3.6.2 2x20 GPIO Expansion Headers

The board has two 40-pin expansion headers. Each header has 36 user pins connected directly to the Cyclone V SoC FPGA. It also comes with DC +5V (VCC5), DC +3.3V (VCC3P3), and two GND pins. Figure 3-18 shows the I/O distribution of the GPIO connector. The maximum power consumption allowed for a daughter card connected to one or two GPIO ports is shown in Table 3-9 and Table 3-10 shows all the pin assignments of the GPIO connector.

GPIO 0 (JP1)

Pin Name	Signal	#			#	Signal	Pin Name
PIN_V12	GPIO_0[0]	1			2	GPIO_0[1]	PIN_AF7
PIN_W12	GPIO_0[2]	3			4	GPIO_0[3]	PIN_AF8
PIN_Y8	GPIO_0[4]	5			6	GPIO_0[5]	PIN_AB4
PIN_W8	GPIO_0[6]	7			8	GPIO_0[7]	PIN_Y4
PIN_Y5	GPIO_0[8]	9			10	GPIO_0[9]	PIN_U11
	5V	11			12	**GND**	
PIN_T8	GPIO_0[10]	13			14	GPIO_0[11]	PIN_T12
PIN_AH5	GPIO_0[12]	15			16	GPIO_0[13]	PIN_AH6
PIN_AH4	GPIO_0[14]	17			18	GPIO_0[15]	PIN_AG5
PIN_AH3	GPIO_0[16]	19			20	GPIO_0[17]	PIN_AH2
PIN_AF4	GPIO_0[18]	21			22	GPIO_0[19]	PIN_AG6
PIN_AF5	GPIO_0[20]	23			24	GPIO_0[21]	PIN_AE4
PIN_T13	GPIO_0[22]	25			26	GPIO_0[23]	PIN_T11
PIN_AE7	GPIO_0[24]	27			28	GPIO_0[25]	PIN_AF6
	3.3V	29			30	**GND**	
PIN_AF9	GPIO_0[26]	31			32	GPIO_0[27]	PIN_AE8
PIN_AD10	GPIO_0[28]	33			34	GPIO_0[29]	PIN_AE9
PIN_AD11	GPIO_0[30]	35			36	GPIO_0[31]	PIN_AF10
PIN_AD12	GPIO_0[32]	37			38	GPIO_0[33]	PIN_AE11
PIN_AF11	GPIO_0[34]	39			40	GPIO_0[35]	PIN_AE12

GPIO 1 (JP7)

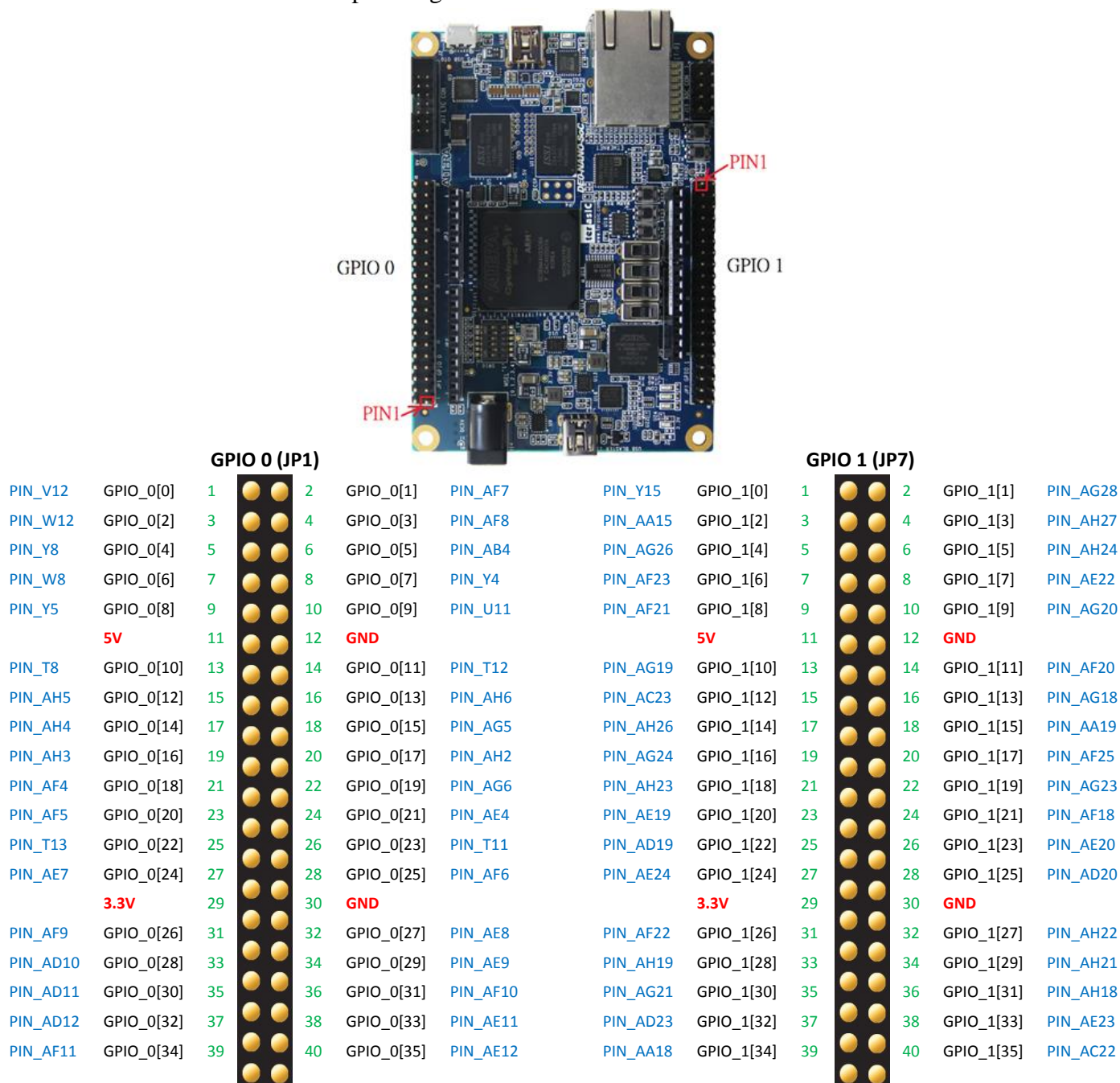| Pin Name	Signal	#			#	Signal	Pin Name
PIN_Y15	GPIO_1[0]	1			2	GPIO_1[1]	PIN_AG28
PIN_AA15	GPIO_1[2]	3			4	GPIO_1[3]	PIN_AH27
PIN_AG26	GPIO_1[4]	5			6	GPIO_1[5]	PIN_AH24
PIN_AF23	GPIO_1[6]	7			8	GPIO_1[7]	PIN_AE22
PIN_AF21	GPIO_1[8]	9			10	GPIO_1[9]	PIN_AG20
	5V	11			12	**GND**	
PIN_AG19	GPIO_1[10]	13			14	GPIO_1[11]	PIN_AF20
PIN_AC23	GPIO_1[12]	15			16	GPIO_1[13]	PIN_AG18
PIN_AH26	GPIO_1[14]	17			18	GPIO_1[15]	PIN_AA19
PIN_AG24	GPIO_1[16]	19			20	GPIO_1[17]	PIN_AF25
PIN_AH23	GPIO_1[18]	21			22	GPIO_1[19]	PIN_AG23
PIN_AE19	GPIO_1[20]	23			24	GPIO_1[21]	PIN_AF18
PIN_AD19	GPIO_1[22]	25			26	GPIO_1[23]	PIN_AE20
PIN_AE24	GPIO_1[24]	27			28	GPIO_1[25]	PIN_AD20
	3.3V	29			30	**GND**	
PIN_AF22	GPIO_1[26]	31			32	GPIO_1[27]	PIN_AH22
PIN_AH19	GPIO_1[28]	33			34	GPIO_1[29]	PIN_AH21
PIN_AG21	GPIO_1[30]	35			36	GPIO_1[31]	PIN_AH18
PIN_AD23	GPIO_1[32]	37			38	GPIO_1[33]	PIN_AE23
PIN_AA18	GPIO_1[34]	39			40	GPIO_1[35]	PIN_AC22

Figure 3-18 GPIO Pin Arrangement

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User Manual

26

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