

%4	OFF		%4	OFF		4%	OFF		%4	OFF	
0x00	0x00	BATPACK_VOLTS_L (recorder)	0x10	0x40		0x20	0x80		0x30	0xc0	
		BATPACK_VOLTS_H									
0x01	0x04		0x11	0x44		0x21	0x84		0x31	0xc4	
				0x46							
0x02	0x08		0x12	0x48		0x22	0x88		0x32	0xc8	
	0x0a										
0x03	0x0c		0x13	0x4c		0x23	0x8c		0x33	0xcc	
0x04	0x10		0x14	0x50		0x24	0x90		0x34	0xd0	
0x05			0x15	0x54		0x25	0x94		0x35	0xd4	
0x06			0x16	0x58		0x26	0x98		0x36	0xd8	
0x07			0x17	0x5c		0x27	0x9c		0x37	0xdc	
0x08	0x20		0x18	0x60		0x28	0xa0		0x38	0xe0	
0x09	0x24		0x19	0x64		0x29	0xa4		0x39	0xe4	
0x0a	0x28		0x1a	0x68		0x2a	0xa8		0x3a	0xe8	
0x0b	0x2c		0x1b	0x6c		0x2b	0xac		0x3b	0xec	
0x0c	0x30		0x1c	0x70		0x2c	0xb0		0x3c	0xf0	
0x0d	0x34		0x1d	0x74		0x2d	0xb4		0x3d	0xf4	
0x0e	0x38		0x1e	0x78		0x2e	0xb8		0x3e	0xf8	
0x0f	0x3c		0x1f	0x7c		0x2f	0xbc		0x3f	0xfc	
					BATPACK_VOLTS_L (last)						
					BATPACK_VOLTS_H (last)						

%4	OFF	VarName	%4	offset(d)	VarName	%4	OFF	VarName	%4	OFF	VarName
0x40	0x100	EXT_VIN_VOLTS_L	0x50	0x140	RTC_SS	0x60	180		0x70	1c0	INTERNAL_ADC_L
		EXT_VIN_VOLTS_H			RTC_MM					1c1	INTERNAL_ADC_H

0x03		POWEROFF_RTC_MIN	
0x04		POWEROFF_RTC_HOUR	
0x05		POWEROFF_RTC_DATE (1-31)	
0x06		POWEROFF_RTC_MONTH (1-12)	
0x07		POWEROFF_RTC_YEAR	
0x08			
0x0c		HOST_POWEROFF_SECS_L	
		HOST_POWEROFF_SECS_H	
0x0e		HOST_POWERON_SECS_L	
		HOST_POWERON_SECS_H	
0x10		BATPACK_REFILL_LOW_L	bloc 1
0x12		BATPACK_REFILL_LOW_H	
		BATPACK_REFILL_HIGH_L	
		BATPACK_REFILL_HIGH_H	
0x14			
0x18		POWEROFF (disabled/enabled)	
0x19		ALARMO (disabled/enabled)	
0x1a			
0x1b		POWEROFF_TIMEDATE_LOG (disabled / enabled)	
0x1c		ALARMO_ACTION (poweroff/poweron)	
0x1d			
0x1e		BB_INPUTS_STATE_PRESCALER	
0x20			bloc 2
0x24			
0x28			
0x2c			
0x30			bloc 3
0x34			
0x38			
0x3c			
0x40		EEPROM_BOOT (1=use eeprom data, 2=use default datas)	bloc 4

0x05	//
0x06	System shutdown : initiate
0x07	
0x10	config : WRITE
0x11	config : READ
0x12	config : Restore factory settings
0x66	sleep mode(internal)
0xCB	Core Bus Reset : Reset other cores on the bus

			bloc 5
0x50		EEPROM_CONFIG_NAME (16)	

ADDRESS(hex)	FORMAT	NAME	USAGE	ACTION (I/F)	MODE	Min VAL	Max VAL	UNIT	DEFAULT
00/01 ... 0x7E/0x7F	W[0x3F]	BATPACK_VOLTS_L	R	I			0x3ff	9,76mV	?
100	W	EXT_VIN_VOLTS_L EXT_VIN_VOLTS_H	R	I			0x3ff	20mV	?
102	W	POWPACK_VOLTS_L POWPACK_VOLTS_H	R	I			0x3ff	9,76mV	
104	W	HOST_3V3_L HOST_3V3_H	R	I			0x3ff	2,44mV	
108	B	BATPACK_STATE	R	I			3		2
109	B	MAIN_SUPPLY_SOURCE	R	I			1		
10a	B	BATPACK_MONITOR_INDEX	R	I			0x7f		
10b	B	BATPACK_REFILL_MODE	R	I			1		
10c	W	EXTVIN_VOLTS_MAX_L EXTVIN_VOLTS_MAX_H	R/W	I		1	0x3ff	20mV	
10e	W	EXTVIN_VOLTS_MIN_L EXTVIN_VOLTS_MIN_H	R/W	I			0x3fe	20mV	
114	W	HOST_POWEROFF_SECS_L HOST_POWEROFF_SECS_H	R/W	SHUT	6		65535	second	10
116	W	HOST_POWERON_SECS_L HOST_POWERON_SECS_H	R/W	BOOT	B	1	65535	second	3
118	W	BATPACK_REFILL_LOW_L BATPACK_REFILL_LOW_H	R/W	I		0x25c 5.9V	0x3ff 10V	9,76mV	0x266 6,0V
11a	W	BATPACK_REFILL_HIGH_L BATPACK_REFILL_HIGH_H	R/W	I		0x300 6.5V	0x3ff 10V	9,76mV	0x2F0 7,35V
120	B	POWEROFF	R/W	SHUT	6		1		
121	B	ALARM0	R/W	I	ALL		1		
122	B	ALARM0_ACTION	R/W	I	ALL		2		
123	B	POWEROFF_LOG	R/W	SHUT	6		1		
128	B	SYSTEM_SHUTDOWN	R				1		
12c	B	INPUTS_STATE_PRESCALER	R/W	I			0xFF	100us	10
130	B	INPUTS_STATE	R	I			0xFF		
131	B	USER_INPUT_A_COUNT	R/W	I			0xFF		?
132	B	USER_INPUT_B_COUNT	R/W	I			0xFF		?
133	B	USER_INPUT_D_COUNT	R/W	I			0xFF		?
134	B	USER_INPUT_E_COUNT	R/W	I			0xFF		?
135	B	USER_INPUT_F_COUNT	R/W	I			0xFF		?
136	B	USER_INPUT_G_COUNT	R/W	I			0xFF		?
137	B	INPUTS_CLEAR	W	I			0x13		
140	B	RTC_SEC	R/W	I	1,2,4		0x59	DCHex	?
141	B	RTC_MIN	R/W	I	1,2,4		0x59	DCHex	?
142	B	RTC_HOUR	R/W	I	1,2,4		0x11 / 0x23	DCHex	?
143	B	RTC_WD	R/W	I	1,2,4	1	7	DCHex	?
144	B	RTC_ND	R/W	I	1,2,4	1	0x31	DCHex	?
145	B	RTC_MON	R/W	I	1,2,4	1	0x12	DCHex	?
146	B	RTC_YEAR	R/W	I	1,2,4		0x99	DCHex	?
147	B	RTC_ALARM_SEC	R/W	I	1,2,4		0x59	DCHex	?
148	B	RTC_ALARM_MIN	R/W	I	1,2,4		0x59	DCHex	?
149	B	RTC_ALARM_HOUR	R/W	I	1,2,4		0x11/0x23	DCHex	?
14a	B	RTC_ALARM_ND	R/W	I	1,2,4	1	0x07	DCHex	?
14b	B	RTC_ALARM_MASK	R/W	I	1,2,4		0x0F	DCHex	?

1b0 1b1 1be 1bf	B[16]	SCRATCHPAD	R/W	I	I,1,2,3,4				?
1e4	B	EEPROM_MAGIC	W	I	0x10		0x26		0x00
1e5	B	EEPROM_BLOC	W	I	0x10,0x11		7		?

) PRELIMINARY , V1.0 june 2015

Description

Batpack voltage monitor recorder DATAs

Main DC input voltage readout

Battery Pack current voltage readout

BusBoard's 3.3V 1A voltage regulator output voltage readout

Battery Pack status register :

0 : Ready

1 : Refill is in progress

2 : Undervoltage / No Battery Pack connected

3 : Overvoltage / Battery Pack disabled

BusBoard's power source is :

0 : EXT_VIN (main DC source)

1 : Battery Pack (main DC source is OFF or Under the voltage threshold)

Battery Pack voltage monitor recorder's current index (RAM address)

Battery Pack refill mode.

0 : Permanent current

1 : Pulsed current (1 sec ON , 1 sec OFF periods)

Main DC input voltage highest value since BusBoard's power up.Can be cleared by user

Main DC input voltage lowest value since BusBoard's power up.Can be cleared by user

Delay between BusBoards shutdown command received and effective Host powering off (see Command 0x06)

Delay between BusBoard's power on and Host power. Applied at Chantilly's BusBoard boot.

Batpack refill Low Threshold (start charging phase trigger)

Batpack refill High Threshold (stop charging phase knee)

Shutdown sequence ends up :

0 : Keep Chantilly System 5V and 3.3V power on , Host power is OFF

1 : power OFF Host , then Chantilly System 5V and 3.3V (full system stop)

RTC Alarm action :

0 : Disabled

1 : Alarm is enabled

RTC Alarm action to perform :

0 : Alarm trigs a system BOOT

1 : Alarm trigs a power-off sequence (Chantilly System AND Host)

2 : Alarm trigs a power-of sequence for the HOST. Chantilly systems remains powered-on.

Power-off timedate logging into BusBoard's embedded EEPROM

0 : Log disabled

1 : Enabled

System shutdown status :

0 : BusBoard normal run

1 : A shutdown sequence is in progress (see Command 0x06)

Anti-bounce prescaler for user inputs A,B,D,E,F,G

0 : Cancel prescaler

User inputs A,B,D,E,F,G immediate state (Bit states are : 1=contact open / 0=contact is closed)

Bit 1 : user input A state

Bit 2 : user input B state

Bit 3 : unused/read as '1'

Bit 4 : user input D state

Bit 5 : user input E state

Bit 6 : user input F state

Bit 7 : user input G state

User input A transitions counter. Each contact closing increments this counter by 1. trigs on HI->low transitions

User input B transitions counter. Each contact closing increments this counter by 1. trigs on HI->low transitions

User input C transitions counter. Each contact closing increments this counter by 1. trigs on HI->low transitions

User input D transitions counter. Each contact closing increments this counter by 1. trigs on HI->low transitions

User input E transitions counter. Each contact closing increments this counter by 1. trigs on HI->low transitions

User input F transitions counter. Each contact closing increments this counter by 1. trigs on HI->low transitions

Input counters are clear if user writes magic key 0x13 into this ram address.

INPUTS_CLEAR's content is cleared to 0x00 when the BusBoard has cleared all counters.

Embedded BuBoard's RTC seconds (see Command 0x01,0x02,0x04)

Minuts

Hour :

Bit 6 : cleared=24Hour mode , set=12Hr AM/PM mode

Bit 5 : in 12hr mode, set=PM , cleared = AM

Bit 7 : always cleared

Day number of the Week (1=Monday 7=Sunday)

Day of the Month

Month of the Year

Year in the range 0..0x99

BusBoard's ALARM seconds value

BusBoard's ALARM minutesvalue

BusBoard's ALARM hours value

BusBoard's ALARM day of the week value

BusBoard's ALARM enable mask

0x0F: Alarm once per second

0x07: Alarm when seconds match

0x03: Alarm when minutes and seconds match

0x01: Alarm when hours,minutes,seconds match
0x00: Alarm when day,hours,minutes and seconds match

Scratchpad Area.

A 16 places RAM area used for RTC functions : setup RTC, Read RTC, set ALARM ..

EEPROM save configuration magic Key. Set to 0x26 = enable writing the eeprom (see Command 0x10)

EEPROM Read config / Write config Bloc number (see Command 0x10)

EEPROM Read config / Write config Bloc number (see Command 0x10)