

Group Register Bits

Global	0x41200000	31..24 ext_pins_n Control external Pins of the Rpi	23..16 ext_pins_b	15..8 N/A	7..6 <i>see PLL1</i>	5..3 SEL B	2..0 SEL A
						Output settings:	
						000	PLL1
						001	PLL2
						010	PLL1 + PLL2
						011	PLL1 + IN2
						100	IN1
						101	IN2
						110	LI1_X
						111	LI1_Y

PLL1	0x41200000	31..8 <i>see Global</i>	7 2nd Harmonic out: f / 2f	6 PID_EN enables the PI loop	5..0 <i>see Global</i>	For the weights W_A, W_B: W_A = A sin(phi) , W_B = A sin(phi) Then the output wave is A sin(wt+phi)
	0x41200008	31..16 N/A	15..8 W_A outwave = W_A*cos + W_B*sin 2's complement	7..0 W_B		
	0x41210000	31..0 Kp*2^16 2's complement				
	0x41210008	31..0 Ki * 2^16 2's complement				
	0x41220000	31..0 f0 * 2^32/31.25e6  2's complement				
	0x41220008	31..0 BW * 2^32/31.25e6 2's complement				Demodulation filter configuration. Order between 1 and 8 ("000" and "111"). Alpha = exp(-1/TC/122.07kHz) = exp(-2pi fn/122.07kHz). TC = 1/(2pi fn) are the filter bandwidth as used in ZI instrum. Note, both Order and Alpha are positive, so no 2's complement
	0x41230000	31..27 N/A	26..10 Alpha*2^17 unsigned	9..3 N/A	2..0 Order-1 unsigned	

PLL2	0x41300000	<i>Identical to PLL1, just add 0x00100000 to all addresses</i>				
	0x41300008					
	0x41310000					
	0x41310008					
	0x41320000					
	0x41320008					
	0x41330000					