



PS5 EMC Error Code

IN-PS5-0043E-xx

SIE Inc. CS Dept.

Revision list

No.	Rev.	Date	Discription	Drown by	Checked by	Approved by
-	01	2020/11/06	Release			

Error Log Format

== Hardware Information ==

Board Id : 179SC205711596A0
Product Serial : AJ22521523

== Emc Error Log ==

#	No	Code	Rtc	PowState	UpCause	SeqNo	DevPm	T (SoC)	T (Env)
#	00	80810001	1058901D	00FF0042	00000000	217C	0004	FFFF	FFFF
#	01	80000009	1058901C	00FF0042	00000000	203B	0004	FFFF	FFFF
#	02	C0020203	104C9999	000000E5	00000100	217B	000E	2DC0	1E40
#	03	80000009	104C9999	00000005	00000100	217B	000E	2DC0	1E40
#	04	C0010201	10491C82	00FF0001	00000000	2179	0004	FFFF	FFFF
#	05	C0010201	10490B0D	00FF0001	00000000	2179	0004	FFFF	FFFF
#	06	808D0003	1022A0A3	00000005	00000100	217B	000E	5F00	2380
#	07	80830000	1011AE4E	00000005	00000000	217B	000E	2340	1B40
#	08	80000009	1011AE4E	00000005	00000000	217B	000E	2340	1B40
#	09	00000000	00000000	00000000	00000000	0000	0000	0000	0000
#	0A	00000000	00000000	00000000	00000000	0000	0000	0000	0000
--- Partially omitted ---									
#	3D	00000000	00000000	00000000	00000000	0000	0000	0000	0000
#	3E	00000000	00000000	00000000	00000000	0000	0000	0000	0000

Error Log Format

Item	Name	Length	Description
Error Log Code	Code	32bit	Code of error detected by EMC.
Counter value of RTC	Rtc	32bit	The counter value of RTC when an error is detected. (second) The progress time from 2012/01/01 00:00:00 (GMT). If RTC data can not be got, it shows "0xFFFFFFFF". Ex. Before RTC setting, No battery power
Power state information	PowState	32bit	It shows "Starting state of OS" or "System state information" when an error occurs.
Starting factor	UpCause	32bit	The starting factor of main SoC or EAP when an error occurs. You can know what triggered the main SoC or EAP to be started.
Last sequence number	SeqNo	16bit	The number of the last sequence executed when the error occurred.
Device power management information	DevPm	16bit	The power state of the device when the error occurred.
Temperature of main SoC	T(SoC)	16bit	The temperature of the main SoC when the error occurred. It consists of 8 bits for the integer part and 8 bits for the decimal part. If the temperature cannot be obtained when an error occurs, it will be 0xFFFF.
Temperature of environment	T(Env)	16bit	The temperature of the environmental sensor when the error occurs. It consists of 8 bits for the integer part and 8 bits for the decimal part. If the temperature cannot be obtained when an error occurs, it will be 0xFFFF.

EMC Error Code List

CATEGORY	Error Code	CAUSE	memo
Hardware	0x80000001	Failed to access the thermal sensor	
Hardware	0x80000004	AC/DC Power Fail	
Hardware	0x80000005	Main SoC CPU Power Fail	
Hardware	0x80000006	Main SoC GFX Power Fail	
Hardware	0x80000007	Main SoC Thrm High Tempr Abnormality	
Hardware	0x80000008	Drive Dead Notify Timeout	
Hardware	0x80000009	AC In Detect	
Hardware	0x8000000A	VRM HOT Fatal	
Hardware	0x8000000B	UnexpectedThermalShutdown	Unexpected Thermal Shutdown in state that Fatal OFF is not allowed
Hardware	0x8000000C	MSoCTemprAlert	
Main SoC CPU Power Fail	0x80050000	SoC VRM Power Fail (CPU)	VRM Power Fail(CPU) : Couldn't get the error factor.
Main SoC CPU Power Fail	0x8005XXXX	SoC VRM Power Fail (CPU)	VRM Power Fail(CPU) : XXXX means the error factor.
Main SoC GFX Power Fail	0x80060000	SoC VRM Power Fail (GFX)	VRM Power Fail(GFX) : Couldn't get the error factor.
Main SoC GFX Power Fail	0x8006XXXX	SoC VRM Power Fail (GFX)	VRM Power Fail(GFX) : XXXX means the error factor.
Software	0x8080XXXX	Fatal Shutdown by OS request	
PowerSequence	0x80810001	Power Sequence Error	
PowerSequence	0x80810002	Power Sequence NVS Access Error	
PowerSequence	0x80810013	Power Sequence ScCmd DRAM Init Error	Power Sequence Error : DRAM_INIT_GENERAL_ERROR from FC
PowerSequence	0x80810014	Power Sequence ScCmd Link Up Failure	Power Sequence Error : SCCMD_RCX1_LINKUP_FAILURE from FC
Main SoC Message	0x80830000	Main SoC Sync Flood	
PCIe	0x80840000	PCIe Link Down	
Flash Controller	0x80870001	Flash Controller RAM Protect Error	
Flash Controller	0x80870002	Flash Controller RAM Parity Error	

EMC Error Code List

CATEGORY	Error Code	CAUSE	memo
Flash Controller	0x80870003	Flash Controller Boot Failed	Flash Controller Boot Failed : Couldn't read Chip Revision.
Flash Controller	0x80870004	Flash Controller Boot Failed NoRecord	Flash Controller Boot Failed : Couldn't read error information.
Flash Controller	0x80870005	Flash Controller Boot Failed State Error	Flash Controller Boot Failed : Couldn't change to SPI Mode.
Flash Controller	0x808710XX	Flash Controller ScCmd Response Error	
Flash Controller Boot EAP	0x8088XXXX	Flash Controller Boot EAP Error	
Flash Controller Boot EFC	0x8089XXXX	Flash Controller Boot EFC Error	
Flash Controller Temperature	0x808AXXXX	Flash Controller Temper Error	Abnormal temperature of Flash Controller:XXXX means temperature.
Flash Controller WDT	0x808BXXYZ	Flash Controller Watch Dog Timer	
USB Type-C	0x808CXXXX	USB Type-C Error	
Abnomal Temperature	0x808D0000	Thermal Shutdown : Main SoC	
Abnomal Temperature	0x808D0001	Thermal Shutdown : Local Sensor 1	
Abnomal Temperature	0x808D0002	Thermal Shutdown : Local Sensor 2	
Abnomal Temperature	0x808D0003	Thermal Shutdown : Local Sensor 3	
Abnomal Hcmd	0x808E0000	Communication error : Close Error	High possibility of a software bug
Abnomal Hcmd	0x808E0001	Communication error : Open Error	High possibility of a software bug
Abnomal Hcmd	0x808E0002	Communication error : Host Write Flag Error	A cause is hardware or software bug.
Abnomal Hcmd	0x808E0003	Communication error : EMC Read Flag Error	A cause is hardware or software bug.
Abnomal Hcmd	0x808E0004	Communication error : Write Flag Error	A cause is hardware or software bug.
Abnomal Hcmd	0x808E0005	Communication error : Wait SIG1 Error	A cause is hardware or software bug.
Abnomal Hcmd	0x808E0006	Communication error : Reset request from Host	It left if Reset request came from Host, when 808E0002-808E0005 error occurred.
Abnomal Hcmd	0x808E0007	Communication error : Checksum Error	SPM data is not correct.
Abnomal SMCU communication	0x808F0001	SMCU communication error : Timeout	
Abnomal SMCU communication	0x808F0002	SMCU communication error : Reset	

EMC Error Code List

CATEGORY	Error Code	CAUSE	memo
Abnormal SMCU communication	0x808F0003	SMCU communication error : TIS Error	
Abnormal SMCU communication	0x808F00FF	SMCU communication error : Undefined	
Software	0x8090XXXX	Fatal Shutdown by Error Additional Code	
SSD PMIC	0x8091XXYY	SSD PMIC Error	
EMC	0x80C00114	WatchDogForSoC	
EMC	0x80C00115	WatchDogForEAP	
EMC	0x80C0012C	BD Drive Detached	
EMC	0x80C0012D	EMC Watch Dog Timer Error	
EMC	0x80C0012E	ADC Error (Button)	Completion interruption didn't enter from ADC during Timeout.
EMC	0x80C0012F	ADC Error (BD Drive)	Completion interruption didn't enter from ADC during Timeout.
EMC	0x80C00130	ADC Error (AC In Det)	Completion interruption didn't enter from ADC during Timeout.
EMC	0x80C00131	USB Over Current	USB Over Current detection. (Type-A)
EMC	0x80C00132	FAN Storage Access Failed	It is an access error in servo parameter from NVS.
EMC	0x80C00133	USB-BT FW Header Invalid	Header information of BT FW in DDR isn't right.
EMC	0x80C00134	USB-BT BT Command Error	Error during BT Firmware Download
EMC	0x80C00135	USB-BT Memory Malloc Failed	It should be software factor.
EMC	0x80C00136	USB-BT Device Not Found	
EMC	0x80C00137	USB-BT MISC Error	
EMC	0x80C00138	Flash Controller Interrupt HW Error	
EMC	0x80C00139	BD Drive Eject Assert Delayed	
EMC	0x80D001XX	USB-BT Error (Bulk Out)	USB related errors of WiFi Module (BT)
EMC	0x80D002XX	USB-BT Error (Bulk In)	USB related errors of WiFi Module (BT)
EMC	0x80D003XX	USB-BT Error (Bt Init)	USB related errors of WiFi Module (BT)

EMC Error Code List

CATEGORY	Error Code	CAUSE	memo
EMC	0x80D004XX	USB-BT Error (Download Firmware)	USB related errors of WiFi Module (BT)
EMC	0x80D005XX	USB-BT Error (Release Device)	USB related errors of WiFi Module (BT)
EMC	0x80D006XX	USB-BT Error (Exec Cmd0)	USB related errors of WiFi Module (BT)
EMC	0x80D007XX	USB-BT Error (Exec Cmd1)	USB related errors of WiFi Module (BT)
Sonics Bus	0xB0XXXXXX	Sonics Bus Error	
Hardware Access	0xC001XXXX	Main SoC Access Error (I2C)	
Hardware Access	0xC002XXXX	Main SoC Access Error (SB-TSI I2C)	
Hardware Access	0xC003XXXX	Main SoC Access Error (SB-RMI)	
Hardware Access	0xC00BXXXX	Serial Flash Access Error	
Hardware Access	0xC00CXXXX	VRM Controller Access Error	
Hardware Access	0xC00DXXXX	PMIC (Subsystem) Access Error	
Hardware Access	0xC010XXXX	Flash Controller Access Error	
Hardware Access	0xC011XXXX	Potentiometer Access Error	
Hardware Access	0xC015XXXX	PCIe Access Error	
Hardware Access	0xC016XXXX	PMIC (SSD) Access Error	
Hardware Access	0xC081XXXX	HDMI Tx Access Error	
Hardware Access	0xC090XXXX	USB Type-C PD Controller Access Error	
Hardware Access	0xC091XXXX	USB Type-C USB/DP Mux Access Error	
Hardware Access	0xC092XXXX	USB Type-C Redriver Access Error	
Hardware Access	0xC0FEXXXX	Dummy	

Power state information



-OS State

Code	State
0x00	SYSTEM Ready
0x01	Main On Standby
0x10-0x1F	PSP
0x20-0x3F	BIOS
0x40	EAP READY
0x41-0x4F	EAP
0x50-0xBF	Kernel
0xC0-0xFE	Init Process
0x02-0x0F	Reserved
0xFF	HOSTOS_OFF

-System State

Code	State	Comment
0x0000	ACIN_L	Before Standby
0x0001	STANDBY	Standby state
0x0002	PG2_ON	PG2 ON state
0x0003	EFC_ON	EFC ON state
0x0004	EAP_ON	EAP ON state
0x0005	SOC_ON	Main SoC ON state
0x0006	ERROR_DET	Error detected state
0x0007	FATAL_ERROR	Fatal Shutdown state
0x0008	NEVER_BOOT	Never Boot state
0x0009	FORCE_OFF	Forced OFF state
0x000A	FORCE_OFF	BT Firmware Download state

Starting factor

Bit :

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Reserved	Reserved	Reserved	Reserved	Reserved	DEV UART	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	BT	CEC	EAP	Main SoC	Reserved	Reserved	Reserved	Reserved	Reserved	Eject Button	Disc Loaded	Power Button	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Boot-up at Power-on

Bit	Name	Definition
26	DEV UART	Booted by UART command
19	BT	Booted by Bluetooth(PS button of DualSense)
18	CEC	Booted by HDMI-CEC
17	EAP	Booted by EAP's order
16	Main SoC	Booted by Main SoC's order
10	Eject Button	Booted by pressing the Eject button while the disc is inserted
9	Disc Loaded	Booted by inserting Disc
8	Power Button	Booted by pressing the power button
0	Boot-Up at power-on	Booted by power supply from the PSU

Device power management information

Bit :

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	HDMI(5V)	BD DRIVE	HDMI(CEC)	USB	WLAN

Bit	Device	Comment
4	HDMI(5V)	-
3	BD DRIVE	-
2	HDMI(CEC)	-
1	USB	-
0	WLAN	The reset status of the WLAN/BT Module