	HS CM4 Pinout								
	Unit	Name	Pin Number	Connection Type	Conversion	Description			
	Camera	CAM_IO1	24	connection type		15 pinout for Raspberry Pi Camer	•		
	Camera	CAM_IO1			No	15 pinout for Raspberry PI Camer	a		
		CAM_IO0	48		No				
		CAM_SCL	35		No	NOTE: cm4io datasheet schemati	c shows 2k pullups on lir	nes	
		CAM_SDA	36		No	check page 10, J6			
		CAM0_D0_N	128		No	-			
		CAM0_D0_P	130		No				
		CAM0_D1_N	134		No				
		CAM0_D1_P	136		No				
		CAM0_C_N	140		No				
		CAMO_C_P	142						
					No				
	Ethernet	TRD0_P	12		No	Ethernet connection for serial		https://www.ertyu.org/steven_nikke	el/ethernetcables.html
		TRD0_N	10		No				
		TRD1 P	4		No				
		TRD2_P	11		No				
		TRD2_N	9		No				
		TRD1_N	6		No				
		TRD3_P	3		No				
		TRD3_N	5		No				
	Accelerometer		38		SPI or I2C	GPIO11 / low	Can be either SPI or I2		Potential issue: https://raspberrypi.stackexchange.com/questions/87115/what-is-the-mode-supposed-to-be-for-ce0-and-ce1-when-spi-is-enabled
	Accelerometer						Can be either SPI or IZ	:6	Potential issue: https://raspberrypl.stackexchange.com/questions/a/115/what-is-the-mode-supposed-to-be-tor-ceu-and-cei-when-spi-is-enabled
		SPI_ACCELEROMETER_MIS0		SPI	SPI or I2C	GPIO9 / low			
		SPI_ACCELEROMETER_MOS1	44		SPI or I2C	GPIO10 / low			
		SPI_ACCELEROMETER_CE0_N	39		SPI or I2C	GPIO8 / high			
		SPI_ACCELEROMETER_CE1_N	37	ori	SPI or I2C	GPIO7 / high			
	Output Motors			I2C	I2C to PWM (16)	GPI00	Program ALT0		
		SCL0	80	I2C	I2C to PWM (16)	GPIO1	Program ALT0		
	Speaker	Speaker0		PWM	No	GPIO12 / low			
		Speaker1		PWM	No	GPIO13 / low			
	Lidar 1	SDA0		I2C	program ALT0	GPI00 / high	AKA: SCI0	Information on this topic is on pag	
		SCL0	80	I2C	program ALT0	GPIO1 / high	AKA: DSI0	Cris note: In config.txt set force_e	eprom_read=0
	Lidar 2	SDA0		I2C	I2C	GPI00 / high		_	
		SCL0		12C	program ALT5	GPIO1 / high			
		SCLU	80	120	program AL15	GPIO17 nign			
	Buttons	Button_1 (power/rest feature)	99	Switch	N/A	Refer to CM4 datasheet	ON/OFF	Input. Drive low to power off CM4.	
		Button_2	55	program	N/A	GPIO14 / low		Programmable choose	
					N/A	N/A			
		Button_3		program				Programmable choose	
		Button_4		program	N/A	GPIO16 / low		Programmable choose	
		Button_5	50	program	N/A	GPIO17 / low		Programmable choose	
		Extra choice for buttons	30			GPIO6 / high			
			-						
Old PCB GPI									
Pin#	Name	Description			Old Pin/GPIO	New Pin			
	1 1.8V output	POWER		Cam_SCL	80/SCL0	35/ID_SC	OK - Cris		
	2 3.3V output	POWER		Cam_SDA	82/SDA0	36/ID SD	OK - Cris		
	3 5V input	POWER		oum_ob/t	02.00/10	00.10_00	OIC OILD	0040 10010 1 161	2C so long as camera functions for camera 1 are not used
								SDAU and SCLU can be used for i	2C so long as camera functions for camera if are not used
	7 GPIO14	BUTTON		Lidar_SCL	35/ID_SD	80/SCL0	OK - Cris		
	8 GPIO15	BUTTON		Lidar_SDA	36/ID_SC	82/SDA0	OK - Cris		
	9 GPIO16	BUTTON							
	10 GPIO17	BUTTON							
		BUTTON							
	11 GPIO4								
		DATA (LIDAR)							
	12 GPI05	DATA (LIDAR)							
		DATA (LIDAR)							
	13 GPI06	DATA (LIDAR) BUTTON							
	13 GPIO6 15 Speaker0	DATA (LIDAR) BUTTON SPEAKER							
	13 GPIO6 15 Speaker0 16 Speaker1	DATA (LIDAR) BUTTON SPEAKER SPEAKER							
	<ul><li>13 GPIO6</li><li>15 Speaker0</li><li>16 Speaker1</li><li>18 Power control</li></ul>	DATA (LIDAR) BUTTON SPEAKER SPEAKER POWER							
	13 GPIO6 15 Speaker0 16 Speaker1	DATA (LIDAR) BUTTON SPEAKER SPEAKER POWER							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK	DATA (LIDAR) BUTTON SPEAKER SPEAKER POWER DATA (ACCELEROMETER)							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1	DATA (LIDAR) BUTTON SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (ACCELEROMETER)							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0	DATA (LIDAR) BUTTON SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER)							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER)							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0	DATA (LIDAR) BUTTON SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER)							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N 38 CE1_N	DATA (LIDAR) BUTTON SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER)							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0_N 38 CE1_N 39 SCL	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (DATA (LIDAR)							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N 38 CE1_N	DATA (LIDAR) BUTTON SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER) DATA (ACCELEROMETER)							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0_N 38 CE1_N 39 SCL 40 SDA	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (DATA (LIDAR)							
	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0_N 38 CE1_N 39 SCL 40 SDA	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (DATA (LIDAR)							
lew PCB GP	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0_N 38 CE1_N 39 SCL 40 SDA	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)							
ew PCB GP	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MCS0 37 CE0_N 38 CE1_N 39 SCL 40 SDA	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (DATA (LIDAR)							
ew PCB GP	13 GPIO6 15 Speaker0 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0 N 38 CE1 N 39 SCL 40 SDA	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			Layout for new PCB				
ew PCB GP	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0_N 38 CE1_N 39 SCL 40 SDA	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			1	GND		GND	
ew PCB GP	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0_N 38 CE1_N 39 SCL 40 SDA	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			1				
ew PCB GP	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0_N 38 CE1_N 39 SCL 40 SDA 010 Name 1 GND 2 GND 3 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			1	GND		GND	4
ew PCB GP	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N 38 CEI_N 39 SCL 40 SDA	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			1 3	GND GND		GND GND	4 6
ew PCB GP	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEQ.N 38 CE1_N 39 SCL 40 SDA POLO Name 1 GND 2 GND 3 GND 4 GND 5 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			3 5	GND GND GND		GND GND GND	4 6 8
ew PCB GP	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N 38 CEI_N 39 SCL 40 SDA	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			3 5	GND GND		GND GND	4 6
ew PCB GP	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0_N 38 CE1_N 39 SCL 40 SDA  POO Name 1 GND 2 GND 3 GND 4 GND 4 GND 5 GND 6 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			5	GND GND GND GND GND		GND GND GND GND	4 6 8 8 10 10 10 10 10 10 10 10 10 10 10 10 10
ew PCB GPn #	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N 38 CEI_N 39 SCL 40 SDA  PIO Name 1 GND 2 GND 3 GND 4 GND 5 GND 7 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			1 5 5 7 8	GIND GIND GIND GIND GIND		GND GND GND GND GND	4 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
ew PCB GPn #	13 GPIO6 15 Speaker0 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0_N 38 CE1_N 39 SCL 40 SDA  POOR Name 1 GND 2 GND 3 GND 4 GND 5 GND 6 GND 7 GND 8 GND 8 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			3 5 7 1 1	GND GND GND GND GND GND		GND GND GND GND	4 6 8 8 10 12 14 4 14 14 14 14 14 14 14 14 14 14 14 1
ew PCB GPn #	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N 38 CEI_N 39 SCL 40 SDA  PIO Name 1 GND 2 GND 3 GND 4 GND 5 GND 7 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			3 5 7 1 1	GIND GIND GIND GIND GIND		GND GND GND GND GND	4 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
ew PCB GP n #	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N 38 CEL_N 39 SCL 40 SDA  PIO Name 1 GND 2 GND 3 GND 4 GND 5 GND 6 GND 7 GND 8 GND 7 GND 8 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			3 8 7 8 11	GND GND GND GND GND GND GND GND SPEAKER1		GND	4 6 8 8 10 10 12 14 14 16 16 16 16 16 16 16 16 16 16 16 16 16
ew PCB GP n#	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO, N 38 CE1, N 39 SCL 40 SDA  PION Name 1 GND 2 GND 3 GND 4 GND 5 GND 6 GND 7 GND 8 GND 9 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			5 5 7 8 11 13 14 17	GND		GND GND GND GND GND GND GND GND GND SPEAKER0	4 6 6 8 8 8 8 10 12 12 14 16 16 18 8 18 18 18 18 18 18 18 18 18 18 18 1
ew PCB GP	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CE0_N 38 CE1_N 39 SCL 40 SDA  POR Name 1 GND 4 GND 4 GND 5 GND 6 GND 7 GND 8 GND 9 GND 10 GND 11 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GND		GND GND GND GND GND GND GND GND SPEAKER0 IZC LIDAR SDA 0	4 6 6 8 8 8 10 10 12 14 16 18 18 18 18 18 18 18 18 18 18 18 18 18
ew PCB GP	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO, N 38 CE1, N 39 SCL 40 SDA  PION Name 1 GND 2 GND 3 GND 4 GND 5 GND 6 GND 7 GND 8 GND 9 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GND		GND GND GND GND GND GND GND GND GND SPEAKER0	4 6 6 8 8 8 10 10 12 14 16 18 18 18 18 18 18 18 18 18 18 18 18 18
ew PCB GP	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N 38 CEI_N 39 SCL 40 SDA  PIO Name 1 GND 2 GND 3 GND 4 GND 5 GND 6 GND 7 GND 8 GND 9 GND 10 GND 11 GND 11 GND 11 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			1 5 7 8 1 11 15 11 11 12 2	GND GND GND GND GND GND SPEAKER1 GPI016 LIDAR_SCL3 IZC_LIDAR_SCL_0		GND GND GND GND GND GND GND GND GPO GPO GPO SPEARER0 SPEARER0 SPEACELEROMETER_SCLK SPLACELEROMETER_SCLK	4 6 6 8 10 10 10 12 14 14 16 18 18 12 22 1 10 10 10 10 10 10 10 10 10 10 10 10 1
ew PCB GP in #	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MIS0 37 CE0 N 38 CE1 N 39 SCL 40 SDA POR Name 1 GMD 2 GMD 3 GMD 4 GMD 5 GMD 6 GMD 7 GMD 8 GMD 9 GMD 10 GMD 11 GMD 12 GMD 11 GMD	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			1 5 7 6 1 1 13 14 12 12 22	GND GND GND GND GND GND GND GND SPEAKER1 GPID06 LIDAR_SCLS LIC_LIDAR_SCL_0 SPL_ACCELEROMETER_CE1_N		GND GND GND GND GND GND GND GPIOG SPEAKERO 3C_LIDAR_SDA_0 SPL_ACCELEROMETER_NISS SPL_ACCELEROMETER_NISS SPL_ACCELEROMETER_NISS	4 6 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
tew PCB GPin #	13 GPIO6 15 Speaker1 16 Speaker1 18 Power control 34 SCLK 35 MOS1 36 MISO 37 CEO_N 38 CEI_N 39 SCL 40 SDA  PIO Name 1 GND 2 GND 3 GND 4 GND 5 GND 6 GND 7 GND 8 GND 9 GND 10 GND 11 GND 11 GND 11 GND	DATA (LIDAR) BUTTON SPEAKER SPEAKER SPEAKER POWER DATA (ACCELEROMETER) DATA (LIDAR)			1 5 7 6 1 1 13 14 12 12 22	GND GND GND GND GND GND GND SPEAKERI GPIOTE LIDAR SCL3 SP_ACCELEROMETER_CE1_N SP_ACCELEROMETER_CE0_N		GND GND GND GND GND GND GND GND GPO GPO GPO SPEARER0 SPEARER0 SPEACELEROMETER_SCLK SPLACELEROMETER_SCLK	4 6 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8

16 GPI06			29	LIDAR_SDA3	GPIO14	30
17 GPIO16			31	POWER		32
18 SPEAKER0			33	3.3V 3.3V 3.3V	3.3V	34
19 GPIO5			35		3.3V	36
20 I2C_LIDAR_	SDA_0		37		3.3V	38
21 I2C_LIDAR_			39	5V	5V	40
	EROMETER_SCLK					
23 SPI_ACCELI	EROMETER_CE1_N					
	EROMETER_MIS0					
	EROMETER_CE0_N					
	EROMETER_MOS1					
27 GPI017						
28 GPIO15						
29 GPIO4						
30 GPIO14						
31 POWER						
32 3.3V						
33 3.3V						
34 3.3V						
35 3.3V						
36 3.3V						
37 3.3V						
38 3.3V						
39 5V						
40 5V						
Version 2 I/O Board pinout						
	Pin Name (Left)	Pin Name (Right)				
	5V	5V				
	3.3V	3.3V				
	3.3V	3.3V				
	3.3V	3.3V				
	3.3V	3.3V				
	GPIO14 (Button)					