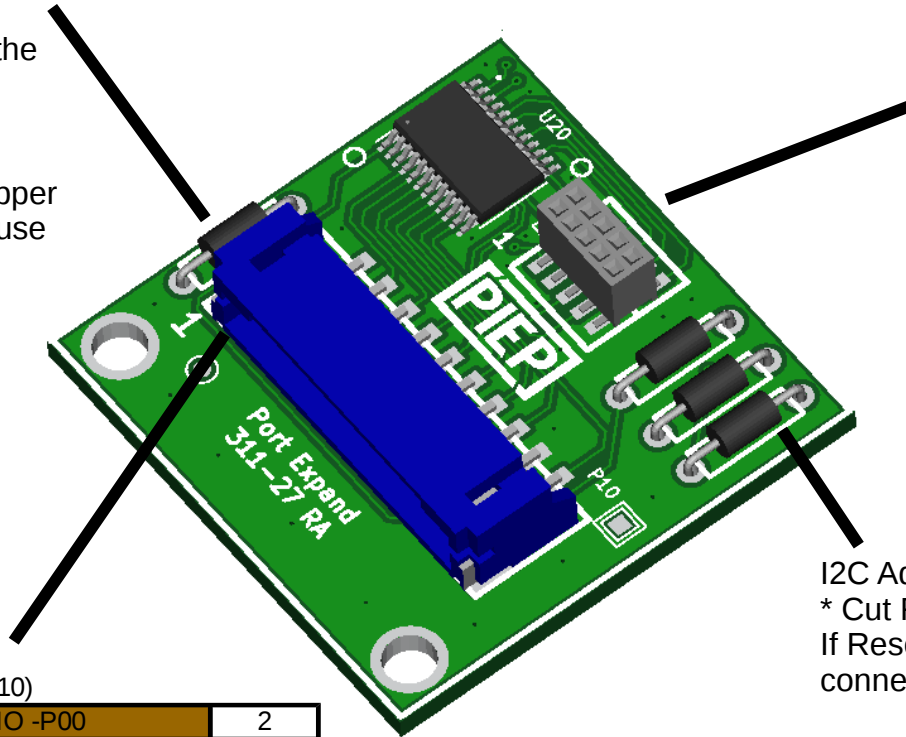




# PN 311-27, Rev A Port Expander Board

+ With R23 intact, Vpp\_Ext is a 3.3V source pin  
 With R23 cut, Vpp\_Ext is the logic supply voltage for digital ports  
 Vpp\_Ext on P10 and top header are not isolated; upper byte and lower byte must use same source voltage



## Stacking Header Pin Assignments

Top

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

Upper byte of port expander output

Bottom

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

I2C Address – 0x20 (ADDR low) or 0x21 (ADDR high)  
 \* Cut R25 for address 0x21. Default is address 0x20  
 If Reset control is not utilized; SPIP pin 2 resource (bottom connector) may be freed by cutting R24

\*\* If device interrupt is not utilized, R26 may be cut to free SPIP pin 10 for other stacked peripherals.

## Supplemental Header (P10)

1	Vpp Ext+	DIO -P00	2
3	DIO -P02	DIO -P01	4
5	DIO -P04	DIO -P03	6
7	DIO -P06	DIO -P05	8
9	GND	DIO -P07	10

Lower byte of port expander

P10 mating connector- SKU 400-007  
 Precrimped Leads – SKU 400-009  
 Additional Standoffs – SKU 400-012

Texas Instruments TCA6416APWR SPI port expander board

PIEP is a copyright of E3 Embedded Systems, LLC and is protected under US Patent 9,870,337



**EMBEDDED SYSTEMS**