

Mini-Stack Assembly Example

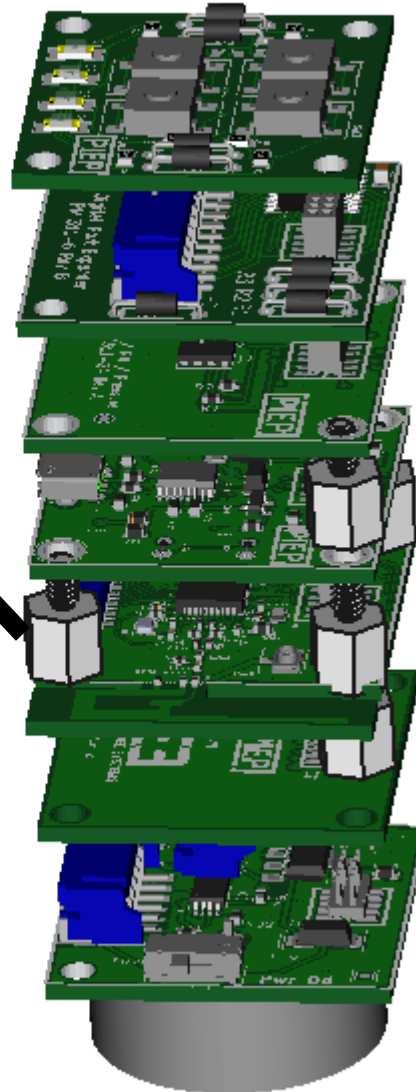
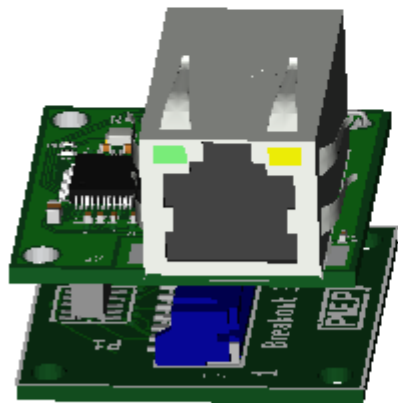


M3X6 Hex Standoff

Remotely Mounted Boards

311-20
Ethernet Bd

311-07
Breakout Bd



311-03 Switch / LED Bd

311-27 Port Expander Bd

311-24 Temp / RH Bd

311-28 USB Bd

212-001 CC2541
Processor Bd

311-07 Breakout Bd

311-29 Battery Bd



EMBEDDED SYSTEMS

Mini-Stack Assembly Example



Top board stack map files (from User Sheets)

Note: Most processor special purpose I/O can also operate as general purpose DIO

CC2541 Top Stacked Boards

311-27 Port Expander (Bottom only)

1	+3.3V	DIO (Reset)*	2
2			4
5	I2C SDA / SDA (3)	I2C SCL / SCL(2)	6
7			8
9	GND	IRQ (P1-2)**	10

Bottom header of port expander interfaces to processor; top header is port expander I/O

311-3 Switch / LED board

1	Vcc	DIO* (sw1)	2
3	DIO (sw2)	DIO* (sw3)	4
5	DIO* (LED1)	DIO (LED2)	6
7	DIO* (LED3)	DIO (ILED4)	8
9	GND	DIO (sw4)	10

311-24 Temp / RH board

1	+3.3V		2
3			4
5	I2C SDA / SDA (3)	I2C SCL / SCL(2)	6
7			8
9	GND		10

311-27 Port Expander (Top only)

1	Vpp Ext+	DIO – P13	2
3	DIO – P10	DIO – P14	4
5	DIO – P11	DIO – P15	6
7	DIO – P12	DIO – P16	8
9	GND	DIO – P17	10

311-29 USB

1	Vcc		2
3			4
5	SCI-RTS*	SCI-CTS*	6
7	SCI-TX	SCI-RX	8
9	GND		10

Pins 5 & 6 CTS / RTS disabled via removal of jumpers R17 & R18; Pins 5 & 6 are available for alternate peripherals

CC2541

1	+3.3V	ADC (P0-0)	2
3	ADC (P0-1)	DIO (P1-0)	4
5	I2C SDA / SDA (3)	I2C SCL / SCL(2)	6
7	SCI2 RX (P1-7)	SCI2 TX (P1-6)	8
9	GND	IRQ (P1-2)	10



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Top Boards composite map files. Note: Port expander board top header is populated with signal lines from port expander; no I/O from processor is on this header.

Port Expander (Top) to Switch Board Interface

	1	Vpp Ext+	DIO – P13	2	Switch 1
Switch 2	3	DIO – P10	DIO – P14	4	Switch 3
LED 1	5	DIO – P11	DIO – P15	6	LED 2
LED 3	7	DIO – P12	DIO – P16	8	LED 4
	9	GND	DIO – P17	10	Switch 4

Peripherals Mapped into CC2541 (Top Header Only)

	1	+3.3V	DIO (Reset)*	2	Port Expander Reset
	3			4	
Temp / RH & Port Expander I2SDA	5	I2C_SDA / SDA (3)	I2C_SCL / SCL(2)	6	Temp / RH & Port Expander I2C SCL
USB RX	7	SCI2_RX (P1-7)	SCI2_TX (P1-6)	8	USB TX
	9	GND	IRQ (P1-2)**	10	Port Expander Interrupt



Mini-Stack Assembly Example



Bottom Stack Mapped Peripherals

CC2541 Bottom

1	+3.3V	ADC(P0-6)	2
3	ADC (P0-7)	DIO (P1-1)	4
5	SPI CLK / PWM (P0-3)	SPI SS/PWM (P0-2)	6
7	SPI MISO/SCI_RX (P0-5)	SPI MOSI/SCI_TX (P0-4)	8
9	GND	IRQ (P1-3)	10

Note: Breakout boards used for remote mounting of Ethernet; breakout board does not use any processor Resources. Breakouts not shown.

311-20 Ethernet

1	+3.3V		2
3	DIO (Rst)	DIO (PMODE2)	4
5	SPI-SCK	SPI-SS	6
7	SPI-MISO	SPI-MOSI	8
9	GND	IRQ	10

Signals used by Ethernet board must be populated on interconnect cable between Breakout boards. For this example; breakout Positions 1,3-9 must be populated; Pin 10 is optional (depending on Ethernet Jumper configuration.) Pin 2 – do not populate.

Battery Board

1	+3.3V		2
3			4
5			6
7			8
9	GND		10

