5.0 Registers List

The optical heart rate detection sensor can be programmed through registers and heart rate relational data can be read from registers. All registers not listed are reserved, and should never be written by firmware. Note that the user should write address 0x09 with 0x5A if he/she would like to modify the value of register. Besides, the user should write address 0x7F with 0x01 if he/she would like to modify the value of Bank1 register and write address 0x7F with 0x00 to return to Bank0.

Table 8. Register Bank 0

Note: Switch to Register Bank-0 by writing 0x00 to Reg-0x7F

Address	Register Name	Access	Reset	Data Type
0x00	Product_ID1	R	0x30	Eight bits number for the upper 8 bits of Product Identifier, PID[11:4]
0x01	Product_ID2	R	0xDX	Eight bits number with MSB [7:4] for the lower 4 bits of Product Identifier, PID[3:0], while LSB[3:0] is the Chip Version Identifier, VID[3:0]
0x05	Operation_Mode	R/W	0xB8	Bit field
0x06	Configuration	R/W	0x02	Bit field
0x09	Write_Protect	R/W	0x00	Bit field
0x0A	Sleep1_Setting	R/W	0x21	Bit field
0x0B	Enter_Time	R/W	0x37	Bit field
0x0C	Sleep2_Setting	R/W	0x71	Bit field
0x20	AE_EnH	R/W	0x0F	Bit field
0x32	Exposure_Time_L	R	-	Bit field
0x33	Exposure_Time_H	R	-	Bit field
0x4D	Touch_Resolution	R/W	0x1A	Bit field
0x59	Touch_Detection	R	-	Bit field

Table 9. Register Bank 1

Note: Switch to Register Bank 1 by writing 0x01 to Reg0x7F

Address	Register Name	Access	Default	Data Type
0x1A	HR_Data_Algo_A	R	-	Eight bits unsigned integer
0x1B	Frame_Average	R	-	Eight bits unsigned integer
0x1C	HR_Data_Algo_C	R	-	Eight bits unsigned integer
0x23	Touch_TH	R/W	0x28	Bit field
0x25	Touch_TH_S_L	R/W	0x00	Bit field
0x26	Touch_TH_S_H	R/W	0x02	Bit field
0x38	LED_Step	R	0xF2	Bit field
0x64	HR_Raw Data_A	R	-	Eight bits unsigned integer
0x65	HR_Raw Data_B	R	-	Eight bits unsigned integer
0x66	HR_Raw Data_C	R	-	Eight bits unsigned integer
0x67	HR_Raw Data_D	R	-	Eight bits unsigned integer
0x68	HR_Data_Ready	R	-	Eight bits unsigned integer