

ACT82120 Register Definition

Abstract

This application note identifies the ACT82120 internal registers that help make this IC flexible and configurable for many applications. This is the initial released version therefore some registers might be changed in the future.

Introduction

The ACT82120 provides a complete one cell charging ecosystem optimized for portable electronic devices in a single highly integrated PMIC. This IC combines a 1.5A JEITA switching battery charger with integrated VBAT control MOSFET plus two low IQ LDOs, push-button input, and four 25mA LED drivers.

Register Types

The ACT82120 ICs contain the following register types.

Basic Volatile - Customer R/W (Read and Write), RO (Read only) and RC (Read to Clear). The customer can modify these register values to change IC functionality. Any changes to these registers are lost when power is recycled. The default values are fixed and cannot be changed.

Basic Non-Volatile - Customer R/W and RO. The customer can modify these register values to change IC functionality. Any changes to these registers are lost when power is recycled. The default values can be modified at the factory to optimize IC functionality for specific applications. Please consult Sales@Qorvo.com for custom options and minimum order quantities.

The ACT82120 contains four major register spaces.

MASTER REGISTERS	0x00h to 0x14h
LDO Reg	0x20h to 0x23h
APSC Reg	0x40h to 0x79h
LED Reg	0x80h to 0xF0h

Register Map Overview

The following table shows an overview of the ACT82120 register map.

ADDR (HEX)	7	6	5	4	3	2	1	0
Master Registers								
00	VSYS_OV_STAT	VSYS_OK_STAT	TSHUT_STAT	TWARN_STAT	VAO_UV_STAT	ACTIVE	SHIPMODE_EXIT	PB_STAT
01	VSYS_OV	VSYS_OK	TSHUT	TWARN	VAO_UV	RFU	nPB_DET_INT	PB_INT
02	VSYS_OV_MSK	VSYS_OK_MSK	TSHUT_MSK	TWARN_MSK	VAO_UV_MSK	RFU	nPB_DET_INT_MSK	PB_INT_MSK
03	PB_DISABLE_CONFIG	RFU			VSYSMON[3:0]			
04	PB_waittimer_T4[1:0]		PB_waittimer_T3[1:0]		PB_waittimer_T2[1:0]		PB_waittimer_T1[1:0]	
05	DIS_VIN_SHIPMODE	DIS_PB_SHIPMODE	DIS_DEEPSM	PD_CHRG_DIS	PU_CHRG_DIS	PU_EN_LDO1	PU_EN_LDO2	PU_EN_LED
0F	INTADR[7:0]							
10	Deep_SM_key[7:0]							
11	PASSWD[7:0]							
12	DIE_BASE		DIE_METAL		RFU		DEBUG_MODE	FACTORY_MODE
13	RFU							
14	RFU							

ADDR (HEX)	7	6	5	4	3	2	1	0
LDO Registers								
20	LDO1_OK_STAT	LDO2_OK_STAT	LDO2_UV	LDO2_OV	LDO2_ILIM	LDO1_UV	LDO1_OV	LDO1_ILIM
21	ON_LDO1	ON_LDO2	LDO2_UV_MSK	LDO2_OV_MSK	LDO2_ILIM_MSK	LDO1_UV_MSK	LDO1_OV_MSK	LDO1_ILIM_MSK
22	HICUP_TIMER[1:0]		LDO1_VSET[5:0]					
23	DIS_PD	EN_HICUP	LDO2_VSET[5:0]					

ADDR (HEX)	7	6	5	4	3	2	1	0
APSC Registers								
40	RFU		VIN_WRLS_OV_STAT	VIN_USB_OV_S TAT	VIN_WRLS_OK_ST AT	VIN_USB_OK_S TAT	LOW_BAT_STAT	BAT_SUP_MO DE_ACTIVE_ STAT
41	CHGINx_vilOOP_ACTIVE	WRLS_HIGHER_ USB	VIN_WRLS_OV	VIN_USB_OV	VIN_WRLS_OK	VIN_USB_OK	LOW_BAT	BAT_DET_CH ANGE
42	CHGINx_vilOOP_ACTIVE_MSK	WRLS_HIGHER_ USB_MSK	VIN_WRLS_OV_ MSK	VIN_USB_OV_M SK	VIN_WRLS_OK_MS K	VIN_USB_OK_M SK	LOW_BAT_MSK	BAT_DET_CH ANGE_MSK
43	RFU		BAT_TEMP<2:0>		BAT_CHG STATUS<3:0>			
44	THERMAL_LOOP_ACITVE	SFTY_TIMER_E XPIRED_INT	BAT_NTC_FAUL T	BATFET_ILIM	VSYS_ILIM	OTF_AUTO_UP DATE	CHG_STAT_CHAN GE	BAT_TEMP_C HANGE
45	THERMAL_LOOP_ACITVE_INT_MS K	SFTY_TIMER_E XPIRED_INT_MS K	BAT_NTC_FAUL T_INT_MSK	BATFET_ILIM_IN T_MSK	VSYS_ILIM_INT_M SK	OTF_AUTO_UP DATE_INT_MSK	CHG_STAT_CHAN GE_INT_MSK	BAT_TEMP_C HANGE_INT_ MSK
46	RFU			ENBFETin_BKOL_ TOF	EN_TBAT	FLT_TIMER_PA USE	TOFLT	EN_ISNS_BA T_ONLY
47	RFU						RECHARG_SET[1:0]	
48	RFU		VTERM_VM[5:0]					
49	RFU		ICHG_VM[5:0]					
4A	RFU				ITERM_VM[3:0]			
4B	VPRE[3:0]				IPRE[3:0]			
4C	VINLIM_USB[1:0]		VTERM_NVM[5:0]					
4D	VINLIM_WRLS[1:0]		ICHG_NVM[5:0]					
4E	IINILIM_USB[2:0]			DIS_THERM_RE G	ITERM_NVM[3:0]			
4F	IINILIM_WRLS[4:0]					DIS BATFET_VPRE	VBATSHRT[1:0]	
50	TQUAL_OTF[1:0]		VSYSL[5:0]					
51	DIS_FLT_TMR	DIS_EOC_TERM	DIS_VINLIM_4S YNC	CHG TIMER SEL	PCHG TIMER SEL	ON_BUCK	SAVEIQ_BATONLY	SHRT_CURR ENT
5F	LS_DRVADJ[1:0]		HS_DRVADJ[1:0]		BK_SLOW_SS_OP T	BK_RCOMP_ADJ[2:0]		
63	ICHG_SCALE_TZ1		ICHG_SCALE_TZ2		ICHG_SCALE_TZ3		ICHG_SCALE_TZ4	
64	ICHG_SCALE_TZ5		VTERM_TZ1		VTERM_TZ2		VTERM_TZ3	
65	VTERM_TZ4		VTERM_TZ5		TempZone_01		TempZone_12	

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66	TempZone_23		TempZone_34		TempZone_45		TempZone_56	
67	VINUV_WRLS[1:0]		ADC_OSR<1:0>		ADC_AFF	ADC_EN	VINUV_USB<1:0>	
6D	ADC_DATA_CH1[11:4]							
6E	ADC_DATA_CH1[3:0]				ADC_DATA_CH2[3:0]			
6F	ADC_DATA_CH2[11:4]							
70	ADC_DATA_CH3[11:4]							
71	ADC_DATA_CH3[3:0]				ADC_DATA_CH4[3:0]			
72	ADC_DATA_CH4[11:4]							
73	ADC_DATA_CH5[11:4]							
74	ADC_DATA_CH5[3:0]				ADC_DATA_CH6[3:0]			
75	ADC_DATA_CH6[11:4]							
76	ADC_DATA_CH7[11:4]							
77	ADC_DATA_CH7[3:0]				ADC_DATA_CH8[3:0]			
78	ADC_DATA_CH8[11:4]							
79	CH1_ADC_DIS	CH2_ADC_DIS	CH3_ADC_DIS	CH4_ADC_DIS	CH5_ADC_DIS	CH6_ADC_DIS	CH7_ADC_DIS	CH8_ADC_DIS

ADDR (HEX)	7	6	5	4	3	2	1	0
LED Registers								
80	LOG_EN	LED_EN	ENG1_EXEC[1:0]		ENG2_EXEC[1:0]		ENG3_EXEC[1:0]	
81	RFU		ENG1_MODE[1:0]		ENG2_MODE[1:0]		ENG3_MODE[1:0]	
82	LED0_PWM[7:0]							
83	LED1_PWM[7:0]							
84	LED2_PWM[7:0]							
85	LED0_CURRENT[7:0]							
86	LED1_CURRENT[7:0]							
87	LED2_CURRENT[7:0]							
88	PWM_HF	ENG1_STEP_SIZE	ENG2_STEP_SIZE	ENG3_STEP_SIZE	RFU	ENG1_INT_MSK	ENG2_INT_MSK	ENG3_INT_MSK
89	RFU				ENG1_PC[3:0]			
8A	RFU				ENG2_PC[3:0]			
8B	RFU				ENG3_PC[3:0]			
8C	RFU					ENG1_INT	ENG2_INT	ENG3_INT
8D	RESET[7:0]							
8E	LED3_PWM[7:0]							
8F	LED3_CURRENT[7:0]							
90	CMD_1_ENG1[15:8]							
91	CMD_1_ENG1[7:0]							
92	CMD_2_ENG1[15:8]							
93	CMD_2_ENG1[7:0]							
94	CMD_3_ENG1[15:8]							
95	CMD_3_ENG1[7:0]							
96	CMD_4_ENG1[15:8]							
97	CMD_4_ENG1[7:0]							
98	CMD_5_ENG1[15:8]							
99	CMD_5_ENG1[7:0]							
9A	CMD_6_ENG1[15:8]							
9B	CMD_6_ENG1[7:0]							
9C	CMD_7_ENG1[15:8]							
9D	CMD_7_ENG1[7:0]							
9E	CMD_8_ENG1[15:8]							
9F	CMD_8_ENG1[7:0]							
A0	CMD_9_ENG1[15:8]							
A1	CMD_9_ENG1[7:0]							
A2	CMD_10_ENG1[15:8]							
A3	CMD_10_ENG1[7:0]							
A4	CMD_11_ENG1[15:8]							
A5	CMD_11_ENG1[7:0]							
A6	CMD_12_ENG1[15:8]							
A7	CMD_12_ENG1[7:0]							
A8	CMD_13_ENG1[15:8]							
A9	CMD_13_ENG1[7:0]							
AA	CMD_14_ENG1[15:8]							
AB	CMD_14_ENG1[7:0]							
AC	CMD_15_ENG1[15:8]							
AD	CMD_15_ENG1[7:0]							
AE	CMD_16_ENG1[15:8]							
AF	CMD_16_ENG1[7:0]							

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B0				CMD_1_ENG2[15:8]
B1				CMD_1_ENG2[7:0]
B2				CMD_2_ENG2[15:8]
B3				CMD_2_ENG2[7:0]
B4				CMD_3_ENG2[15:8]
B5				CMD_3_ENG2[7:0]
B6				CMD_4_ENG2[15:8]
B7				CMD_4_ENG2[7:0]
B8				CMD_5_ENG2[15:8]
B9				CMD_5_ENG2[7:0]
BA				CMD_6_ENG2[15:8]
BB				CMD_6_ENG2[7:0]
BC				CMD_7_ENG2[15:8]
BD				CMD_7_ENG2[7:0]
BE				CMD_8_ENG2[15:8]
BF				CMD_8_ENG2[7:0]
C0				CMD_9_ENG2[15:8]
C1				CMD_9_ENG2[7:0]
C2				CMD_10_ENG2[15:8]
C3				CMD_10_ENG2[7:0]
C4				CMD_11_ENG2[15:8]
C5				CMD_11_ENG2[7:0]
C6				CMD_12_ENG2[15:8]
C7				CMD_12_ENG2[7:0]
C8				CMD_13_ENG2[15:8]
C9				CMD_13_ENG2[7:0]
CA				CMD_14_ENG2[15:8]
CB				CMD_14_ENG2[7:0]
CC				CMD_15_ENG2[15:8]
CD				CMD_15_ENG2[7:0]
CE				CMD_16_ENG2[15:8]
CF				CMD_16_ENG2[7:0]
D0				CMD_1_ENG3[15:8]
D1				CMD_1_ENG3[7:0]
D2				CMD_2_ENG3[15:8]
D3				CMD_2_ENG3[7:0]
D4				CMD_3_ENG3[15:8]
D5				CMD_3_ENG3[7:0]
D6				CMD_4_ENG3[15:8]
D7				CMD_4_ENG3[7:0]
D8				CMD_5_ENG3[15:8]
D9				CMD_5_ENG3[7:0]
DA				CMD_6_ENG3[15:8]
DB				CMD_6_ENG3[7:0]
DC				CMD_7_ENG3[15:8]
DD				CMD_7_ENG3[7:0]
DE				CMD_8_ENG3[15:8]
DF				CMD_8_ENG3[7:0]
E0				CMD_9_ENG3[15:8]
E1				CMD_9_ENG3[7:0]
E2				CMD_10_ENG3[15:8]
E3				CMD_10_ENG3[7:0]
E4				CMD_11_ENG3[15:8]
E5				CMD_11_ENG3[7:0]
E6				CMD_12_ENG3[15:8]
E7				CMD_12_ENG3[7:0]
E8				CMD_13_ENG3[15:8]
E9				CMD_13_ENG3[7:0]
EA				CMD_14_ENG3[15:8]
EB				CMD_14_ENG3[7:0]
EC				CMD_15_ENG3[15:8]
ED				CMD_15_ENG3[7:0]
EE				CMD_16_ENG4[15:8]
EF				CMD_16_ENG3[7:0]
F0	LED3_ENG_SEL[1:0]	LED2_ENG_SEL[1:0]	LED1_ENG_SEL[1:0]	LED0_ENG_SEL[1:0]

MSTR00 Register

Address = 0x00h	Default = 0x00h	Type = Basic Volatile
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BIT	7	6	5	4	3	2	1	0
Name	VSYS_OV_STA T	VSYS_OK_STA T	TSHUT_STA T	TWARN_STA T	VAO_UV_STA T	ACTIV E	SHIPMODE_EXI T	PB_STA T
Default	0	0	0	0	0	0	0	0
Access	RO	RO	RO	RO	RO	RO	RC	RO

Name	Description	Notes
VSYS_OV_STAT	1. VSYS is in OV 0: VSYS is not in OV	
VSYS_OK_STAT	1. VSYS is in not in UV or OV 0: VSYS is in either OV or UV	
TSHUT_STAT	1. Device temp is higher than TSHUT 0. Device temp is lower than TSHUT	
TWARN_STAT	1. Device temp is higher than TWARN 0. Device temp is lower than TWARN	
VAO_UV_STAT	1. VAO is in UV 0: VAO is not in UV	
ACTIVE	1. Device is in ACTIVE state 0. Device is not in ACTIVE state	
SHIPMODE_EXIT	1. Device transitions from ship mode to active 0. no state transition from ship mode to active	
PB_STAT	1. PB_IN is high 0: PB is low	

MSTR01 Register

Address = 0x01h	Default = 0x00h	Type = Basic Volatile
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BIT	7	6	5	4	3	2	1	0
Name	VSYS_OV	VSYS_OK	TSHUT	TWARN	VAO_UV	RFU	nPB_DET_INT	PB_INT
Default	0	0	0	0	0	0	0	0
Access	RO	RO	RO	RO	RC	RO	RC	RC

Name	Description	Notes
VSYS_OV	fault interrupt	
VSYS_OK	event interrupt when VSYS_OK_STAT changes	
TSHUT	fault interrupt	
TWARN	event interrupt	
VAO_UV	event interrupt	
RFU	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
nPB_DET_INT	event Interrupt in the event of rising edge of nPB_DET	
PB_INT	event Interrupt in the event of rising or falling of push button input after deglitch	

MSTR02 Register

Address = 0x02h	Default = 0x00h	Type = Basic Volatile
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BIT	7	6	5	4	3	2	1	0
Name	VSYS_OV_MSK	VSYS_OK_MSK	TSHUT_MSK	TWARN_MSK	VAO_UV_MSK	RFU	nPB_DET_INT_MSK	PB_INT_MSK
Default	0	0	0	0	0	0	0	0
Access	RW	RW	RW	RW	RW	RO	RW	RW

Name	Description	Notes
VSYS_OV_MSK	VSYS OV Interrupt Mask 1: Mask interrupt 0: No mask interrupt	
VSYS_OK_MSK	VSYS OK Interrupt Mask 1: Mask interrupt 0: No mask interrupt	
TSHUT_MSK	Thermal shutdown Interrupt Mask 1: Mask interrupt 0: No mask interrupt	
TWARN_MSK	Thermal warning Interrupt Mask 1: Mask interrupt 0: No mask interrupt	
VAO_UV_MSK	VAO UV Interrupt Mask 1: Mask interrupt 0: No mask interrupt	
RFU	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
nPB_DET_INT_MSK	nPB_DET pin Interrupt Mask 1: Mask interrupt 0: No mask interrupt	
PB_INT_MSK	Push-Button mode only. Push - Button Interrupt Mask 1: Mask interrupt 0: No mask interrupt	

MSTR03 Register

Address = 0x03h	Default = 0x20h	Type = Basic Non-Volatile
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BIT	7	6:4	3:0
Name	PB_DISABLE_CONFIG	RFU	VSYSMON[3:0]
Default	0	010	0000
Access	RW	RW	RW

Name	Description	Notes
PB_DISABLE_CONFIG	0: - if PB_waittimer_T3 = 2'b00, after T1, nPB_DET is low and LDO12 are disabled. - if PB_waittimer_T3 is not 2'b00, in T4, nPB_DET pin is low and LDO1 and LDO2 are disabled. 1: - if PB_waittimer_T3 = 2'b00, after T1, nPB_DET is low, LDO12 are enabled. - if PB_waittimer_T3 is not 2'b00, in T4, nPB_DET pin is low, LDO12 are enabled.	

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RFU [6:4]	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
VSYSMON[3:0] [3:0]	VSYSMON setting (rising) 0000: 2.7 V to 1111: 4.2 V Step size = 0.1 V	

MSTR04 Register

Address = 0x04h	Default = 0x55h	Type = Basic Non-Volatile
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BIT	7:6	5:4	3:2	1:0
Name	PB_waittimer_T4[1:0]	PB_waittimer_T3[1:0]	PB_waittimer_T2[1:0]	PB_waittimer_T1[1:0]
Default	01	01	01	01
Access	RW	RW	RW	RW

Name	Description	Notes
PB_waittimer_T4[1:0] [7:6]	OPT programing option for PB (time slot T4) 00: 250 ms 01: 500 ms 10: 1000 ms 11: 2000 ms	
PB_waittimer_T3[1:0] [5:4]	OPT programing option for PB (time slot T3) 00: T3&T4 are disabled. nPB_DET and/or LDO12 are disabled after T1 as long as Push Button is not released. 01: 30 s 10: 35 s 11: 40 s	
PB_waittimer_T2[1:0] [3:2]	OPT programing option for PB (time slot T2) 00: 50 μ s 01: 100 μ s 10: 150 μ s 11: 200 μ s Note: If PB_waittimer_T3 = 2'b00, this timer defines the minimum time nPB_DET=low and/or LDO12 are disabled.	
PB_waittimer_T1[1:0] [1:0]	OPT programing option for PB (time slot T1) 00: 10 s 01: 15 s 10: 20 s 11: 25 s	

MSTR05 Register

Address = 0x05h	Default = 0x06h	Type = Basic Non-Volatile
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BIT	7	6	5	4	3	2	1	0
Name	DIS_VIN_SHIPMO DE	DIS_PB_SHIPMO DE	DIS_DEEPS M	PD_CHRG_D IS	PU_CHRG_D IS	PU_EN_LD O1	PU_EN_LD O2	PU_EN_LE D
Default	0	0	0	0	0	1	1	0
Access	RW	RW	RW	RW	RW	RW	RW	RW

Name	Description	Notes
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DIS_VIN_SHIPMODE	1. VIN present does not trigger ship mode exit 0. VIN present trigger ship mode exit	
DIS_PB_SHIPMODE	1. Push button being high does not trigger ship mode exit 0. push button being high triggers ship mode exit	
DIS_DEEPSM	1: Deep_SM_key register is masked has no effect 0: Deep_SM_key register is not masked	
PD_CHRG_DIS	1: enable the pull down 0: disable the pull down	
PU_CHRG_DIS	1: enable the pull up 0: disable the pull up	
PU_EN_LDO1	1: enable the pull up 0: disable the pull up	
PU_EN_LDO2	1: enable the pull up 0: disable the pull up	
PU_EN_LED	1: enable the pull up 0: disable the pull up	

MSTR06 Register

Address = 0x0Fh	Default = 0x00h	Type = Basic Volatile
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BIT	7:0
Name	INTADR[7:0]
Default	00000000
Access	RO

Name	Description	Notes
INTADR[7:0]	Provides the hex address of the block that generated the interrupt on nIRQ pin. See below table for details. 0x01: MSTR 0x02: APSC 0x04: LDO1 0x08: LDO2 0x10: LED	

MSTR07 Register

Address = 0x10h	Default = 0x00h	Type = Basic Volatile
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BIT	7:0
Name	Deep_SM_key[7:0]
Default	00000000
Access	RW

Name	Description	Notes
Deep_SM_key[7:0]	writing this register with data=0x55h in ship mode to transition device to deep sleep	

MSTR08 Register

Address = 0x12h	Default = 0x00h	Type = Basic Volatile
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BIT	7:6	5:4	3:2	1	0
Name	DIE_BASE	DIE_METAL	RFU	DEBUG_MODE	FACTORY_MODE
Default	00	00	00	00	00
Access	RO	RO	RO	RO	RO

Name	Description	Notes
DIE_BASE [7:6]	00: A 01: B 10: C 11: D	
DIE_METAL [5:4]	00: Z 01: 1 10: 2 11: 3	
RFU [3:2]	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
DEBUG_MODE	Debug mode status, Active high	
FACTORY_MODE	Factory mode status. Active high 0 = IC is in normal operating mode 1 = IC is in factory programming mode	

MSTR09 Register

Address = 0x13h	Default = 0x00h	Type = Basic Volatile
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BIT	7:0
Name	RFU
Default	00000000
Access	RW

Name	Description	Notes
RFU [7:0]	Reserved	

MSTR10 Register

Address = 0x14h	Default = 0x00h	Type = Basic Volatile
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BIT	7:0
Name	RFU
Default	00000000
Access	RW

Name	Description	Notes
RFU [7:0]	Reserved	Do not change this register value. Changing the register value can affect IC functionality.

LDO00 Register

Address = 0x20h	Default = 0x00h	Type = Basic Volatile
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BIT	7	6	5	4	3	2	1	0
Name	LDO1_OK_STAT	LDO2_OK_STAT	LDO2_UV	LDO2_OV	LDO2_ILIM	LDO1_UV	LDO1_OV	LDO1_ILIM
Default	0	0	0	0	0	0	0	0
Access	RO	RO	RC	RC	RC	RC	RC	RC

Name	Description	Notes
LDO1_OK_STAT	1. LDO1 is enabled without fault 0. LDO1 is disabled	
LDO2_OK_STAT	1. LDO2 is enabled without fault 0. LDO2 is disabled	
LDO2_UV	LDO2_UV fault interrupt	
LDO2_OV	LDO2_OV fault interrupt	
LDO2_ILIM	LDO2_ILIM fault interrupt	
LDO1_UV	LDO1_UV fault interrupt	
LDO1_OV	LDO1_OV fault interrupt	
LDO1_ILIM	LDO1_ILIM fault interrupt	

LDO01 Register

Address = 0x21h	Default = 0xC0h	Type = Basic Volatile
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BIT	7	6	5	4	3	2	1	0
Name	ON_LD_O1	ON_LDO_2	LDO2_UV_MSK	LDO2_OV_MSK	LDO2_ILIM_MSK	LDO1_UV_MSK	LDO1_OV_MSK	LDO1_ILIM_MSK
Default	1	1	0	0	0	0	0	0
Access	RW	RW	RW	RW	RW	RW	RW	RW

Name	Description	Notes
ON_LDO1	Enable LDO1 1: Enable 0: Disable LDO1 is turned on if ON_LDO1 bit is high and EN_LDO1 pin is high	
ON_LDO2	Enable LDO2 1: Enable 0: Disable LDO2 is turned on if ON_LDO2 bit is high and EN_LDO2 pin is high	
LDO2_UV_MSK	LDO2_UV interrupt mask bit	
LDO2_OV_MSK	LDO2_OV interrupt mask bit	
LDO2_ILIM_MSK	LDO2_ILIM interrupt mask bit	
LDO1_UV_MSK	LDO1_UV interrupt mask bit	
LDO1_OV_MSK	LDO1_OV interrupt mask bit	
LDO1_ILIM_MSK	LDO1_ILIM interrupt mask bit	

LDO02 Register

Address = 0x22h	Default = 0x58h	Type = Basic Non-Volatile
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BIT	7:6	5:0
Name	HICUP_TIMER[1:0]	LDO1 VSET[5:0]
Default	01	011000
Access	RW	RW

Name	Description	Notes
HICUP_TIMER[1:0] [7:6]	After a fault, LDO1 and LDO2 are attempt to restart once timer expires 00: 250 ms 01: 500 ms 10: 1000 ms 11: 2000 ms	
LDO1 VSET[5:0] [5:0]	VSET_LDO1: 0.6 V to 3.3 V in 50 mV steps Note: default is 011000 for 1.8 V, max code is 110110 (LDO1 min shall be 1.2 V)	

LDO03 Register

Address = 0x23h	Default = 0x76h	Type = Basic Non-Volatile
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BIT	7	6	5:0
Name	DIS_PD	EN_HICCUP	LDO2 VSET[5:0]
Default	0	1	110110
Access	RW	RW	RW

Name	Description	Notes
DIS_PD	Pull Down Resistor Configuration on LDO1 and LDO2 when disabled 0: 40 Ω Pull Downs Enabled 1: 40 Ω Pull Downs Disabled	
EN_HICCUP	1. LDO Retry enabled after fault with HICCUP_TIMER 0. LDO Latched off after fault	
LDO2 VSET[5:0]	VSET_LDO1: 0.6 V to 3.3 V in 50 mV steps Note: default is 110110 for 3.3 V, max code is 110110 (LDO1 min shall be 1.2 V)	

APSC00 Register

Address = 0x40h	Default = 0x00h	Type = Basic Volatile
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BIT	7:6	5	4	3	2	1	0
Name	RFU	VIN_WRLS_O V_STAT	VIN_USB_OV _STAT	VIN_WRLS_O K_STAT	VIN_USB_OK _STAT	LOW_BAT_STAT	BAT_SUP_MODE_ACTI VE_STAT

APPLICATION NOTE AN159

Default	00	0	0	0	0	0	0
Access	R0	RO	RO	RO	RO	RO	RO

Name	Description	Notes
RFU [7:6]	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
VIN_WRLS_OV_STAT	1: VIN_WRLS in in OV 0: VIN_WRLS in not in OV	
VIN_USB_OV_STAT	1: VIN_USB in in OV 0: VIN_USB in not in OV	
VIN_WRLS_OK_STAT	1: VIN_WRLS is not in OV or UV 0: VIN_WRLS is in either OV or UV	
VIN_USB_OK_STAT	1: VIN_USB is not in OV or UV 0: VIN_USB is in either OV or UV	
LOW_BAT_STAT	1: VBAT is less then VPRES 0: VBAT is higher than VPRES	
BAT_SUP_MODE_ACTIVE_STAT	1: Device is in supplement mode 0: Device is not in supplement mode	

APSC01 Register

Address = 0x41h	Default = 0x00h	Type = Basic Volatile
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BIT	7	6	5	4	3	2	1	0
Name	CHGINx_viLOOP_ACTIVE	WRLS_HIGHER_USB	VIN_WRLS_OV	VIN_USB_OV	VIN_WRLS_OK	VIN_USB_OK	LOW_BAT	BAT_DET_CHANGE
Default	0	0	0	0	0	0	0	0
Access	RC	RC	RO	RO	RC	RC	RC	RC

Name	Description	Notes
CHGINx_viLOOP_ACTIVE	Event Interrupt triggered when either Input OCP limit is reached (Reg 4Eh[7:5] for VIN_USB and Reg 4Fh[7:3] for VIN_WRLS) The Input Voltage is below the Adaptive Undervoltage Threshold outlined in Section 2.7.1 of the datasheet. Chare current is throttled to maintain VIN at the adaptive threshold until VIN recovers	
WRLS_HIGHER_USB	Event Interrupt triggered when VIN_WRLS is higher than VIN_USB	
VIN_WRLS_OV	WRLS OV fault interrupt	
VIN_USB_OV	VUSB OV fault interrupt	
VIN_WRLS_OK	WRLS OK event interrupt, for VIN_WRLS_OK_STAT change	
VIN_USB_OK	VUSB OK event interrupt for VIN_USB_OK_STAT change	
LOW_BAT	VBAT < VPRES & no Charge input event interrupt	
BAT_DET_CHANGE	Event Interrupt for (1) PMIC detects battery is connected or removed via VBAT_NTC voltage (2) Battery detection after CV fails 1: Change 0: No change	

APSC02 Register

APPLICATION NOTE AN159

Address = 0x42h	Default = 0x00h	Type = Basic Volatile
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BIT	7	6	5	4	3	2	1	0
Name	CHGINx_viLOOP_ACTIVE_MSK	WRLS_HIGHER_USB_MSK	VIN_WRLS_OV_MSK	VIN_USB_OV_MSK	VIN_WRLS_OK_MSK	VIN_USB_OK_MSK	LOW_BAT_MSK	BAT_DET_CHANGE_MSK
Default	0	0	0	0	0	0	0	0
Access	RW	RW	RW	RW	RW	RW	RW	RW

Name	Description	Notes
CHGINx_viLOOP_ACTIVE_MSK	Mask/Unmask Interrupt	
WRLS_HIGHER_USB_MSK	Mask/Unmask Interrupt	
VIN_WRLS_OV_MSK	Mask/Unmask Interrupt	
VIN_USB_OV_MSK	Mask/Unmask Interrupt	
VIN_WRLS_OK_MSK	Mask/Unmask Interrupt	
VIN_USB_OK_MSK	Mask/Unmask Interrupt	
LOW_BAT_MSK	Mask/Unmask Interrupt	
BAT_DET_CHANGE_MSK	Mask/Unmask Interrupt	

APSC03 Register

Address = 0x43h	Default = 0x00h	Type = Basic Volatile
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BIT	7	6:4	3:0
Name	RFU	BAT_TEMP<2:0>	BAT_CHG_STATUS<3:0>
Default	0	000	000
Access	RO	RO	RO

Name	Description	Notes
RFU	Reserved	
BAT_TEMP<2:0> [6:4]	Battery Tempzone check Status: 000 @ TZ0: <0 °C (stop charging) 001 @ TZ1: 0 to 10°C 010 @ TZ2: 10 to 20°C 011 @ TZ3: 20 to 40°C 100 @ TZ4: 40 to 46°C 101 @ TZ5: 46 to 55°C 110 @ TZ6: >55°C (stop charging) 111: Invalid setting	
BAT_CHG_STATUS<3:0> [3:0]	BAT CHARGE STATUS – See Table 1 for more information 0000 - Reset 0001 - VBAT Short 0010 - VBAT PRE 0011 - Not Used 0100 - End of Charge (Sleep, BDSNK or BDSRC) 0101 - Fault 0110 - Not Used 0111 - Not Used 1000 - CC Fastcharge 1001 - CV Fastcharge 1010 - Buck only 1011 - Not Used 1100 - Not Used 1110 - Not Used	

1111 - Not Used

APSC04 Register

Address = 0x44h	Default = 0x00h	Type = Basic Volatile
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BIT	7	6	5	4	3	2	1	0
Name	THERMAL_LOOP_ACITVE	SFTY_TIMER_EXPIRED_INT	BAT_NTC_FAULT	BATFET_ILIM	VSYS_ILIM	OTF_AUTO_UPDATE	CHG_STAT_CHANGE	BAT_TEMP_CHANGE
Default	0	0	0	0	0	0	0	0
Access	RC	RC	RO	RO	RO	RC	RC	RC

Name	Description	Notes
THERMAL_LOOP_ACITVE	event Interrupt when buck thermal loop is active	
SFTY_TIMER_EXPIRED_INT	event Interrupt when safety timer expires	
BAT_NTC_FAULT	fault Interrupt when BAT temperature is too high or too low	
BATFET_ILIM	fault Interrupt when BATFET has current limit	
VSYS_ILIM	fault Interrupt when buck has current limit	
OTF_AUTO_UPDATE	event interrupt if OTF register auto updated	
CHG_STAT_CHANGE	event Interrupt when BAT_CHG_STATUS changes	
BAT_TEMP_CHANGE	event Interrupt when BAT NTC temperature changes or right before charging starts	

APSC05 Register

Address = 0x45h	Default = 0x00h	Type = Basic Volatile
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BIT	7	6	5	4	3	2	1	0
Name	THERMAL_LOOP_ACITVE_INT_MSK	SFTY_TIMER_EXPIRED_INT_MSK	BAT_NTC_FAULT_INT_MSK	BATFET_ILIM_INT_MSK	VSYS_ILIM_INT_MSK	OTF_AUTO_UPDATE_INT_MSK	CHG_STAT_CHANGE_INT_MSK	BAT_TEMP_CHANGE_INT_MSK
Default	0	0	0	0	0	0	0	0
Access	RW	RW	RW	RW	RW	RW	RW	RW

Name	Description	Notes
THERMAL_LOOP_ACITVE_INT_MSK	Mask/Unmask Interrupt	
SFTY_TIMER_EXPIRED_INT_MSK	Mask/Unmask Interrupt	
BAT_NTC_FAULT_INT_MSK	Mask/Unmask Interrupt	
BATFET_ILIM_INT_MSK	Mask/Unmask Interrupt	
VSYS_ILIM_INT_MSK	Mask/Unmask Interrupt	
OTF_AUTO_UPDATE_INT_MSK	Mask/Unmask Interrupt	
CHG_STAT_CHANGE_INT_MSK	Mask/Unmask Interrupt	
BAT_TEMP_CHANGE_INT_MSK	Mask/Unmask Interrupt	

APSC06 Register

APPLICATION NOTE AN159

Address = 0x46h	Default = 0x00h	Type = Basic Volatile
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BIT	7:5	4	3	2	1	0
Name	RFU	ENBFEin_BKOL_TOF	EN_TBAT	FLT_TIMER_PAUSE	TOFLT	EN_ISNS_BAT_ONLY
Default	000	0	0	0	0	0
Access	RW	RW	RW	RW	RW	RW

Name	Description	Notes
RFU [7:5]	Reserved	
ENBFEin_BKOL_TOF	Enable BATFET turn on in BUCK_ONLY and TOFLT states 1: Enable 0: Disable When this bit is enabled, the BATFET turn on is delayed during the transition from BUCK_ONLY to Charging Mode to reduce VSYS undershoot	
EN_TBAT	If Buck is enabled, VREF is automatically enabled. If Buck is disable, VREF is controlled by this bit. 1: enable VREF 0: disable VREF	
FLT_TIMER_PAUSE	Pause Timer for pre-charge and fast charge	
TOFLT	1: device is in TOFLT state 0: device is not in TOFLT state to exit TOFLT state, this bit has to be set to 0 by i2c	
EN_ISNS_BAT_ONLY	If the Buck Charger is enabled, ISNS is automatically enabled. If the Buck Charger is disabled, ISNS is controlled by this bit. 1: Enable ISNS in Battery Only Mode 0: Disable ISNS in Battery Only Mode When high, IQ increases by approx. 400 μ A	

APSC07 Register

Address = 0x47h	Default = 0x02h	Type = Basic Volatile
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BIT	7:2	1:0
Name	RFU	RECHARG_SET[1:0]
Default	000000	10
Access	RW	RW

Name	Description	Notes
RFU [7:2]	Reserved	
RECHARG_SET[1:0] [1:0]	Recharge threshold setting: 00: Disable (Default) 01: =VTERM-100mV 10: =VTERM-150mV 11: =VTERM-200mV	

APSC08 Register

Address = 0x48h	Default = 0x18h	Type = Basic Volatile
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BIT	7:6	5:0
Name	RFU	VTERM_VM[5:0]

APPLICATION NOTE AN159

Default	00	011000
Access	RW	RW

Name	Description	Notes
RFU [7:6]	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
VTERM_VM[5:0]	VTERM_VM to setting CV loop The default load value = VTERM_NVM[5:0] and VTERM_TZx register	

APSC09 Register

Address = 0x49h	Default = 0x12h	Type = Basic Volatile
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BIT	7:6	5:0
Name	RFU	ICHG_VM[5:0]
Default	00	010010
Access	RW	RW

Name	Description	Notes
RFU [7:6]	Reserved	
ICHG_VM[5:0] [5:0]	ICHG_VM for setting CC loop The default load value = ICHG_NVM[5:0] and ICHG_SCALE_TZx registers Note: 111110 is used represent max 1.6A setting in register read	

APSC10 Register

Address = 0x4Ah	Default = 0x08h	Type = Basic Volatile
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BIT	7:4	3:0
Name	RFU	ITERM_VM[3:0]
Default	0000	1000
Access	RW	RW

Name	Description	Notes
RFU [7:4]	Reserved	
ITERM_VM[3:0]	ITERM_VM to setting Terminate threshold The default load value = ITERM_NVM[3:0]	

APSC11 Register

Address = 0x4Bh	Default = 0xC8h	Type = Basic Non-Volatile
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BIT	7:4	3:0
Name	VPRE[3:0]	IPRE[3:0]
Default	1100	1000

APPLICATION NOTE AN159

Access	RW	RW
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Name	Description	Notes
VPRE[3:0]	Battery Pre-Charge Rising Threshold: 2.8 V to 3.55 V & 5 0mV/step 0000: 2.8 V 0100: 3.0 V 1000: 3.2 V 1100: 3.4 V 1111: 3.55 V *The Pre-Charge Falling Threshold is 100 mV less than Rising	
IPRE[3:0]	Battery Pre-Charge Current: 0000: 10 mA 1000: 50 mA 0001: 15 mA 1001: 75 mA 0010: 20 mA 1010: 100 mA 0011: 25 mA 1011: 125 mA 0100: 30 mA 1100: 150 mA 0101: 35 mA 1101: 175 mA 0110: 40 mA 1110: 200 mA 0111: 45 mA 1111: 225 mA	

APSC12 Register

Address = 0x4Ch	Default = 0x58h	Type = Basic Non-Volatile
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BIT	7:6	5:0
Name	VINLIM_USB[1:0]	VTERM_NVM[5:0]
Default	01	011000
Access	RW	RW

Name	Description	Notes
VINLIM_USB[1:0] [7:6]	USB weak input voltage limit setting VBAT < 3.8 V - 3.8 V < VBAT < 4.05V - VBAT > 4.05V 00: Disable - Disable - Disable 01: 4.25 - 4.5 - 4.6 V 10: 4.5 - 4.5 - 4.6 V 11: 4.6 - 4.6 - 4.6 V	
VTERM_NVM[5:0] [5:0]	VTERM to setting CV3 (CV): 3.6 V to 4.55 V @ 25 mV/step 000000: 3.6 V 001000: 3.8 V 010000: 4.0 V 011000: 4.2 V (default) 100000: 4.4 V 100110: 4.55 V 100111->111111: no uses	

APSC13 Register

Address = 0x4Dh	Default = 0x56h	Type = Basic Non-Volatile
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BIT	7:6	5:0
Name	VINLIM_WRLS[1:0]	ICHG_NVM[5:0]
Default	01	010110
Access	RW	RW

Name	Description	Notes
VINLIM_WRLS[1:0] [7:6]	Wireless weak input voltage limit setting VBAT < 3.8 V - 3.8 V < VBAT < 4.05 V - VBAT > 4.05 V 00: Disable - Disable - Disable 01: 4.25 - 4.5 - 4.6 V 10: 4.5 - 4.5 - 4.6 V 11: 4.6 - 4.6 - 4.6 V	
ICHG_NVM[5:0] [5:0]	Fast charge current setting 0.05 A -> 1.6 A, 25 mA/step 000000: 50 mA 001000: 250 mA 010000: 450 mA 011000: 650 mA 100000: 850 mA 101000: 1050 mA 110000: 1250 mA 111000: 1450 mA 111010: 1500 mA 111100: 1550 mA 111110 and 111111: 1600 mA	

APSC14 Register

Address = 0x4Eh	Default = 0x89h	Type = Basic Non-Volatile
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BIT	7:5	4	3:0
Name	IINILIM_USB[2:0]	DIS_THERM_REG	ITERM_NVM[3:0]
Default	100	0	01001
Access	RW	RW	RW

Name	Description	Notes
IINILIM_USB[2:0] [7:5]	USB Input Peak Current Limit 000: Disable 001: 0.5 A 010: 1.0 A 011: 1.5 A 100: 2.0 A 101: 2.0 A 110: 2.0 A 111: 2.0 A	
DIS_THERM_REG	Disable Thermal Loop Regulation 1: Disable 0: Enable	
ITERM_NVM[3:0] [3:0]	ITERM End of Charge Current: 0000: 10 mA 1000: 50 mA 0001: 15 mA 1001: 75 mA 0010: 20 mA 1010: 100 mA 0011: 25 mA 1011: 125 mA 0100: 30 mA 1100: 150 mA 0101: 35 mA 1101: 175 mA 0110: 40 mA 1110: 200 mA 0111: 45 mA 1111: 225 mA	

APSC15 Register

Address = 0x4Fh	Default = 0x48h	Type = Basic Non-Volatile
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BIT	7:3	2	1:0
Name	IINILIM_WRLS[4:0]	DIS BATFET_VPRE	VBATSHRT[1:0]
Default	01001	0	00
Access	RW	RW	RW

Name	Description	Notes
IINILIM_WRLS[4:0] [7:3]	Wireless Input Peak Current Limit 00000: Disable 00001: 0.10 A 01011: 0.60 A 00010: 0.15 A 01100: 0.65 A 00011: 0.20 A 01101: 0.70 A 00100: 0.25 A 01110: 0.75 A 00101: 0.30 A 01111: 0.80 A 00110: 0.35 A 10000: 0.85 A 00111: 0.40 A 10001: 0.90 A 01000: 0.45 A 10010: 0.95 A 01001: 0.50 A 10011: 1.00 A 01010: 0.55 A >10100: 1.00 A	
DIS BATFET_VPRE	1: BATFET keep turn on when VBAT<VPRE Falling threshold 0: BATFET turn off when VBAT< VPRE Falling threshold *VPRE should be setting by Reg0x11h[7:4]=VPRE[3:0]	
VBATSHRT[1:0] [1:0]	Battery Short-Charge Rising threshold Detection 00: 2.0 V 01: 2.2 V 10: 2.4 V 11: 2.6 V The Short-Charge Falling Threshold is 100 mV less than Rising	

Table_317 APSC16 Register

Address = 0x50h	Default = 0x18h	Type = Basic Non-Volatile
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BIT	7:6	5:0
Name	TQUAL_OTF[1:0]	VSYSL[5:0]
Default	00	011000
Access	RW	RW

Name	Description	Notes
TQUAL_OTF[1:0] [7:6]	TQUAL Timer Timer starts after a charge state or tempzone change. OTF registers are updated by NVM registers if no I2C OTF commands are sent before TQUAL expires. Tempzone change always restarts the TQUAL timer. 00: 0 s 01: 1 s 10: 2 s	

	11: 4 s	
VSYSL[5:0] [5:0]	VSYSL regulated Voltage 000000: 3.00 V 001000: 3.40 V 010000: 3.80 V 011000: 4.20 V 100000: 4.60 V 100100: 4.80 V 100101->111111: Invalid	

APSC17 Register

Address = 0x51h	Default = 0x04h	Type = Basic Non-Volatile
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BIT	7	6	5	4	3	2	1	0
Name	DIS_FLT_TM R	DIS_EOC_TER M	DIS_VINLIM_4SYN C	CHG TIME R SEL	PCHG TIME R SEL	ON_BUC K	SAVEIQ_BATONL Y	SHRT_CURREN T
Default	0	0	0	0	0	1	0	0
Access	RW	RW	RW	RW	RW	RW	RW	RW

Name	Description	Notes
DIS_FLT_TMR	1: Disable TimeOut Fault, any TimeOut charging will not trigger fault 0: timeout fault detection is enabled.	
DIS_EOC_TERM	1: Disable EOC, device stays at CV state 0: After CV, device continue to do battery detection and disable BATFET Note: setting DIS_EOC_TERM=1 disables the charge timer	
DIS_VINLIM_4SYNC	1: Disable feature turn-off LS buck when weak-input loop active	
CHG TIMER SEL	Charge Time Out Selection 0: 6 hours 1: 9 hours	
PCHG TIMER SEL	Short & Pre-Charge Time Out Selection 0: 1 hour 1: 2 hours	
ON_BUCK	1: Turn on BUCK 0: Turn off BUCK	
SAVEIQ_BATONLY	Disable internal BATFET protection circuit to reduce PMIC IQ by 29 μ A in BATTERY only mode. Note, VSYS inrush current could increase to > 400 mA depending on output capacitance if this feature is off. 0: Disabled 1: Active, IQ Reduced	
SHRT_CURRENT	Battery Short-Charge Current 0: 25 mA 1: 50 mA	

APSC31 Register

Address = 0x63h	Default = 0x99h	Type = Basic Non-Volatile
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BIT	7:6	5:4	3:2	1:0
Name	ICHG_SCALE_TZ1	ICHG_SCALE_TZ2	ICHG_SCALE_TZ3	ICHG_SCALE_TZ4
Default	10	01	10	01
Access	RW	RW	RW	RW

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Name	Description	Notes
ICHG_SCALE_TZ1 [7:6]	Setting ICHG scale vs ICHG[4:0] at Tempzone1 (0°C => 10°C Default) 00: 0.125 01: 0.250 10: 0.375 11: 0.500	
ICHG_SCALE_TZ2 [5:4]	Setting ICHG scale vs ICHG[4:0] at Tempzone2 (10°C=>20°C Default) 00: 0.375 01: 0.500 10: 0.625 11: 0.750	
ICHG_SCALE_TZ3 [3:2]	Setting ICHG scale vs ICHG[4:0] at Tempzone3 (20°C=>40°C Default) 00: 0.875 01: 1.000 10: 1.125 11: 1.500	
ICHG_SCALE_TZ4 [1:0]	Setting ICHG scale vs ICHG[4:0] at Tempzone4 (40°C=>46°C Default) 00: 0.500 01: 0.625 10: 0.750 11: 0.875	

APSC32 Register

Address = 0x64h	Default = 0x80h	Type = Basic Non-Volatile
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BIT	7:6	5:4	3:2	1:0
Name	ICHG_SCALE_TZ5	VTERM_TZ1	VTERM_TZ2	VTERM_TZ3
Default	10	00	00	00
Access	RW	RW	RW	RW

Name	Description	Notes
ICHG_SCALE_TZ5 [7:6]	Setting ICHG scale vs ICHG[4:0] at Tempzone5 (46°C=>55°C Default) 00: 0.125 01: 0.250 10: 0.375 11: 0.500	
VTERM_TZ1 [5:4]	Setting VTERM adjust at Tempzone1 (0°C => 10°C Default) 00: 000 mV 01: -100 mV 10: -200 mV 11: -300 mV	
VTERM_TZ2 [3:2]	Setting VTERM adjust at Tempzone2 (10°C=>20°C Default) 00: 000 mV 01: -100 mV 10: -200 mV 11: -300 mV	
VTERM_TZ3 [1:0]	Setting VTERM adjust at Tempzone3 (20°C=>40°C Default) 00: 000 mV 01: -100 mV 10: -200 mV 11: -300 mV	

APSC33 Register

Address = 0x65h	Default = 0x0Fh	Type = Basic Non-Volatile
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BIT	7:6	5:4	3:2	1:0
Name	VTERM_TZ4	VTERM_TZ5	TempZone_01	TempZone_12
Default	00	00	11	11
Access	RW	RW	RW	RW

Name	Description	Notes
VTERM_TZ4 [7:6]	Setting VTERM adjust at Tempzone4 (40°C=>46°C Default) 00: 000 mV 01: -100 mV 10: -200 mV 11: -300 mV	
VTERM_TZ5 [5:4]	Setting VTERM adjust at Tempzone5 (46°C=>55°C Default) 00: 000 mV 01: -100 mV 10: -200 mV 11: -300 mV	

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TempZone_01 [3:2]	Tempzone0 Low setting 00: -4°C 01: -2°C 10: 0°C 11: 2°C *The NTC comparator threshold - 2°C than Tempzone0 Low setting	
TempZone_12 [1:0]	Tempzone1 High = Tempzone2 Low setting 00: 6°C 01: 8°C 10: 10°C 11: 12°C	

APSC34 Register

Address = 0x66h	Default = 0xA5h	Type = Basic Non-Volatile
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BIT	7:6	5:4	3:2	1:0
Name	TempZone_23	TempZone_34	TempZone_45	TempZone_56
Default	1	1	0	0
Access	RW	RW	RW	RW

Name	Description	Notes
TempZone_23 [7:6]	Tempzone2 High = Tempzone3 Low setting 00: 16°C 01: 18°C 10: 20°C 11: 22°C	
TempZone_34 [5:4]	Tempzone3 High = Tempzone4 Low setting 00: 36°C 01: 38°C 10: 40°C 11: 42°C	
TempZone_45 [3:2]	Tempzone4 High = Tempzone5 Low setting 00: 44°C 01: 46°C 10: 48°C 11: 50°C	
TempZone_56 [1:0]	Tempzone5 High setting 00: 53°C 01: 55°C 10: 57°C 11: 60°C *The NTC comparator threshold +2°C than Tempzone5 High setting	

ADC00 Register

Address = 0x67h	Default = 0xD0h	Type = Basic Non-Volatile
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BIT	7	6	5:4	3	2	1:0
Name	VINUV_WRLS[1:0]		ADC_OSR<1:0>	ADC_AFF	ADC_EN	VINUV_USB<1:0>
Default	1	1	01	0	0	00
Access	RW	RW	RW	RW	RW	RW

Name	Description	Notes
VINUV_WRLS[1:0]	UV threshold setting for USB path: 00: 4.00V 01: 4.25V 10: 5.00V 11: 9.00V	
ADC_OSR<1:0> [5:4]	ADC conversion time setting 00: 8ms 01: 16ms 10: 32ms 11: 64ms	
ADC_AFF	1. Enable ADC anti-aliasing filter	
ADC_EN	1: ADC Enabled	
VINUV_USB<1:0> [1:0]	UV threshold setting for USB path: 00: 3.75V 01: 4.00V 10: 4.25V 11: 4.50V	

ADC01 Register

Address = 0x6Dh	Default = 0x00h	Type = Basic Volatile
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BIT	7:0
Name	ADC_DATA_CH1[11:4]
Default	00000000
Access	RO

Name	Description	Notes
ADC_DATA_CH1[11:4]	ADC Data out channel 1	

ADC02 Register

Address = 0x6Eh	Default = 0x00h	Type = Basic Volatile
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BIT	7:4	3:0
Name	ADC_DATA_CH1[3:0]	ADC_DATA_CH2[3:0]
Default	0	0
Access	RO	RO

Name	Description	Notes
ADC_DATA_CH1[3:0]	ADC Data out channel 1	
ADC_DATA_CH2[3:0]	ADC Data out channel 2	

ADC03 Register

Address = 0x6Fh	Default = 0x00h	Type = Basic Volatile
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BIT	7:0
Name	ADC_DATA_CH2[11:4]
Default	00000000
Access	RO

Name	Description	Notes
ADC_DATA_CH2[11:4] [7:0]	ADC Data out channel 2	

ADC04 Register

Address = 0x70h	Default = 0x00h	Type = Basic Volatile
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BIT	7:0
Name	ADC_DATA_CH3[11:4]
Default	00000000

APPLICATION NOTE AN159

Access	RO
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Name	Description	Notes
ADC_DATA_CH3[11:4] [7:0]	ADC Data out channel 3	

ADC05 Register

Address = 0x71h	Default = 0x00h	Type = Basic Volatile
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BIT	7:4	3:0
Name	ADC_DATA_CH3[3:0]	ADC_DATA_CH4[3:0]
Default	0000	00000
Access	RO	RO

Name	Description	Notes
ADC_DATA_CH3[3:0]	ADC Data out channel 3	
ADC_DATA_CH4[3:0]	ADC Data out channel 4	

ADC06 Register

Address = 0x72h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	ADC_DATA_CH4[11:4]
Default	00000000
Access	RO

Name	Description	Notes
ADC_DATA_CH4[11:4]	ADC Data out channel 4	

ADC07 Register

Address = 0x73h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	ADC_DATA_CH5[11:4]
Default	00000000
Access	RO

Name	Description	Notes
ADC_DATA_CH5[11:4]	ADC Data out channel 5	

ADC08 Register

Address = 0x74h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:4	3:0
Name	ADC_DATA_CH5[3:0]	ADC_DATA_CH6[3:0]
Default	0000	00000
Access	RO	RO

Name	Description	Notes
ADC_DATA_CH5[3:0]	ADC Data out channel 5	
ADC_DATA_CH6[3:0]	ADC Data out channel 6	

ADC09 Register

Address = 0x75h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	ADC_DATA_CH6[11:4]
Default	00000000
Access	RO

Name	Description	Notes
ADC_DATA_CH6[11:4]	ADC Data out channel 6	

ADC10 Register

Address = 0x76h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	ADC_DATA_CH7[11:4]
Default	00000000
Access	RO

Name	Description	Notes
ADC_DATA_CH7[11:4]	ADC Data out channel 7	

ADC11 Register

Address = 0x77h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:4	3:0
Name	ADC_DATA_CH7[3:0]	ADC_DATA_CH8[3:0]
Default	0000	00000
Access	RO	RO

Name	Description	Notes
ADC_DATA_CH7[3:0]	ADC Data out channel 7	
ADC_DATA_CH8[3:0]	ADC Data out channel 8	

ADC12 Register

Address = 0x78h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	ADC_DATA_CH8[11:4]
Default	00000000
Access	RO

Name	Description	Notes
ADC_DATA_CH8[11:4]	ADC Data out channel 8	

ADC13 Register

Address = 0x79h	Default = 0x50h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7	6	5	4	3	2	1	0
Name	CH1_ADC_DIS	CH2_ADC_DIS	CH3_ADC_DIS	CH4_ADC_DIS	CH5_ADC_DIS	CH6_ADC_DIS	CH7_ADC_DIS	CH8_ADC_DIS
Default	0	1	0	1	0	0	0	0
Access	RW	RW	RW	RW	RW	RW	RW	RW

Name	Description	Notes
CH1_ADC_DIS	Disable ADC to channel 1 If Buck is enabled, this bit is forced to 0	
CH2_ADC_DIS	Disable ADC to channel 2 (CH2 unused)	
CH3_ADC_DIS	Disable ADC to channel 3	
CH4_ADC_DIS	Disable ADC to channel 4 (CH4 unused)	
CH5_ADC_DIS	Disable ADC to channel 5	
CH6_ADC_DIS	Disable ADC to channel 6	
CH7_ADC_DIS	Disable ADC to channel 7	
CH8_ADC_DIS	Disable ADC to channel 8	

LED00 Register

Address = 0x80h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7	6	5:4	3:2	1:0
Name	LOG_EN	LED_EN	ENG1_EXEC[1:0]	ENG2_EXEC[1:0]	ENG3_EXEC[1:0]
Default	0	0	00	00	00
Access	RW	RW	RW	RW	RW

Name	Description	Notes
LOG_EN	Logarithmic PWM adjustment 0 = Linear adjustment 1 = Logarithmic adjustment	
LED_EN	0: disable LED 1: enable LED when EN_LED pin is high if applicable Note: EN_LED pin being low reset LED_EN bit to be 0	
ENG1_EXEC[1:0]	Engine 1 Program Execution. 00: Hold: Wait until current command is finished then stop while EXEC mode is hold. Program Counter can be read or written only in this mode. 01: Step: Execute instruction defined by Engine 1 PC, increment PC and change ENG1_EXEC to 00b (Hold) 10: Run: Start at program counter value defined by current Engine 1 PC value 11: Execute instruction defined by current Engine 1 PC value and change ENG1_EXEC to 00b (Hold)	
ENG2_EXEC[1:0]	Engine 2 Program Execution	
ENG3_EXEC[1:0]	Engine 3 Program Execution	

LED01 Register

Address = 0x81h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:6	5:4	3:2	1:0
Name	RFU	ENG1_MODE[1:0]	ENG2_MODE[1:0]	ENG3_MODE[1:0]
Default	00	00	00	00
Access	RW	RW	RW	RW

Name	Description	Notes
RFU [7:6]	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
ENG1_MODE[1:0]	Engine 1 operation mode 00: Disabled, reset Engine 1 PC 01: Load program to SRAM, reset Engine 1 PC 10: Run program defined by ENG1_EXEC 11: Direct control from LED0_PWM Register, Reset Engine 1 PC	
ENG2_MODE[1:0]	Engine 2 operation mode 00: Disabled, reset Engine 2 PC 01: Load program to SRAM, reset Engine 2 PC 10: Run program defined by ENG2_EXEC 11: Direct control from LED1_PWM Register, Reset Engine 2 PC	
ENG3_MODE[1:0]	Engine 3 operation mode 00: Disabled, reset Engine 3 PC 01: Load program to SRAM, reset Engine 3 PC 10: Run program defined by ENG3_EXEC 11: Direct control from LED2_PWM Register, Reset Engine 3 PC	

LED02 Register

Address = 0x82h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	LED0_PWM[7:0]
Default	00000000
Access	RW

Name	Description	Notes
LED0_PWM[7:0]	LED0 output PWM value during direct control operation mode	

LED03 Register

Address = 0x83h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	LED1_PWM[7:0]
Default	00000000
Access	RW

Name	Description	Notes
LED1_PWM[7:0]	LED1 output PWM value during direct control operation mode	

LED04 Register

Address = 0x84h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	LED2_PWM[7:0]
Default	00000000
Access	RW

Name	Description	Notes
LED2_PWM[7:0]	LED2 output PWM value during direct control operation mode	

LED05 Register

Address = 0x85h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	LED0_CURRENT[7:0]

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Default	00000000
Access	RW

Name	Description	Notes
LED0_CURRENT[7:0]	LED0 Current Setting 0.1 mA per step	

LED06 Register

Address = 0x86h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	LED1_CURRENT[7:0]
Default	00000000
Access	RW

Name	Description	Notes
LED1_CURRENT[7:0]	LED1 Current Setting 0.1 mA per step	

LED07 Register

Address = 0x87h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	LED2_CURRENT[7:0]
Default	00000000
Access	RW

Name	Description	Notes
LED2_CURRENT[7:0]	LED2 Current Setting 0.1 mA per step	

LED08 Register

Address = 0x88h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7	6	5	4	3	2	1	0
Name	PWM_HF	ENG1_STEP_SIZE	ENG2_STEP_SIZE	ENG3_STEP_SIZE	RFU	ENG1_INT_MSK	ENG2_INT_MSK	ENG3_INT_MSK
Default	0	0	0	0	0	0	0	0
Access	RW	RW	RW	RW	RW	RW	RW	RW

Name	Description	Notes
PWM_HF	PWM frequency 0 = 274Hz 1 = 549Hz	
ENG1_STEP_SIZE	global setting of LED current step size of ENG1 0: ENG1 current step size is 1	

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	1: ENG1 current step size is 2	
ENG2_STEP_SIZE	global setting of LED current step size of ENG2 0: ENG2 current step size is 1 1: ENG2 current step size is 2	
ENG3_STEP_SIZE	global setting of LED current step size of ENG3 0: ENG3 current step size is 1 1: ENG3 current step size is 2	
RFU	Reserved	
ENG1_INT_MSK	Interrupt mask bit	
ENG2_INT_MSK	Interrupt mask bit	
ENG3_INT_MSK	Interrupt mask bit	

LED09 Register

Address = 0x89h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:4	3:0
Name	RFU	ENG1_PC[3:0]
Default	0000	0000
Access	RW	RW

Name	Description	Notes
RFU [7:4]	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
ENG1_PC[3:0]	Engine 1 Program Counter	

LED10 Register

Address = 0x8Ah	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:4	3:0
Name	RFU	ENG2_PC[3:0]
Default	0000	0000
Access	RW	RW

Name	Description	Notes
RFU [7:4]	Reserved	
ENG2_PC[3:0]	Engine 2 Program Counter	

LED11 Register

Address = 0x8Bh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:4	3:0
Name	RFU	ENG3_PC[3:0]
Default	0	0
Access	RW	RW

Name	Description	Notes
RFU [7:4]	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
ENG3_PC[3:0]	Engine 3 Program Counter	

LED12 Register

Address = 0x8Ch	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:3	2	1	0
Name	RFU	ENG1_INT	ENG2_INT	ENG3_INT
Default	00000	0	0	0
Access	RW	RC	RC	RC

Name	Description	Notes
RFU [7:3]	Reserved	Do not change this register value. Changing the register value can affect IC functionality.
ENG1_INT	Event Interrupt from Engine 1 completion This bit is cleared to 0 by register read or when Engine 1 starts	
ENG2_INT	Event Interrupt from Engine 2 completion This bit is cleared to 0 by register read or when Engine 2 starts	
ENG3_INT	Event Interrupt from Engine 3 completion This bit is cleared to 0 by register read or when Engine 3 starts	

LED13 Register

Address = 0x8Dh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	RESET[7:0]
Default	00000000
Access	RW

Name	Description	Notes
RESET[7:0]	Reset all VM Basic register values (includes itself) when FFh is written	

LED14 Register

Address = 0x8Eh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	LED3_PWM[7:0]
Default	00000000
Access	RW

Name	Description	Notes
LED3_PWM[7:0]	LED3 output PWM value during direct control operation mode	

LED15 Register

Address = 0x8Fh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	LED3_CURRENT[7:0]
Default	00000000
Access	RW

Name	Description	Notes
LED3_CURRENT[7:0]	LED3 Current Setting 0.1mA per step	

LED16 Register

Address = 0x90h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_1_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_1_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED17 Register

Address = 0x91h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_1_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_1_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED18 Register

Address = 0x92h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_2_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_2_ENG1[15:8] [7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED19 Register

Address = 0x93h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_2_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_2_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED20 Register

Address = 0x94h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_3_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_3_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED21 Register

Address = 0x95h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_3_ENG1[7:0]
Default	00000000
Access	RW

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Name	Description	Notes
CMD_3_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED22 Register

Address = 0x96h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_4_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_4_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED23 Register

Address = 0x97h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_4_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_4_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED24 Register

Address = 0x98h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_5_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_5_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED25 Register

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Address = 0x99h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_5_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_5_ENG1[7:0] [7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED26 Register

Address = 0x9Ah	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_6_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_6_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED27 Register

Address = 0x9Bh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_6_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_6_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED28 Register

Address = 0x9Ch	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_7_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_7_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED29 Register

Address = 0x9Dh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_7_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_7_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED30 Register

Address = 0x9Eh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_8_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_8_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED31 Register

Address = 0x9Fh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_8_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_8_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED32 Register

APPLICATION NOTE AN159

Address = 0xA0h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_9_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_9_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED33 Register

Address = 0xA1h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_9_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_9_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED34 Register

Address = 0xA2h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_10_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_10_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED35 Register

Address = 0xA3h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_10_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_10_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED36 Register

Address = 0xA4h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_11_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_11_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED37 Register

Address = 0xA5h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_11_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_11_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED38 Register

Address = 0xA6h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_12_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_12_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED39 Register

APPLICATION NOTE AN159

Address = 0xA7h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_12_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_12_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED40 Register

Address = 0xA8h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_13_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_13_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED41 Register

Address = 0xA9h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_13_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_13_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED42 Register

Address = 0xAAh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_14_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_14_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED43 Register

Address = 0xABh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	CMD_14_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_14_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED44 Register

Address = 0xACh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	CMD_15_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_15_ENG1[15:8]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED45 Register

Address = 0xADh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	CMD_15_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_15_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED46 Register

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Address = 0xAEh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_16_ENG1[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_16_ENG1[15:8] [7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED47 Register

Address = 0xAFh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_16_ENG1[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_16_ENG1[7:0]	Writeable when Engine 1 operation mode is b01 (LOAD program)	

LED48 Register

Address = 0xB0h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_1_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_1_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED49 Register

Address = 0xB1h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_1_ENG2[7:0]
Default	0
Access	RW

Name	Description	Notes
CMD_1_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED50 Register

Address = 0xB2h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_2_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_2_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED51 Register

Address = 0xB3h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_2_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_2_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED52 Register

Address = 0xB4h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_3_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_3_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED53 Register

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Address = 0xB5h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_3_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_3_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED54 Register

Address = 0xB6h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_4_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_4_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED55 Register

Address = 0xB7h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_4_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_4_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED56 Register

Address = 0xB8h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_5_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_5_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED57 Register

Address = 0xB9h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	CMD_5_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_5_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED58 Register

Address = 0xBAh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	CMD_6_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_6_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED59 Register

Address = 0xBBh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	CMD_6_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_6_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED60 Register

Address = 0xBC h	Default = 0x00 h	Type = Basic Volatile
------------------	------------------	-----------------------

BIT	7:0
Name	CMD_7_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_7_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED61 Register

Address = 0xBD h	Default = 0x00 h	Type = Basic Volatile
------------------	------------------	-----------------------

BIT	7:0
Name	CMD_7_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_7_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED62 Register

Address = 0xBE h	Default = 0x00 h	Type = Basic Volatile
------------------	------------------	-----------------------

BIT	7:0
Name	CMD_8_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_8_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED63 Register

Address = 0xBF h	Default = 0x00 h	Type = Basic Volatile
------------------	------------------	-----------------------

BIT	7:0
Name	CMD_8_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_8_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED64 Register

Address = 0xC0h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_9_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_9_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED65 Register

Address = 0xC1h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_9_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_9_ENG2[7:0] [7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED66 Register

Address = 0xC2h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_10_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_10_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED67 Register

APPLICATION NOTE AN159

Address = 0xC3h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_10_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_10_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED68 Register

Address = 0xC4h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_11_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_11_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED69 Register

Address = 0xC5h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_11_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_11_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED70 Register

Address = 0xC6h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_12_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_12_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED71 Register

Address = 0xC7h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	CMD_12_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_12_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED72 Register

Address = 0xC8h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	CMD_13_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_13_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED73 Register

Address = 0xC9h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BITS	7:0
Name	CMD_13_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_13_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED74 Register

APPLICATION NOTE AN159

Address = 0xCAh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_14_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_14_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED75 Register

Address = 0xCBh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_14_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_14_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED76 Register

Address = 0xCCh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_15_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_15_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED77 Register

Address = 0xCDh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_15_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_15_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED78 Register

Address = 0xCEh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_16_ENG2[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_16_ENG2[15:8]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED79 Register

Address = 0xCFh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_16_ENG2[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_16_ENG2[7:0]	Writeable when Engine 2 operation mode is b01 (LOAD program)	

LED80 Register

Address = 0xD0h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_1_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_1_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED81 Register

APPLICATION NOTE AN159

Address = 0xD1h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_1_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_1_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED82 Register

Address = 0xD2h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_2_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_2_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED83 Register

Address = 0xD3h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_2_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_2_ENG3[7:0] [7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED84 Register

Address = 0xD4h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_3_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_3_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED85 Register

Address = 0xD5h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_3_ENG3[7:0]
Default	0
Access	RW

Name	Description	Notes
CMD_3_ENG3[7:0] [7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED86 Register

Address = 0xD6h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_4_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_4_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED87 Register

Address = 0xD7h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_4_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_4_ENG3[7:0] [7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED88 Register

APPLICATION NOTE AN159

Address = 0xD8h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_5_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_5_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED89 Register

Address = 0xD9h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_5_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_5_ENG3[7:0] [7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED90 Register

Address = 0xDAh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_6_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_6_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED91 Register

Address = 0xDBh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_6_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_6_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED92 Register

Address = 0xDC	Default = 0x00h	Type = Basic Volatile
----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_7_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_7_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED93 Register

Address = 0xDD	Default = 0x00h	Type = Basic Volatile
----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_7_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_7_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED94 Register

Address = 0xDE	Default = 0x00h	Type = Basic Volatile
----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_8_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_8_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED95 Register

APPLICATION NOTE AN159

Address = 0xDFh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_8_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_8_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED96 Register

Address = 0xE0h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_9_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_9_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED97 Register

Address = 0xE1h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_9_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_9_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED98 Register

Address = 0xE2h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_10_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_10_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED99 Register

Address = 0xE3h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_10_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_10_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED100 Register

Address = 0xE4h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_11_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_11_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED101 Register

Address = 0xE5h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_11_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_11_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED102 Register

APPLICATION NOTE AN159

Address = 0xE6h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_12_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_12_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED103 Register

Address = 0xE7h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_12_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_12_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED104 Register

Address = 0xE8h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_13_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_13_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED105 Register

Address = 0xE9h	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_13_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_13_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED106 Register

Address = 0xEA h	Default = 0x00 h	Type = Basic Volatile
------------------	------------------	-----------------------

BIT	7:0
Name	CMD_14_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_14_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED107 Register

Address = 0xEB h	Default = 0x00 h	Type = Basic Volatile
------------------	------------------	-----------------------

BIT	7:0
Name	CMD_14_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_14_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED108 Register

Address = 0xECh	Default = 0x00 h	Type = Basic Volatile
-----------------	------------------	-----------------------

BIT	7:0
Name	CMD_15_ENG3[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_15_ENG3[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED109 Register

APPLICATION NOTE AN159

Address = 0xEDh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_15_ENG3[7:0]
Default	0
Access	RW

Name	Description	Notes
CMD_15_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED110 Register

Address = 0xEEh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_16_ENG4[15:8]
Default	00000000
Access	RW

Name	Description	Notes
CMD_16_ENG4[15:8]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED111 Register

Address = 0xEFh	Default = 0x00h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:0
Name	CMD_16_ENG3[7:0]
Default	00000000
Access	RW

Name	Description	Notes
CMD_16_ENG3[7:0]	Writeable when Engine 3 operation mode is b01 (LOAD program)	

LED112 Register

Address = 0xF0h	Default = 0x39h	Type = Basic Volatile
-----------------	-----------------	-----------------------

BIT	7:6	5:4	3:2	1:0
Name	LED3_ENG_SEL[1:0]	LED2_ENG_SEL[1:0]	LED1_ENG_SEL[1:0]	LED0_ENG_SEL[1:0]
Default	00	11	10	01
Access	RW	RW	RW	RW

APPLICATION NOTE AN159

Name	Description	Notes
LED3_ENG_SEL[1:0] [7:6]	Selection from where LED3 output PWM is controlled	
LED2_ENG_SEL[1:0] [5:4]	Selection from where LED2 output PWM is controlled	
LED1_ENG_SEL[1:0] [3:2]	Selection from where LED1 output PWM is controlled	
LED0_ENG_SEL[1:0] [1:0]	Selection from where LED1 output PWM is controlled	

Referenced Documents

The reference documents below take precedence over the contents of this application note and should always be consulted for the latest information.

ACT82120 Data Sheet

Contact Information

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