

Group 40 DPHS CM4 Pinout									
Unit	Name	Pin Number	Connection Type	Conversion	Description				
Camera	CAM_IO1	24	No	No	15 pinout for Raspberry Pi Camera				
	CAM_IO0	48	No	No					
	CAM_SCL	35	No	No	NOTE: cm4io datasheet schematic shows 2k pullups on lines				
	CAM_SDA	36	No	No	check page 10, J6				
	CAM0_D0_N	128	No	No					
	CAM0_D0_P	130	No	No					
	CAM0_D1_N	134	No	No					
	CAM0_D1_P	136	No	No					
	CAM0_C_N	140	No	No					
	CAM0_C_P	142	No	No					
Ethernet	TRD0_P	12	No	No	Ethernet connection for serial		https://www.erbyu.org/steven_nikke/ethernetcables.html		
	TRD0_N	10	No	No					
	TRD1_P	4	No	No					
	TRD2_P	11	No	No					
	TRD2_N	9	No	No					
	TRD1_N	6	No	No					
	TRD3_P	3	No	No					
	TRD3_N	5	No	No					
Accelerometer	SPI_ACCELEROMETER_SCL	38 SPI	SPI or I2C	GPI011 / low		Can be either SPI or I2C	Potential issue: https://raspberrypi.stackexchange.com/questions/87115/what-is-the-mode-supposed-to-be-for-ce0-and-ce1-when-spi-is-enabled		
	SPI_ACCELEROMETER_MISO	40 SPI	SPI or I2C	GPI09 / low					
	SPI_ACCELEROMETER_MOS1	44 SPI	SPI or I2C	GPI010 / low					
	SPI_ACCELEROMETER_CE0_N	39 SPI	SPI or I2C	GPI08 / high					
	SPI_ACCELEROMETER_CE1_N	37 SPI	SPI or I2C	GPI07 / high					
Output Motors	SDA0	82	I2C	I2C to PWM (16)	GPI00	Program ALT0			
	SCL0	80	I2C	I2C to PWM (16)	GPI01	Program ALT0			
Speaker	Speaker0	31 PWM	No	GPI012 / low					
	Speaker1	28 PWM	No	GPI013 / low					
Lidar 1	SDA0	82	I2C	program ALT0	GPI00 / high	AKA: SCIO	Information on this topic is on page 11 of datasheet		
	SCL0	80	I2C	program ALT0	GPI01 / high	AKA: DSIO	Cris note: In config.txt set force_eeeprom_read=0		
Lidar 2	SDA0	82	I2C	I2C	GPI00 / high				
	SCL0	80	I2C	program ALT5	GPI01 / high				
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	GPI014 / low		Programmable choose		
	Button_3	51	program	N/A	N/A		Programmable choose		
	Button_4	29	program	N/A	GPI016 / low		Programmable choose		
	Button_5	50	program	N/A	GPI017 / low		Programmable choose		
	Extra choice for buttons	30			GPI06 / high				
Old PCB GPIO									
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					SDA0 and SCL0 can be used for I2C so long as camera functions for camera 1 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							
11	GPIO4	DATA (LIDAR)							
12	GPIO5	DATA (LIDAR)							
13	GPIO6	BUTTON							
15	Speaker0	SPEAKER							
16	Speaker1	SPEAKER							
18	Power control	POWER							
34	SCLK	DATA (ACCELEROMETER)							
35	MOS1	DATA (ACCELEROMETER)							
36	MISO	DATA (ACCELEROMETER)							
37	CE0_N	DATA (ACCELEROMETER)							
38	CE1_N	DATA (ACCELEROMETER)							
39	SCL	DATA (LIDAR)							
40	SDA	DATA (LIDAR)							
New PCB GPIO									
Pin #	Name	Description							
1	GND			Layout for new PCB					
2	GND			1	GND		GND	2	
3	GND			3	GND		GND	4	
4	GND			5	GND		GND	6	
5	GND			7	GND		GND	8	
6	GND			9	GND		GND	10	
7	GND			11	GND		GND	12	
8	GND			13	GND		GND	14	
9	GND			15	SPEAKER1		GPI06	16	
10	GND			17	GPIO16		SPEAKER0	18	
11	GND			19	LIDAR_SCL3		I2C_LIDAR_SDA_0	20	
12	GND			21	I2C_LIDAR_SCL_0		SPI_ACCELEROMETER_SCLK	22	
13	GND			23	SPI_ACCELEROMETER_CE1_N		SPI_ACCELEROMETER_MISO	24	
14	GND			25	SPI_ACCELEROMETER_CE0_N		SPI_ACCELEROMETER_MOS1	26	
15	SPEAKER1			27	GPIO17		GPIO15	28	

16	GPIO6				29	LIDAR_SDA3		GPIO14	30
17	GPIO16				31	POWER		3.3V	32
18	SPEAKER0				33	3.3V		3.3V	34
19	GPIO5				35	3.3V		3.3V	36
20	I2C_LIDAR_SDA_0				37	3.3V		3.3V	38
21	I2C_LIDAR_SCL_0				39	5V		5V	40
22	SPI_ACCELEROMETER_SCLK								
23	SPI_ACCELEROMETER_CE1_N								
24	SPI_ACCELEROMETER_MISO								
25	SPI_ACCELEROMETER_CE0_N								
26	SPI_ACCELEROMETER_MOS1								
27	GPIO17								
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)								