Configuration Options and Connection Requirements

Configuration Mode	Heating				Airflow				Zero Cross Detector		Comments
	Typical Power Source	Output Type	TC4 / TC4C Port	Interface Suggestion	Typical Power Source	Output Type	TC4 / TC4C Port	Interface Suggestion	Required?	TC4 / TC4C Port	
CONFIG_PWM	AC Mains	Slow PWM	OT1	SSR Zero Cross type	DC	PWM	IO3	MOSFET MOSFET Driver	No	N/A	- Slow PWM on OT1 - Default 1Hz but adjustable between 1/4Hz to 3.9kHz in user.h - Fast PWM on IO3 - Default 3.9kHz but adjustable between 30.64Hz and 62.5kHz - Also allows slow PWM output on OT2 (same frequency as OT1)
CONFIG_PAC2	AC Mains	ICC / Burst	OT1	SSR Zero Cross type	AC Mains	PAC	OT2	SSR Random Fire type	Yes	IO2	Also allows fast PWM output on IO3 - Default 3.9kHz but adjustable between 30.64Hz and 62.5kHz
CONFIG_PAC3	AC Mains	ICC / Burst	OT1	SSR Zero Cross type	AC Mains	PAC	OT2	SSR Random Fire type	Yes	IO3	
CONFIG_PAC2_IO3HTR	Gas	PWM	IO3	Solenoid interface circuit	AC Mains	PAC	OT2	SSR Random Fire type	Yes	IO2	Fast PWM on IO3 - Default 3.9kHz but adjustable between 30.64Hz and 62.5kHz

PWM = Pulse Width Modulation
PAC = Phase Angle Control
ICC = Integral Cycle Control
SSR = Solid State Relay

Configuration Option Usage Examples

CONFIG_PWM	**Small Popcorn Machine Roaster** - AC heating element connected to OT1 via a standard zero cross SSR - DC fan connected to IO3 port via an appropriate driver circuit	**Gas Powered Roaster** - Gas heating with gas valve connected to OT1 via an appropriate valve driver circuit - OT1 PWM frequency adjusted to 2.2kHz - DC fan connected to IO3 port via an appropriate driver circuit
CONFIG_PAC2	**Electric Air Roaster** - AC heating element connected to OT1 via standard zero cross SSR - AC Fan/Blower connected to OT2 via a random fire SSR - Zero cross detector connected to IO2	**Electric Drum Roaster** - AC heating element connected to OT1 via standard zero cross SSR - AC Fan/Blower connected to OT2 via a random fire SSR - Zero cross detector connected to IO2 - Optional DC drum rotation motor connected to IO3 via an appropriate driver circuit
CONFIG_PAC3	**Electric Air Roaster** - AC heating element connected to OT1 via standard zero cross SSR - AC Fan/Blower connected to OT2 via a random fire SSR - Zero cross detector connected to IO3	
CONFIG_PAC2_IO3HTR	**Gas Powered Roaster** - Gas heating with gas valve connected to IO3 via valve driver circuit - AC Fan/Blower connected to OT2 via a random fire SSR - Zero cross detector connected to IO2	