



# **Intel® Visual Compute Accelerator Product Family**

***Release Notes for 2.2 release***

**Rev 1.0**

**July 2018**

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## ***Document Revision History***

<b>Date</b>	<b>Revision</b>	<b>Changes</b>
July 2018	1.0	Create document with all information about 2.2 release.

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# 1. Overview

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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

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- Package **"IntelVisualComputeAccelerator\_BIOS\_2.2.29.zip"** contains:
  - VCA-BIOS\_0ACGC305\_0ACIE203\_201802191351.img
- Package **"IntelVisualComputeAccelerator\_EEPROM\_2.2.29.zip"** contains:
  - M.2\_support/eeprom\_dafbb163.bin
  - eeprom\_8183ffee.bin
- Package **"IntelVisualComputeAccelerator\_Build\_Scripts\_2.2.29.zip"** contains:
  - build\_scripts-2.2.29.tar.gz
- Package **"IntelVisualComputeAccelerator\_Host\_CentOS\_7.4\_2.2.29.zip"** contains:
  - daemon-vca-2.2.29-0.x86\_64.rpm
  - kernel-3.10.0-693.11.6.el7.2.2.29.VCA.x86\_64.rpm
  - kernel-headers-3.10.0-693.11.6.el7.2.2.29.VCA.x86\_64.rpm
  - vca\_patches\_kernel\_3.10.0-693.11.6.el7\_2.2.29\_src.tar.gz
  - vcadepub-2.2.29.rpm
  - vpass-modules-3.10.0-693.11.6.el7.2.2.29.VCA.x86\_64-2.2.29-0.x86\_64.rpm
- Package **"IntelVisualComputeAccelerator\_Host\_Debian\_8.7\_2.2.29.zip"** contains:
  - daemon-vca-2.2.29-amd64.deb
  - linux-headers-4.4.122-1.2.2.29.vca\_1.0\_amd64.deb
  - linux-image-4.4.122-1.2.2.29.vca\_1.0\_amd64.deb
  - vca\_patches\_kernel\_4.4.122\_2.2.29\_src.tar.gz
  - vcadepub-2.2.29.deb
  - vpass-modules\_2.2.29-1\_amd64.deb
- Package **"IntelVisualComputeAccelerator\_Host\_Ubuntu\_16.04.3\_2.2.29.zip"** contains:
  - daemon-vca-2.2.29-amd64.deb
  - linux-headers-4.4.98-1.2.2.29.vca\_1.0\_amd64.deb
  - linux-image-4.4.98-1.2.2.29.vca\_1.0\_amd64.deb
  - vca\_patches\_kernel\_4.4.98\_2.2.29\_src.tar.gz
  - vcadepub-2.2.29.deb
  - vpass-modules\_2.2.29-1\_amd64.deb
- Package **"IntelVisualComputeAccelerator\_Kernels\_Development\_Package\_2.2.29.zip"** contains:
  - kernel-devel-3.10.0-693.11.6.el7.2.2.29.VCA.x86\_64.rpm
  - linux-headers-4.13.13-1.2.2.29.vca\_1.0\_amd64.deb
  - linux-headers-4.4.122-1.2.2.29.vca\_1.0\_amd64.deb
  - linux-headers-4.4.98-1.2.2.29.vca\_1.0\_amd64.deb
  - vca\_patches\_kernel\_3.10.0-693.11.6.el7\_2.2.29\_src.tar.gz
  - vca\_patches\_kernel\_4.4.98\_2.2.29\_src.tar.gz
  - vca\_patches\_kernel\_4.4.122\_2.2.29\_src.tar.gz
  - vca\_patches\_kernel\_4.13\_2.2.29\_src.tar.gz
- Package **"IntelVisualComputeAccelerator\_Kernel\_3.10.106\_Patches\_2.2.29.zip"** contains:
  - 0001-initial-commit.patch
  - 0002-Add-.config.patch
  - 0003-Enabled-Xen-support-in-.config.patch
  - 0004-Add-VCA-to-EXTRAVERSION.patch
  - 0005-Added-kernel-devel-to-compilation.patch
  - 0006-net-add-skb\_checksum\_setup.patch
  - 0007-xen-netback-fix-fragment-detection-in-checksum-setup.patch
  - 0008-xen-netback-handle-IPv6-TCP-GSO-packets-from-the-gue.patch
  - 0009-xen-netback-enable-IPv6-TCP-GSO-to-the-guest.patch

- 0010-Fixed-kernel-to-not-install-firmware-in-lib-firmware.patch
- 0011-Added-compilation-and-linker-flags-required-by-SDL-D.patch
- 0012-IOMMU-Adding-domain-mapping-for-all-slots-of-NTB-bus.patch
- 0013-Allow-PCI-passthrough-for-BDW-graphics-despite-RMRR-u.patch
- 0014-Apply-VCA-IOMMU-workaround-to-host-NTB-devices.patch
- 0015-SKL-GPU-8086-193a-recognized-as-VCA\_GPU-by-IOMMU.patch
- 0016-Add-default-values-to-.config.patch
- Package "**IntelVisualComputeAccelerator\_Persistent\_Reference\_CentOS\_7.4\_2.2.29.zip**" contains:
  - vca\_disk\_centos7.4\_2.2.29.vcad.gz
- Package "**IntelVisualComputeAccelerator\_Persistent\_Reference\_Ubuntu\_16.04.3\_2.2.29.zip**" contains:
  - vca\_disk\_reference\_k4.13.13\_ubuntu16.04\_2.2.29.vcad.gz
- Package "**IntelVisualComputeAccelerator\_Sources\_2.2.29.zip**" contains:
  - daemon-vca-2.2.29-0.src.rpm
  - vca\_apps\_2.2.29\_src.tar.gz
  - kernel-3.10.106\_1.2.2.29.VCA-1.src.rpm
  - kernel-3.10.0-693.11.6.el7.2.2.29.VCA.src.rpm
  - vca\_patches\_kernel\_3.10.0-693.11.6.el7\_2.2.29\_src.tar.gz
  - vca\_kernel\_4.13.13\_2.2.29\_src.tar.gz
  - vca\_patches\_kernel\_4.13\_2.2.29\_src.tar.gz
  - vca\_kernel\_4.4.98\_2.2.29\_src.tar.gz
  - vca\_patches\_kernel\_4.4.98\_2.2.29\_src.tar.gz
  - vca\_kernel\_4.4.122\_2.2.29\_src.tar.gz
  - vca\_patches\_kernel\_4.4.122\_2.2.29\_src.tar.gz
  - vcass-modules-2.2.29-0.src.rpm
  - vcass-modules-2.2.29-0.src.rpm
  - vca\_qemu\_2.2.29\_src.tar.gz
- Package "**IntelVisualComputeAccelerator\_Volatile\_KVM\_Production\_CentOS\_7.4\_2.2.29.zip**" contains:
  - vca\_kvm\_centos7.4\_2.2.29.img
- Package "**IntelVisualComputeAccelerator\_Volatile\_KVMGT\_Ubuntu\_16.04.3\_2.2.29.zip**" contains:
  - vca\_kvmgt\_k4.13.13\_ubuntu16.04\_2.2.29.img
- Package "**IntelVisualComputeAccelerator\_Volatile\_Reference\_CentOS\_7.4\_2.2.29.zip**" contains:
  - vca\_baremetal\_reference\_centos7.4\_2.2.29.img
- Package "**IntelVisualComputeAccelerator\_Volatile\_Reference\_Ubuntu\_16.04.3\_2.2.29.zip**" contains:
  - vca\_baremetal\_reference\_k4.4.98\_ubuntu16.04\_2.2.29.img
- Package "**IntelVisualComputeAccelerator\_Windows\_Image\_Creation\_Package\_2.2.29.zip**" contains:
  - answer\_files
  - vca\_create\_windows\_image.ps1
  - VCA\_Windows\_drivers
  - VCAgent



### 3. New/Changed features

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New features added since previous, 2.1, release:

- Enabled Intel Media Server Studio 2018 R1 HF1 (aka. PV4) on "reference" <sup>1</sup> VCA images for CentOS 7.4
- Enabled Intel Media Server Studio 2018 R1 (aka. PV4) on "reference" VCA images for Ubuntu OS 16.04.3 LTS
- Added persistent (aka. vca-disk) "reference" VCA image with CentOS 7.4
- Added "vca\_image\_resize.sh" – script used to resize (both increase or decrease) size of vca-disk
- Added "vcainfo" – script used to check current load of CPU and GPU

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<sup>1</sup> "Reference" means that Intel Media Server Studio 2018 R1 (aka. PV4) has been already installed inside VCA image OS

## 4. Known issues

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ID	Issue ID	Exposure	Title & Workaround
1	2315807	High	Soft Lockup during run iperf on Windows. <b>Workaround:</b> N/A
2	2075992	Medium	Sometimes nodes may stuck in "net_device_ready" status after card OS reboot. <b>Workaround:</b> Reboot or reset VCA node.
3	2059474	Medium	Sometimes nodes may stuck in "link_down" state after card OS reboot. <b>Workaround:</b> Reboot or reset VCA node.
4	2161106	Medium	Performance for Windows BM for third node is degraded (NodeToHost direction only). <b>Workaround:</b> Reboot or reset VCA node.
5	2338237	Medium	vcactl recover-BIOS command returns Gold BIOS timeout. <b>Workaround:</b> Repeat procedure
6	2246521	Medium	"vca_kvmgctl.sh" script can run few VMs with the same MAC and IP. <b>Workaround:</b> N/A
7	2243516	Medium	KVMGT can boot 2 VMs from the same image. <b>Workaround:</b> N/A
8	2470922	Low	ICMP-watchdog doesn't restore network on Windows node. <b>Workaround:</b> N/A
9	2391102	Low	Firewall works but throws error on Ubuntu image <b>Workaround:</b> Configure firewall depends on your needs
10	2300033	Low	Can't change vcactl config when wrong value is set. <b>Workaround:</b> Manually edit configuration file.
11	2207885	Low	Difference in modules naming between .deb and .rpm. <b>Workaround:</b> N/A
12	1789719	Low	VCA Images with Centos 7.4 boots very long (VCA2 card only). <b>Workaround:</b> N/A
13	2329069	Low	Failed to change "va-min-free-memory-enabled-node" option in VCA config file. <b>Workaround:</b> Manually edit configuration file.
14	1796380	Low	Confusing message in "vca_config_upgrade.sh" script. <b>Workaround:</b> N/A
15	1538975	Low	"vca_config_upgrade.sh" script doesn't recover removed option in manual mode. <b>Workaround:</b> N/A

## 5. Fixed issues

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ID	Issue ID	Exposure	Title
1	2264909	High	IO errors when using BlockIO.
2	2243812	High	Low KVMGT performance on 4.13 kernel.
3	2323829	High	BlockIO become "read-only".
4	2235640	High	Bridging doesn't work for VCA Images with Ubuntu with kernels 4.4.98 and 4.13.13 ("net_device_no_ip" status when booting persistent image).
5	2380795	High	vca_resize_image.sh not removing all holes in sparse files.
6	2365735	High	Images with Ubuntu are only build with the base release (e.g. 16.04).
7	2300000	High	Cannot open more than 15 BlockIO partitions at the same time.
8	2430791	Medium	Getting host address in KVMGT for CentOS failed
9	2409436	Medium	vcactl doesn't work if Linux variable "ulimit -s" is set to "unlimited" value.
10	2386128	Medium	Wrong version libboost on Debian.
11	2380687	Medium	Never ending booting on Windows 10 over BlockIO.
12	2296658	Medium	"autoboot" feature doesn't work for vca_disk.
13	2243603	Medium	KVMGT VMs ID is not equal to ID from command parameter.
14	2240510	Medium	Can't boot VM on KVMGT with 4GB of GPU aperture size.
15	2235630	Medium	Network with static IPs doesn't work for VCA Images with Ubuntu with kernels 4.4.98 and 4.13.13.
16	2457469	Low	Problem with soft restarts on Windows 10 over BlockIO.
17	2388029	Low	SYMLINK_DIR/sbin/depmod is incorrect in CentOS reference boot images.