



Intel® Visual Compute Accelerator Product Family

Release Notes for 2.1 release

Rev 1.0

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Document Revision History

Date	Revision	Changes
May 2018	1.0	Create document with all information about 2.1 release.

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Table of Contents

1. Overview.....	6
2. Release packages content.....	7
3. New/Changed features.....	9
4. Known issues.....	10
5. Fixed issues.....	11

1. Overview

The Intel® Visual Compute Accelerator (Intel® VCA) family equips Intel® Xeon® Scalable processor and Intel® Xeon® processor E5-based platforms with Iris® Pro Graphics and Intel® Quick Sync Video media transcode capabilities. Comprised of three Intel Xeon processors, this PCIe* add-in card delivers outstanding total cost of ownership and is supported by a rich ecosystem of server OEMs, ISVs, and solutions. Applications include:

- Broadcast – Ultra-high channel density with high visual quality.
- Remotely rendered graphics – High video quality, low latency graphics for enterprise productivity and anytime anywhere gaming.
- Multi-party communication – Video-enabled B2B, B2C, and C2C communication with massive scaling

2. Release packages content

- Package **"IntelVisualComputeAccelerator_BIOS_2.1.292.zip"** contains:
 - VCA-BIOS_0ACGC305_0ACIE203_201802191351.img
- Package **"IntelVisualComputeAccelerator_EEPROM_2.1.292.zip"** contains:
 - M.2_support/EEPROM_dafbb163.bin
 - EEPROM_8183ffee.bin
- Package **"IntelVisualComputeAccelerator_Build_Scripts_2.1.292.zip"** contains:
 - build_scripts-2.1.292.tar.gz
- Package **"IntelVisualComputeAccelerator_Host_CentOS_7.4_2.1.292.zip"** contains:
 - daemon-vca-2.1.292-0.x86_64.rpm
 - kernel-3.10.0-693.11.6.el7.2.1.290.VCA.x86_64.rpm
 - kernel-headers-3.10.0-693.11.6.el7.2.1.290.VCA.x86_64.rpm
 - vca_debug-2.1.292.rpm
 - vca_modules-3.10.0-693.11.6.el7.2.1.290.VCA.x86_64-2.1.292-0.x86_64.rpm
- Package **"IntelVisualComputeAccelerator_Host_Debian_8.7_2.1.292.zip"** contains:
 - daemon-vca-2.1.292-amd64.deb
 - linux-headers-4.4.122-1.2.1.290.vca_1.0_amd64.deb
 - linux-image-4.4.122-1.2.1.290.vca_1.0_amd64.deb
 - vca_patches_kernel_4.4.122_2.1.290_src.tar.gz
 - vca_debug-2.1.292.deb
 - vca_modules_2.1.292-1_amd64.deb
- Package **"IntelVisualComputeAccelerator_Host_Ubuntu_16.04.3_2.1.292.zip"** contains:
 - daemon-vca-2.1.292-amd64.deb
 - linux-headers-4.4.98-1.2.1.290.vca_1.0_amd64.deb
 - linux-image-4.4.98-1.2.1.290.vca_1.0_amd64.deb
 - vca_patches_kernel_4.4.98_2.1.290_src.tar.gz
 - vca_debug-2.1.292.deb
 - vca_modules_2.1.292-1_amd64.deb
- Package **"IntelVisualComputeAccelerator_Kernels_Development_Package_2.1.292.zip"** contains:
 - kernel-devel-3.10.0-693.11.6.el7.2.1.290.VCA.x86_64.rpm
 - linux-headers-4.13.13-1.2.1.290.vca_1.0_amd64.deb
 - linux-headers-4.4.122-1.2.1.290.vca_1.0_amd64.deb
 - linux-headers-4.4.98-1.2.1.290.vca_1.0_amd64.deb
- Package **"IntelVisualComputeAccelerator_Persistent_Production_CentOS_7.4_2.1.292.zip"** contains:
 - vca_disk_centos7.4_2.1.292.vcad.gz
- Package **"IntelVisualComputeAccelerator_Persistent_Reference_Ubuntu_16.04.3_2.1.292.zip"** contains:
 - vca_disk24_reference_k4.4.98_ubuntu16.04_2.1.292.vcad.gz
- Package **"IntelVisualComputeAccelerator_Sources_2.1.292.zip"** contains:
 - daemon-vca-2.1.292-0.src.rpm
 - kernel-3.10.0-693.11.6.el7.2.1.290.VCA.src.rpm
 - vca_apps_2.1.292_src.tar.gz
 - vca_kernel_4.13.13_2.1.290_src.tar.gz
 - vca_kernel_4.4.98_2.1.290_src.tar.gz
 - vca_modules_4.4.98-1.2.1.290.vca_2.1.292_src.tar.gz
 - VcaQemu-2.1.54.src.zip
 - vca_modules-2.1.292-0.src.rpm

- Package "**IntelVisualComputeAccelerator_Volatile_KVM_Production_CentOS_7.4_2.1.292.zip**" contains:
 - vca_kvm_centos7.4_2.1.292.img
- Package "**IntelVisualComputeAccelerator_Volatile_KVMGT_Ubuntu_16.04.3_2.1.292.zip**" contains:
 - vca_kvmgt_k4.13.13_ubuntu16.04_2.1.292.img
- Package "**IntelVisualComputeAccelerator_Volatile_Reference_CentOS_7.4_2.1.292.zip**" contains:
 - vca_baremetal_reference_centos7.4_2.1.292.img
- Package "**IntelVisualComputeAccelerator_Volatile_Reference_Ubuntu_16.04.3_2.1.292.zip**" contains:
 - vca_baremetal_reference_k4.4.98_ubuntu16.04_2.1.292.img
- Package "**IntelVisualComputeAccelerator_Windows_Image_Creation_Package_2.1.292.zip**" contains:
 - answer_files
 - vca_create_windows_image.ps1
 - VCA_Windows_drivers
 - VCAgent

3. New/Changed features

New features added since previous, 2.0, release:

- added support for Ubuntu OS 16.04.3 LTS:
 - for host OS with kernel 4.4.0-112.135
 - for VCA card OS with kernel 4.4.0-112.135 and 4.13.0-32.35
- added support for CentOS 7.4 (for both host and card OS)
- added new virtualization type: GVT-g with Intel KVMGT as a hypervisor (VCA2 card only)
- added possibility to increase base TDP for each VCA2 node separately (VCA2 card only)
- enabled Intel Media Server Studio 2017 R3 on "reference" VCA images (for both CentOS 7.4 and Ubuntu OS 16.04.3 LTS)
- enabled SGX support in VCA BIOS (VCA2 card only)
- added "vcadebug" application

4. Known issues

ID	Issue ID	Exposure	Title & Workaroud
1	2264909	High	IO errors when using blockio. Workaroud: Reboot or reset VCA node.
2	2243812	High	Low KVMGT performance on 4.13 kernel. Workaroud: N/A
3	2315807	High	Soft Lockup during run iperf on Windows. Workaroud: N/A
4	2323829	High	Blockio become "read-only". Workaroud: Reboot or reset VCA node.
5	2075992	Medium	Sometimes nodes may stuck in "net_device_ready" status after card OS reboot. Workaroud: Reboot or reset VCA node.
6	2059474	Medium	Sometimes nodes may stuck in "link_down" state after card OS reboot. Workaroud: Reboot or reset VCA node.
7	2161106	Medium	Performance for Windows BM for third node is degraded (NodeToHost direction only). Workaroud: Reboot or reset VCA node.
8	2329069	Low	Failed to change "va-min-free-memory-enabled-node" option in VCA config file. Workaroud: Manually edit configuration file.
9	1796380	Low	Confusing message in "vca_config_upgrade.sh" script. Workaroud: N/A
10	1538975	Low	"vca_config_upgrade.sh" script doesn't recover removed option in manual mode. Workaroud: N/A

5. Fixed issues

ID	Issue ID	Exposure	Title
1	2288663	Stopper	Never ending booting on CentOS7.4 + CentOS BM.
2	2286872	Stopper	Never ending booting on KVM image.
3	2249599	Stopper	Cannot set CPU Governor to "intel_pstate" for SKL (VCA2).
4	2245460	Stopper	Installing modules and apps from .deb needs additional steps to work.
5	2243421	Stopper	Spectre/meltdown patch test doesn't pass.
6	2213723	Stopper	DHCP doesn't work with Ubuntu.
7	2182195	Stopper	GigaBit doesn't work with 8 VCA inside.
8	2083297	Stopper	"power_off" status after setting gpu-aperture to 2GB.
9	2058939	Stopper	Updating BIOS from 202 to 203 throws errors.
10	1956934	Stopper	Ubuntu persistent has Read-Only file system.
11	1943396	Stopper	Never ending booting on Windows over Blockio.
12	1934283	Stopper	Low performance on Ubuntu image.
13	1815212	Stopper	Low media performance/tests failures on MSS PV3 (CentOS 7.3 & Ubuntu OS 16.04.3).
14	2307239	High	Can't connect with kvmgt image booted on node.
15	2240772	High	Command "vcactl pwrbtn-short" doesn't work properly on Ubuntu.
16	2235640	High	Ubuntu images with bridging doesn't work, net_device_no_ip with booting persistent image.
17	2224554	High	Debian - network on nodes doesn't work.
18	2095776	High	Soft lockup on WFP with Ubuntu 16.04 kernel 4.4.110-1.2.1.179.vca.
19	2080890	High	Vcauser is NOT owner of /sys/class/vca/* files.
20	2080553	High	Ubuntu 4.4.90 vca_disk has 3GB instead of 50GB.
21	2035119	High	Soft lockup on new WFP during kernel installation.
22	1987584	High	Net device up on nodes with image vca_disk_reference_ubuntu16.04.3_2.1.1231.vcad.
23	1953706	High	"vcactl network ip" command return error.
24	1901134	High	Cannot boot Windows images on node.
25	1904200	High	"net_device_down" status after booting Windows over KVM.
26	2235630	Medium	Ubuntu images with static IP doesn't work.
27	2224676	Medium	vcactl path on vcausers_default is not set on Debian.
28	2160578	Medium	Check MCE log and daemon tests failed on Ubuntu.
29	2160346	Medium	"vcactl temp" command doesn't work on Ubuntu.
30	2076239	Medium	"vcactl pwrbtn-long" command bring nodes to link_down instead of power_off.
31	2069531	Medium	"last-os-image" field cleared when calling "vcactl config os-image" command.
32	2013273	Medium	BM volatile reference image with kernel 4.10 doesn't work (never ending booting) (VV case)
33	1993569	Medium	Blockio devices are cleared by "vcactl config-default" command.
34	1979333	Medium	Serial console on persistent image with kernel 4.4.70 doesn't work.
35	1959427	Medium	Node IP is not assigned from DHCP server.
36	1948013	Medium	Wrong build version on Ubuntu 16.04.3.
37	1834246	Medium	Problem with reopening blockio partition.
38	1589601	Medium	"link_down" status on nodes after perform "vcactl pwrbtn-short" command.
39	2308045	Low	Daemon-vca deb package have no mtools dependency.
40	2299955	Low	Can't boot volatile image when "ramdisk" is mounted over blockio.
41	2230467	Low	"vcactl wait" command stops at "dhcp_error" status when booting Ubuntu image with DHCP.
42	2172298	Low	"vcactl get-BIOS-cfg tdp" command doesn't work properly.
43	2133518	Low	"vcactl update-BIOS" command ends at "power_off" status and goes to bios_up after a minute.
44	1965185	Low	"vcaddebug" tool doesn't work on Ubuntu OS.

Intel® Visual Compute Accelerator Release Notes

45	1934384	Low	Long path to os-image doesn't works with autoboot after reboot host.
46	1859991	Low	"vcactl update-MAC" command doesn't work on Ubuntu OS.
47	1836641	Low	Wrong permissions for configuration files on Debian.
48	1809898	Low	Problem with coping large files on Windows Server 2016 booted via KVM.
49	1743195	Low	Windows booting stuck in "net_device_down" status – "vcactl wait" command throws error.
50	1690115	Low	"vcactl wait-BIOS" command return "net_device_down" status, not "bios_up".
51	1580127	Low	Card generation mismatch in "vcactl update-EEPROM" command output.