

Skylake Platforms RVP/CRB BIOS Release Notes

Skylake – SPT LP/H

June 2015

CRB BIOS v85.1

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Contents

1 SPI Images 6
1.1 SPI Images for Skylake (SKL+SPT LP) platforms 6
1.2 SPI Images for Skylake (SKL+SPT LP) platforms 6

2 Supported Hot Keys 7
2.1 ACPI Hot-keys 7

3 BIOS – SKL CRB v085.1 8
3.1 Highlights 8
3.2 Resolved Client BIOS issues 8

4 n/a BIOS – SKL CRB v084.2 9
4.1 Highlights 10
4.2 Resolved Client BIOS issues 10

5 BIOS – SKL CRB v082 11
5.1 Highlights 11
5.2 Resolved Client BIOS issues 11

6 BIOS – SKL CRB v081.1 12
6.1 Highlights 12
6.2 Resolved Client BIOS issues 12

7 BIOS – SKL CRB v078.1 13
7.1 Highlights 13
7.2 Resolved Client BIOS issues 13
7.3 Known Issues / Limitations 14

8 BIOS – SKL CRB v075.4 15
8.1 Highlights 15
8.2 Resolved Client BIOS issues 15
8.3 Known Issues / Limitations 15

9 BIOS – SKL CRB v075.3 16
9.1 Highlights 16
9.2 Resolved Client BIOS issues 16
9.3 Known Issues / Limitations 17

10 BIOS – SKL CRB v071.3 18
10.1 Highlights 18
10.2 Resolved Client BIOS issues 19
10.3 Known Issues / Limitations 19

11 BIOS – SKL CRB v068.1 20
11.1 Highlights 20
11.2 Resolved Client BIOS issues 20
11.3 Known Issues / Limitations 21

12 BIOS – SKL CRB v066.1 22



12.1 Highlights 22
12.2 Resolved Client BIOS issues 22
12.3 Known Issues / Limitations 23

13 BIOS – SKL CRB v063.4 24
13.1 Highlights 24
13.2 Resolved Client BIOS issues 24
13.3 Known Issues / Limitations 24

14 BIOS – SKL CRB v063.3 25
14.1 Highlights 25
14.2 Resolved Client BIOS issues 26
14.3 Known Issues / Limitations 26

15 BIOS – SKL CRB v058.1 27
15.1 Highlights 27
15.2 Resolved Client BIOS issues 28
15.3 Known Issues / Limitations 28

16 BIOS – SKL CRB v053.3 29
16.1 Highlights 29
16.2 Resolved Client BIOS issues 29
16.3 Known Issues / Limitations 29

17 BIOS – SKL CRB v053.2 30
17.1 Highlights 30
17.2 Resolved Client BIOS issues 30
17.3 Known Issues / Limitations 31

18 BIOS – SKL CRB v050 32
18.1 Highlights 32
18.2 Resolved Client BIOS issues 32
18.3 Known Issues / Limitations 33

19 BIOS – SKL CRB v045.1 34
19.1 Highlights 34
19.2 Resolved Client BIOS issues 34

20 BIOS – SKL CRB v041 35
20.1 Highlights 35
20.2 Resolved Client BIOS issues 35
20.3 Known Issues / Limitations 35



Revision History

Revision Number	Description	Revision Date
41	SKL_SPT_CRB BIOS V41	July 2014
45.1	SKL_SPT_CRB BIOS V45_01	August 2014
50	SKL_SPT_CRB BIOS V50	September 2014
53.2	SKL_SPT_CRB BIOS V53.2	October 2014
53.2	SKL_SPT_CRB BIOS V53.3	October 2014
55.1	SKL_SPT_CRB BIOS V55.1	November 2014
58.1	SKL_SPT_CRB BIOS V58.1	November 2014
63.3	SKL_SPT_CRB BIOS V63.3	December 2014
66.1	SKL_SPT_CRB BIOS V66.1	January 2015
68.1	SKL_SPT_CRB BIOS V68.1	February 2015
71.3	SKL_SPT_CRB BIOS V71.3	February 2015
75.3	SKL_SPT_CRB BIOS V75.3	March 2015
75.3	SKL_SPT_CRB BIOS V75.4	March 2015
75.3	SKL_SPT_CRB BIOS V78.1	April 2015
81.1	SKL_SPT_CRB BIOS V81.1	April 2015
82	SKL_SPT_CRB BIOS V82	April 2015
84.2	SKL_SPT_CRB BIOS V84.2	May 2015
85.1	**SKL_SPT_CRB BIOS V85.1**	**May 2015**

1 SPI Images

1.1 SPI Images for Skylake (SKL+SPT LP) platforms

This release doesn't include full SPI Image.

1.2 SPI Images for Skylake (SKL+SPT LP) platforms

To create either 2x8M full SPI image of the CRB BIOS:

1. Download latest System BIOS
2. Search for the latest Intel® Management Engine Firmware kit**.**
3. Download and install the Intel® ME Firmware kit.
4. Follow instructions to build appropriate full image as described in the "Intel(R) ME FW Bring Up Guide" document (part of the Intel® ME Firmware kit)



2 Supported Hot Keys

CTRL+ALT+SHIFT+<KEY> causes a Hot-Key Event to the SBIOS. The specific <KEY> to complete the sequence is defined in the following table.

2.1 ACPI Hot-keys

F1	IGFX Display Switch using Toggle List 1.
F2	IGFX Display Switch using Toggle List 2.
F3	IGFX Display Switch using Toggle List 3.
F4	IGFX Display Switch using Toggle List 4.
F5	Virtual Power Switch Event (Toggle between Virtual AC and Virtual Battery Mode)
F8	IGFX Panel Fitting Hot-Key
F9	IGFX LCD Brightness Level – Decrease 10% if percentage > = 10%
F10	IGFX LCD Brightness Level – Increase 10% if percentage < = 90%
1/!	10% Virtual Battery
2/@	20% Virtual Battery
3/#	30% Virtual Battery
4/$	40% Virtual Battery
5/%	50% Virtual Battery
6/^	60% Virtual Battery
7/&	70% Virtual Battery
8/*	80% Virtual Battery
9/(	90% Virtual Battery
0/)	100% Virtual Battery
-/_	Virtual Battery % = Virtual Battery – 2%
= /+	Virtual Battery % = Virtual Battery + 2%

Notes:

1. The Virtual Battery hot-key values are a single key with dual purposes.
2. IGFX hot-keys are only supported when IGFX is present and is the primary display device. If that is not the case, the hot-keys will be disabled.
3. The virtual battery hot-keys are only valid when a virtual battery is present. If any real battery is present at all, these hot-keys are disabled. Additionally, the user will only be allowed to decrease battery percentages when in virtual battery mode and will only allow the user to increase battery percentages when in virtual AC Mode. Also, please note that some operating systems only display battery percentage differences that are ≥ ±4%.
4. All of the above hot-keys work in ONLY ACPI aware operating systems.

3 BIOS – SKL CRB v085.1

BIOS version	**0.85.1**
Video Option ROM (VBIOS) GOP Driver	**V1020** **GOP 9.0.1024**
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	**11.0.0.0004** N/A
RST RAID OROM	14.0.0. 2198
MEBx	11.0.0.0003
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**1.0.0**
	BIOS Guard(PFAT): 0.7.0(2.0.20150201) ACM (TXT): **SKL_BIOSAC_20150521 _PRODUCTION_Rev0.85_RC3.BIN** **SKL_BIOSAC_20150521 _DEBUG_Rev0.85_RC3.BIN** ACM (Boot Guard): **3340** Boot Guard ACM: ACM_v3305

3.1 Highlights

Update Silicon initilization code (SiC)
Update GOP and VBIOS
Updated MEBX
Update uCode
Update ACM (TXT)
Update BootGuard

3.2 Resolved Client BIOS issues

n/a



4 *n/a* BIOS – SKL CRB v084.2

BIOS version	**0.84.2**
Video Option ROM (VBIOS) GOP Driver	V1018 GOP 9.0.1022
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.0003 N/A
RST RAID OROM	14.0.0. 2198
MEBx	11.0.0.0003
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.9.0**
	BIOS Guard(PFAT): 0.7.0(2.0.20150201) ACM (TXT): Rev0.85_RC2 ACM (Boot Guard): 2.0.3120 Boot Guard ACM: ACM_v3305

4.1 Highlights

Update Silicon initilization code (SiC)
Update GOP
Update uCode
Update ACM (TXT)
Update BootGuard

4.2 Resolved Client BIOS issues

n/a

5 BIOS – SKL CRB v082

BIOS version	**0.82.0**
Video Option ROM (VBIOS) GOP Driver	V1018 GOP 9.0.1022
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.0003 N/A
RST RAID OROM	14.0.0. 2198
MEBx	11.0.0.0003
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.8.1**
	BIOS Guard(PFAT): 0.7.0(2.0.20150201) ACM (TXT): Rev0.85_RC1 ACM (Boot Guard): 2.0.3120 Boot Guard ACM: ACM_v3220

5.1 Highlights

Update Silicon initilization code (SiC)

5.2 Resolved Client BIOS issues

n/a

6 BIOS – SKL CRB v081.1

BIOS version	**0.81.1**
Video Option ROM (VBIOS) GOP Driver	**V1018** **GOP 9.0.1022**
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.0003 N/A
RST RAID OROM	14.0.0. 2198
MEBx	11.0.0.0003
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.8.0**
	BIOS Guard(PFAT): 0.7.0(2.0.20150201) ACM (TXT): **Rev0.85_RC1** ACM (Boot Guard): 2.0.3120 Boot Guard ACM: ACM_v3220

6.1 Highlights

Update Video Option ROM (VBIOS)
Update GOP
Update uCode
Update Si Code
Update ACM (TXT)

6.2 Resolved Client BIOS issues

n/a

7 BIOS – SKL CRB v078.1

BIOS version	**0.78.1**
Video Option ROM (VBIOS) GOP Driver	**V1017** GOP 9.0.1021
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.0003 N/A
RST RAID OROM	14.0.0. 2198
MEBx	11.0.0.0003
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	0.7.2
	BIOS Guard(PFAT): 0.7.0(2.0.20150201) ACM (TXT): Rev0.8_RC3 ACM (Boot Guard): 2.0.3120 Boot Guard ACM: ACM_v3220

7.1 Highlights

Update Video Option ROM (VBIOS)

Update uCode

7.2 Resolved Client BIOS issues

n/a

7.3 Known Issues / Limitations

n/a

8 BIOS – SKL CRB v075.4

BIOS version	**0.75.4**
Video Option ROM (VBIOS) GOP Driver	V1016 GOP 9.0.1021
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.0003 N/A
RST RAID OROM	14.0.0. 2198
MEBx	11.0.0.0003
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.7.2**
	BIOS Guard(PFAT): 0.7.0(2.0.20150201) ACM (TXT): Rev0.8_RC3 ACM (Boot Guard): 2.0.3120 Boot Guard ACM: ACM_v3220

8.1 Highlights

Update Silicon initilization code (SiC)

8.2 Resolved Client BIOS issues

n/a

8.3 Known Issues / Limitations

n/a

9 BIOS – SKL CRB v075.3

BIOS version	**0.75.3**
Video Option ROM (VBIOS) GOP Driver	**V1016** **GOP 9.0.1021**
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	**11.0.0.0003** N/A
RST RAID OROM	**14.0.0. 2198**
MEBx	11.0.0.0003
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.7.1**
	BIOS Guard(PFAT): **0.7.0(2.0.20150201)** ACM (TXT): **Rev0.8_RC3** ACM (Boot Guard): 2.0.3120 Boot Guard ACM: ACM_v3220

9.1 Highlights

Update GOP/vBIOS.
Update MCU
Update MEBx
Update Boot Guard PFT/ACM
Update Silicon initilization code (SiC)
Legacy USB support has been enabled

9.2 Resolved Client BIOS issues

Sporadically wireless NIC not detected by OS
ULT Thermal Trip above 2.7 GHz
Support wake from SD card events while host controller in D3



eDRAM enabling/disabling options in SKL

9.3 Known Issues / Limitations

n/a

10 BIOS – SKL CRB v071.3

BIOS version	**0.71.3**
Video Option ROM (VBIOS) GOP Driver	**V1015** **GOP 9.0.1020**
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	**14.0.0. 2198**
MEBx	11.0.0.0002
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.7.0**
	BIOS Guard(PFAT): **0.7(2.0.20141124)** ACM (TXT): **SKL_BIOSAC_20140923_DEBUG_Rev0.8_RC1** ACM (Boot Guard): **2.0.3120** Boot Guard ACM: **ACM_v3220**

10.1 Highlights

Update GOP/vBIOS.
Update MCU
Update Boot Guard PFT/ACM
Update Silicon initilization code (SiC)
Legacy USB support has been enabled
Postcodes will be routed to Intel® TraceHub in Release BIOS
Skycam configuration setup options has been extended to RVP13 and PantherMountain
Added MRC support for Phablet board



10.2 Resolved Client BIOS issues

Sx wake issue with RVP11 has been fixed
WiFi card (stone peak) detection issue has been fixed
Fixed PS2 KBD/Mouse not working issue in Windows 8.1 OS
Fixed CATERR issue during Sx cycling
Fixed critical issue that BSOD while booting to os when RTD3 is enabled.

10.3 Known Issues / Limitations

n/a

11 BIOS – SKL CRB v068.1

BIOS version	**0.68.1**
Video Option ROM (VBIOS) GOP Driver	**V1014** **GOP 9.0.1019**
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	**14.0.0. 2190**
MEBx	11.0.0.0002
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.6.5**
	BIOS Guard(PFAT): **0.7(2.0.20141124)** ACM (TXT): SKL_BIOSAC_20140923_DEBUG_Rev0.6_RC1 ACM (Boot Guard): 2.0.3108 Boot Guard ACM: **ACM_v3220**

11.1 Highlights

Update GOP/vBIOS.
Update MCU
Update Boot Guard ACM
Update Silicon initilization code (SiC)

11.2 Resolved Client BIOS issues

n/a.



11.3 Known Issues / Limitations

n/a

12 BIOS – SKL CRB v066.1

BIOS version	0.**66.1**
Video Option ROM (VBIOS) GOP Driver	V1012 **GOP 9.0.1018**
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	14.0.0.2165
MEBx	11.0.0.0002
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.6.4**
	BIOS Guard(PFAT): 1.1.02.09.2014 ACM (TXT): SKL_BIOSAC_20140923_DEBUG_Rev0.6_RC1 ACM (Boot Guard): 2.0.3108 Boot Guard ACM: **ACM_v3220**

12.1 Highlights

Update GOP/vBIOS.
Update MCU
Boot Guard ACM
Silicon initilization code (SiC)

12.2 Resolved Client BIOS issues

n/a.



12.3 Known Issues / Limitations

n/a

13 BIOS – SKL CRB v063.4

BIOS version	0.**63.4**
Video Option ROM (VBIOS) GOP Driver	V1009 GOP 9.0.1015
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	14.0.0.2165
MEBx	11.0.0.0002
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	0.6.3
	BIOS Guard(PFAT): 1.1.02.09.2014 ACM (TXT): SKL_BIOSAC_20140923_DEBUG_Rev0.6_RC1 ACM (Boot Guard): 2.0.3108 Boot Guard ACM: ACM_v3108

13.1 Highlights

Update HSIOs.

13.2 Resolved Client BIOS issues

Fix hangs during RC6 enter.

13.3 Known Issues / Limitations

n/a



14 BIOS – SKL CRB v063.3

BIOS version	0.**63.3**
Video Option ROM (VBIOS) GOP Driver	**V1009** **GOP 9.0.1015**
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	14.0.0.2165
MEBx	11.0.0.0002
PXE OROM	0.1.01
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.6.3**
	BIOS Guard(PFAT): 1.1.02.09.2014 ACM (TXT): SKL_BIOSAC_20140923_DEBUG_Rev0.6_RC1 ACM (Boot Guard): 2.0.3108 Boot Guard ACM: **ACM_v3108**

14.1 Highlights

Update Silicon initialization code.

Update vBIOS and GOP Driver

Update Microcode (0xE and 0xC)

Update Boot Guard ACM

14.2 Resolved Client BIOS issues

n/a.

14.3 Known Issues / Limitations

n/a



15 BIOS – SKL CRB v058.1

BIOS version	0.**58.1**
Video Option ROM (VBIOS) GOP Driver	V1006 GOP 9.0.1014
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	14.0.0.2165
MEBx	11.0.0.0002
PXE OROM	1.5.50
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	0.6.2
	BIOS Guard(PFAT): 1.1.02.09.2014 ACM (TXT): SKL_BIOSAC_20140923_DEBUG_Rev0.6_RC1 ACM (Boot Guard): 2.0.3108 Boot Guard ACM: ACM_v3108

15.1 Highlights

Update Silicon initialization code.

Update vBIOS

Update Microcode

Update Boot Guard ACM

15.2 Resolved Client BIOS issues

n/a.

15.3 Known Issues / Limitations

n/a



16 BIOS – SKL CRB v053.3

BIOS version	0.53.3
Video Option ROM (VBIOS) GOP Driver	V1006 GOP 9.0.1012
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	14.0.0.2165
MEBx	N/A
PXE OROM	1.5.50
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	0.6.0
	BIOS Guard(PFAT): 1.1.02.09.2014 ACM (TXT): SKL_BIOSAC_20140923_DEBUG_Rev0.6_RC1 ACM (Boot Guard): 2.0.3108

16.1 Highlights

n/a

16.2 Resolved Client BIOS issues

Set BIOS critical trip point to 119C on 95W SKU. See Skylake Processor Platform Critical Trip Point Technical Advisory doc # 554076 for details.

16.3 Known Issues / Limitations

n/a

17 BIOS – SKL CRB v053.2

BIOS version	0.53.2
Video Option ROM (VBIOS) GOP Driver	V1006 GOP 9.0.1012
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	14.0.0.2165
MEBx	N/A
PXE OROM	1.5.50
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.6.0**
	BIOS Guard(PFAT): 1.1.02.09.2014 ACM (TXT): **SKL_BIOSAC_20140923_DEBUG_Rev0.6_RC1** ACM (Boot Guard): 2.0.3108

17.1 Highlights

- Update Si code
- Update MCU
- Update ACM (TXT)
- Update ACM (Boot Guard)
- Update RST RAID OROM

17.2 Resolved Client BIOS issues

n/a



17.3 Known Issues / Limitations

n/a

18 BIOS – SKL CRB v050

BIOS version	0.50.0
Video Option ROM (VBIOS) GOP Driver	**V1006** **GOP 9.0.1012**
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	14.0.0.2150
MEBx	N/A
PXE OROM	1.5.50
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	**0.5.2**
	BIOS Guard(PFAT): 1.1.02.09.2014 ACM (TXT): **SKL_BIOSAC_20140821_DEBUG_Rev0.5_RC2** ACM (Boot Guard): V2934

18.1 Highlights

- Update Si code
- Update Video Option ROM (VBIOS)
- Update GOP
- Update MCU
- Update ACM (TXT)

18.2 Resolved Client BIOS issues

n/a



18.3 Known Issues / Limitations

n/a

19 BIOS – SKL CRB v045.1

BIOS version	0.45.1
Video Option ROM (VBIOS) GOP Driver	V1002 GOP 9.0.1009
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1071 N/A
RST RAID OROM	14.0.0.2150
MEBx	N/A
PXE OROM	1.5.50
UEFI UNDI Driver	6.023
Silicon initilization code (SiC)	0.5.1
	BIOS Guard(PFAT) 1.1.02.09.2014 ACM (TXT) 02.13.2014 ACM (Boot Guard) V2934

19.1 Highlights

- Update Si code
- Update Video Option ROM (VBIOS)
- Update GOP
- Update MCU
- Update RST

19.2 Resolved Client BIOS issues

n/a

20 BIOS – SKL CRB v041

BIOS version	0.41
Video Option ROM (VBIOS) GOP Driver	 GOP 9.0.1008
Consumer MB ME Firmware SKU Corporate MB ME Firmware SKU	11.0.0.1069 N/A
RST RAID OROM	14.0.0.2112
MEBx	N/A
PXE OROM	1.5.50
UEFI UNDI Driver	6.023
Silicon initilization code	0.5.0
	BIOS Guard(PFAT) 1.1.02.09.2014 ACM (TXT) 02.13.2014 ACM (Boot Guard) V2934

20.1 Highlights

- First external BIOS binary release

20.2 Resolved Client BIOS issues

n/a

20.3 Known Issues / Limitations

n/a