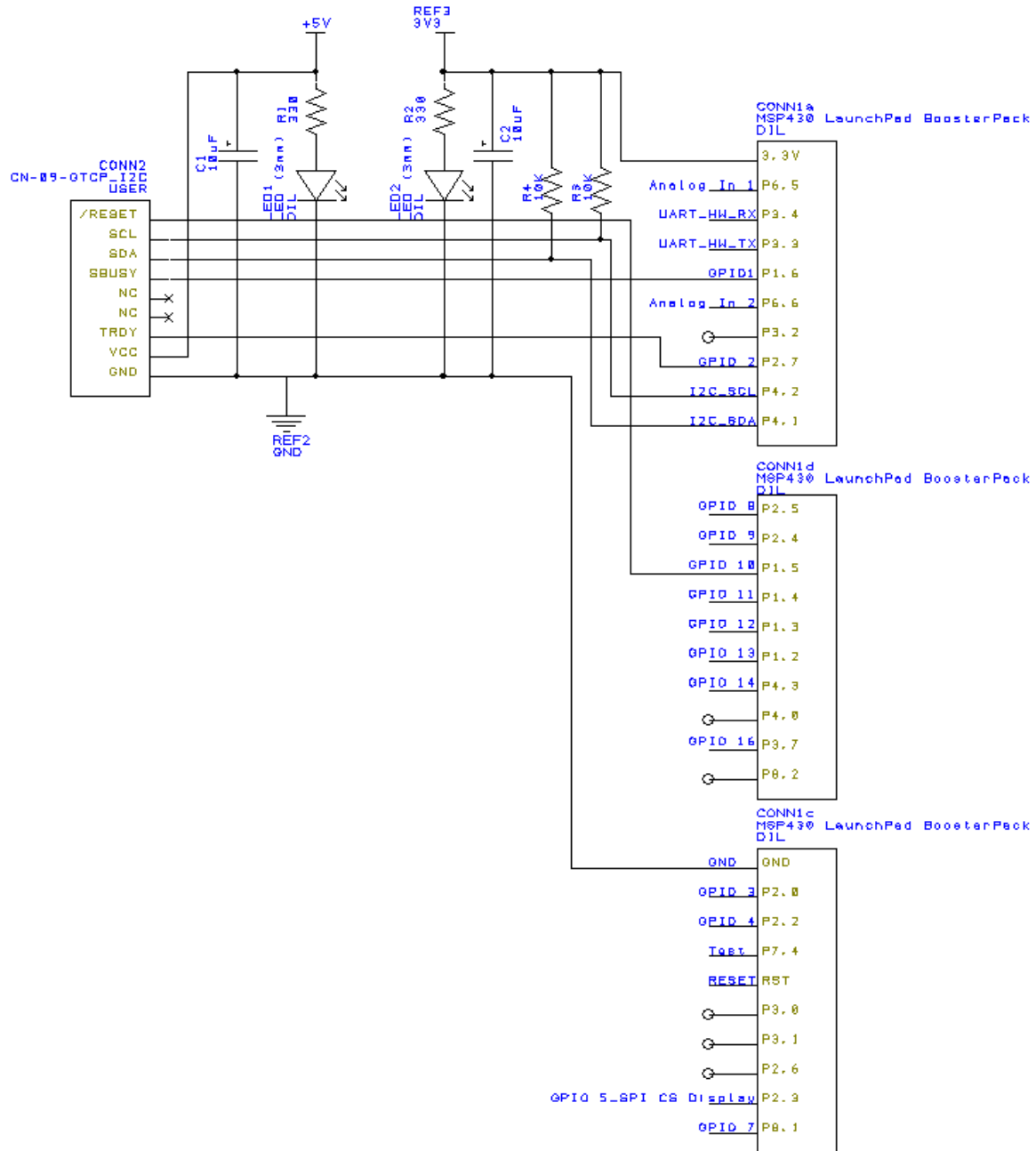
UART Wiring Pin Assignments (MSP430FR6989)

Serial Interface (CN9)	
GT-CP Pin	MSP430™ Pin
1	P2.2
2	Nothing
3	P2.0
4	P4.0
5	P2.6
6	P2.1
7	Nothing
8	External 5V
9	GND

UART Jumper Setting	
Jumper	Setting
J3	OPEN
J4	OPEN
J5	SHORT
J6	SHORT

b. I²C

Wiring Diagram with MSP430F5529



I²C Wiring Pin Assignments (MSP430F5529)

Serial Interface (CN9)	
GT-CP Pin	MSP430™ Pin
1	P1.5
2	P4.2
3	P4.1
4	P1.6
5	Nothing
6	Nothing
7	P2.7
8	External 5V
9	GND

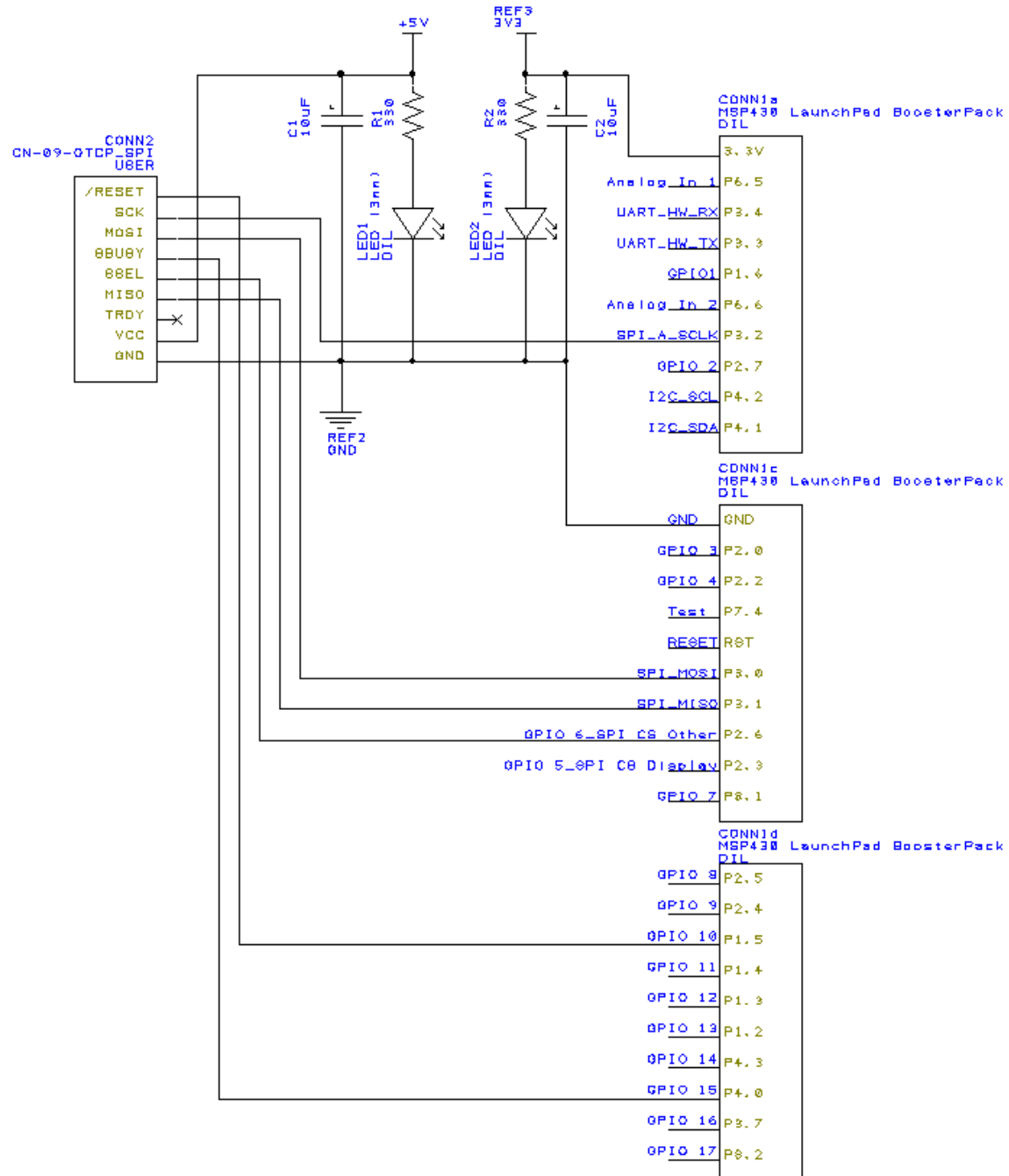
I²C Wiring Pin Assignments (MSP430F5529)

Serial Interface (CN9)	
GT-CP Pin	MSP430™ Pin
1	P2.2
2	P4.1
3	P4.0
4	P1.4
5	Nothing
6	Nothing
7	P1.5
8	External 5V
9	GND

I2C Jumper Setting	
Jumper	Setting
J3	OPEN
J4	OPEN
J5	SHORT
J6	OPEN

c. SPI

Wiring Diagram with MSP430F5529



SPI Wiring Pin Assignments (MSP430F5529)

Serial Interface (CN9)	
GT-CP Pin	MSP430™ Pin
1	P1.5
2	P3.2
3	P3.0
4	P4.0
5	P2.6
6	P3.1
7	Nothing
8	External 5V
9	GND

SPI Wiring Pin Assignments (MSP430F5529)

Serial Interface (CN9)	
GT-CP Pin	MSP430™ Pin
1	P2.2
2	P1.4
3	P1.6
4	P2.7
5	P2.5
6	P1.7
7	Nothing
8	External 5V
9	GND

SPI Jumper Setting	
Jumper	Setting
J3	OPEN
J4	OPEN
J5	OPEN
J6	OPEN

13. You are now ready to program with our GT-CP modules!

Hello World! Program

1. **Add** the following **include** to your **main.c** file.
 - a. `#include "GTCP.h"`
2. **Write** the following **code** in your **main.c** file after the watchdog timer has been stopped.
 - a. `GTCP_start(interface);`
 - i. Be sure to pass in the interface name you wish to use (UART, I²C, or SPI)
 - `GTCP_start(UART);`
 - `GTCP_start(I2C);`
 - `GTCP_start(SPI);`
 - b. `GTCP_printString("Hello World!");`
3. **Save** your **main.c** file.
4. **Right-click** on the **project node** in your **project explorer** and choose **Properties**.
5. Go to **MSP430 Compiler**.
6. **Click** on **"Edit Flags"** and **add "--c99"** to the **flags list**.
7. **Click "OK"**.
8. **Click "Apply and Close"**.
9. **Apply power** to the connected **GT-CP module**.
10. **Connect** your **MSP430™** to your workstation via **USB** and **click** on the **"Debug" button**.
(Looks like a green bug) The program should compile and stop at the beginning of your `main()` function.
11. **Click** on the **"Resume" button** or **press F8** to run your program.
12. You should see "Hello World" on your GT-CP module.

Troubleshooting

1. If you do not see "Hello World" on your module:
 - a. Press the RESET button on the MSP430™.
 - b. Make sure JP1 is open. This allows for the module to take power in from an external source.

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