

<b>Device</b>	LEGO Controller: connected via JP1 or JP2							
<b>Input/Output</b>	both							
<b>Address Base</b>	JP1: 0x10000060; JP2: 0x0x10000070							
<b>Address Map: Value Mode</b>	<b>Address</b>	<b>R/W</b>	<b>Description</b>					
	base	R/W	Data Register:					
			<b>Description:</b>	<b>Sensor Value</b>				
			<b>Bit:</b>	31	30	29	28	27
			<b>Usage:</b>	-	sensor read value			
	base+4	W	Direction Register: 0x07f557ff Bits 26 down to 21 and 18,16,14,12,10 down to 0 must be set to 0's <b>inputs</b> . Bit 19,17,15,13,11 are used to detect if sensor data is valid. <b>Sens</b>					
	Note: load=0, don't-load=1; state=0, value=1; forward=0, reverse=1; on=0, off=1 Note2: the actual direction of a motor depends on the polarity that you connect it							
	<b>Address</b>	<b>R/W</b>	<b>Description</b>					
	base	R/W	Data Register:					
			<b>Description:</b>	<b>Sensor Value</b>				
<b>Bit:</b>			31	30	29	28	27	
<b>Usage:</b>			above/ below	above/ below	above/ below	above/ below	above/ below	
base+4	W	Direction Register: 0x07f55fff Bits 18,16,14,12,9 down to 0 must be set to 1's <b>outputs</b> . Bits 30 down to 27,19,17,15,13,11 must be set to 0's <b>inputs</b> .						
base+8	W	Interrupt Mask Register enables interrupts for each pin (the corre						
base+12	R/W	Edge Capture Register, a bit is high if corresponding pin change						
Note: above=1, below=0; load=0, don't-load=1; state=0, value=1; forward=0, reverse=								
Note2: the actual direction of a motor depends on the polarity that you connect it								

<b>Interrupts for State Mode</b>	<b>Enable</b>	Set bits in Interrupt Mask Register that correspond to data bits you want to interrupt on
	<b>Triggered</b>	When an interrupt enabled input data bit changes value
	<b>IRQ Line</b>	JP1: 11; JP2: 12
	<b>Acknowledge</b>	Write to Edge Capture Register (which clears it)
<b>Reference</b>	<a href="#">lego manual</a>	

or Values and control bits							Ready sensor4	Sensor4
Threshold value				Load Threshold	Mode	Unused	Ready sensor4	Sensor4
26	25	24	23	22	21	20	19	18
-	-	-	-	-	state/ value	-	valid/ not valid	on/ off

1's outputs

or data is valid when low

or Values and control bits							Ready sensor4	Sensor4
Threshold value				Load Threshold	Mode	Unused	Ready sensor4	Sensor4
26	25	24	23	22	21	20	19	18
threshold write value				load/ don't load	state/ value	-	valid/ not valid	on/ off

esponding pins should be configured as input). Eg., set to 0xf8000000 to allow interrupts on any s  
d its value. Writing here clears all bits.

=1; on=0, off=1

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Sensor Control								
Ready sensor3	Sensor3	Ready sensor2	Sensor2	Ready sensor1	Sensor1	Ready sensor0	Sensor0	Mot
17	16	15	14	13	12	11	10	9
valid/ not valid	on/ off	valid/ not valid	on/ off	valid/ not valid	on/ off	valid/ not valid	on/ off	for/ rev

Sensor Control								
Ready sensor3	Sensor3	Ready sensor2	sensor2	Ready sensor1	Sensor1	Ready sensor0	Sensor0	Mot
17	16	15	14	13	12	11	10	9
valid/ not valid	on/ off	valid/ not valid	on/ off	valid/ not valid	on/ off	valid/ not valid	on/ off	for/ rev

sensor

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