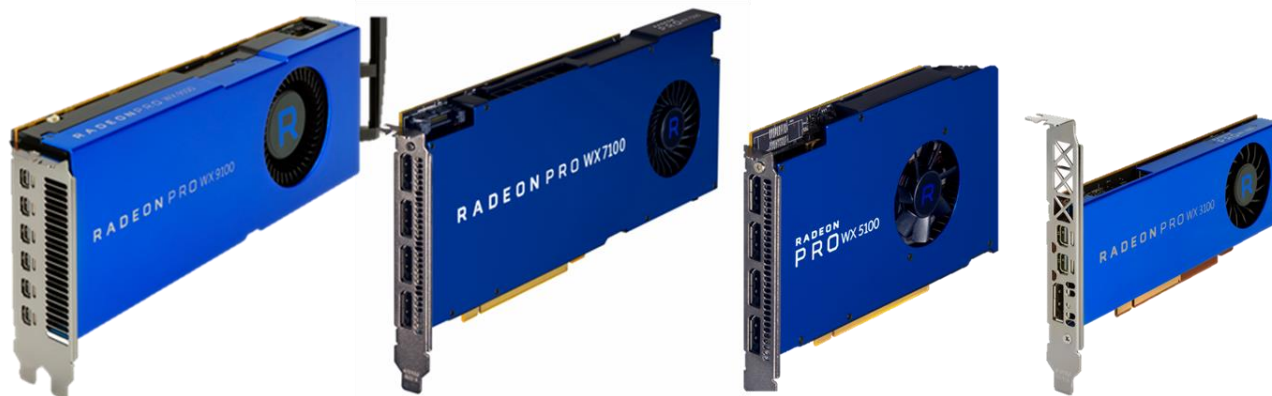


Technical Specifications

AMD Graphics



Supported Solutions

<u>Category</u>	<u>Part number</u>
Radeon™ Pro WX 9100 16GB Graphics	2TF01AA
Radeon™ Pro WX 7100 1 st GFX 8GB Graphics	Z0B14AA
Radeon™ Pro WX 4100 4GB Graphics	Z0B15AA
Radeon™ Pro WX 3100 4GB Graphics	2TF08AA
FirePro™	
AMD FirePro™ W7100 8GB Graphics	J3G93AA
AMD FirePro™ W5100 4GB Graphics	J3G92AA
AMD FirePro™ W4300 4GB Graphics	T7T58AA
AMD FirePro™ W2100 2GB Graphics	J3G91AA

SERVICE AND SUPPORT

AMD graphics cards have a one-year limited warranty or the remainder of the warranty of the HP product in which they are installed. Technical support is available seven days a week, 24 hours a day by online support forums. Parts and labor are available next business day, depending on country*. Certain restrictions and exclusions apply.

Technical Specifications

* Service levels and response times may vary depending on your geographic location. Restrictions and limitations apply. HP services are governed by the applicable HP terms and conditions of service provided or indicated to Customer at the time of purchase. Customer may have additional statutory rights according to applicable local laws, and such rights are not in any way affected by the HP terms and conditions of service or the HP Limited Warranty provided with your HP Product.

Radeon™ Pro WX 4100 4GB Graphics

Technical Specifications

Radeon™ Pro WX 4100 4GB Graphics

Compatibility	Z640, Z840, Z240 TWR, Z240 SFF
Form Factor	Low-Profile Single Slot (6.6" Length)
Graphics Controller	Polaris 11 Baffin GL XT GPU: 1024 Stream Processors organized into 16 Compute Units Power: 50 Watts Cooling: Active
Memory	4GB GDDR5 memory Memory Bandwidth: 6 Gbps / 96 GB/s Memory Width: 128 bit
Connectors	4x Mini DisplayPort 1.4 – HDR ready connectors with HBR3 and MST support. Factory Configured: Four mDP-to-DP cable adapters included After market option kit: Four mDP-to-DP cable adapters included Additional DisplayPort-to-VGA or DisplayPort-to-DVI adapters are available as Factory Configuration or Option Kit accessories.
Maximum Resolution	5K support @ 60Hz <ul style="list-style-type: none">• 1x single-cable 5K monitor, or 2x dual-cable 5K monitors 4x 4K support @ 60Hz
Image Quality Features	Advanced support for 8-bit and 10-bit per RGB color component. High bandwidth scaler for high quality up and downscaling
Display Output	4 full physical DP1.3 HBR3 / DP1.4 HDR outputs FreeSync support
GPU Architecture	GCN 4th Generation
Supported Graphics APIs	DirectX®12 OpenGL® 4.5 OpenCL™ 2.0 Vulkan™ 1.0
Available Graphics Drivers	Windows 10 64-bit Windows® 7 64-bit Linux 64-bit (selected Enterprise distributions) HP qualified drivers may be preloaded or available from the HP support Web site: http://welcome.hp.com/country/us/en/support.html

- Notes**
1. HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, monitor/TV, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support.
 2. AMD PowerTune and AMD ZeroCore Power are technologies offered by certain FirePro™ and Radeon™ Pro products, which are designed to intelligently manage GPU power consumption in response to certain GPU load conditions.
 3. As of September 2016, certified for DisplayPort™ 1.4 HBR3 and ready for DisplayPort™ 1.4 HDR based on independent verification by DisplayPort™ testing authority. HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, monitor/TV, graphics driver and

Technical Specifications

application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support.

Radeon™ Pro WX 3100 4GB Graphics

Form Factor	Low-Profile Single Slot (6.6" Length)
Graphics Controller	Polaris12 GL GPU: 512 Stream Processors organized into 8 Compute Units Power: 50 Watts Cooling: Active
Memory	4GB GDDR5 memory Memory Bandwidth: 6 Gbps / 96 GB/s Memory Width: 128 bit
Connectors	2x Mini DisplayPort™ 1.4 plus 1x DisplayPort™ 1.4 – HDR ready connectors with HBR3 and MST support. Factory Configured: No adapters included After market option kit: One mDP-to-DP cable adapters included Additional Mini DisplayPort™-to-DisplayPort™, DisplayPort™-to-VGA or DisplayPort™-to-DVI adapters are available as Factory Configuration or Option Kit accessories.
Maximum Resolution	5K support @ 60Hz <ul style="list-style-type: none">• 1x single-cable 5K monitor, or 2x dual-cable 5K monitors 3x 4K support @ 60Hz
Image Quality Features	Advanced support for 8-bit and 10-bit per RGB color component. High bandwidth scaler for high quality up and downscaling
Display Output	3 full physical DP1.3 HBR3 / DP1.4 HDR outputs FreeSync support
GPU Architecture	Polaris
Supported Graphics APIs	DirectX® 12 OpenGL® 4.5 OpenCL™ 2.0 Vulkan™ 1.0
Available Graphics Drivers	Windows 10 64-bit (Windows® 7 64-bit available from AMD) Linux® 64-bit (selected Enterprise distributions) HP qualified drivers may be preloaded or available from the HP support Web site: http://welcome.hp.com/country/us/en/support.html

- Notes**
1. HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, monitor/TV, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support.
 2. AMD PowerTune and AMD ZeroCore Power are technologies offered by certain FirePro™ and Radeon™ Pro products, which are designed to intelligently manage GPU power consumption in response to certain GPU load conditions.

Technical Specifications

- As of September 2016, certified for DisplayPort™ 1.4 HBR3 and ready for DisplayPort™ 1.4 HDR based on independent verification by DisplayPort™ testing authority. HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, monitor/TV, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support.

Radeon™ Pro WX 7100 1st GFX 8GB Graphics

Form Factor	Full-Height Single Slot (9.5" Length)
Graphics Controller	Radeon™ Pro WX 7100 graphics GPU: 2304 Stream Processors organized into 36 Compute Units Power: 130 Watts Cooling: Active
Memory	8GB GDDR5 memory Memory Bandwidth: 7 Gbps / 224 GB/s Memory Width: 256 bit
Connectors	4x Display Port 1.4 – HDR ready connectors with HBR3 and MST support. Factory Configured: No video cable adapter included After market option kit: No video cable adapter included Additional DisplayPort-to-VGA or DisplayPort-to-DVI adapters are available as Factory Configuration or Option Kit accessories.
Maximum Resolution	5K support @ 60Hz <ul style="list-style-type: none"> 1x single-cable 5K monitor, or 2x dual-cable 5K monitors
Image Quality Features	Advanced support for 8-bit, 10-bit, and 16-bit per RGB color component. High bandwidth scaler for high quality up and downscaling
Display Output	4 full physical DP1.3 HBR3 / DP1.4 HDR outputs FreeSync support
GPU Architecture	GCN 4th Generation
Supported Graphics APIs	DirectX® 12 OpenGL® 4.5 OpenCL™ 2.0 Vulkan™ 1.0
Available Graphics Drivers	Windows 10 64-bit Windows® 7 64-bit Linux 64-bit

HP qualified drivers may be preloaded or available from the HP support Web site:
<http://welcome.hp.com/country/us/en/support.html>

Technical Specifications

- Notes**
4. HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, monitor/TV, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support.
 5. Radeon VR Ready Creator Products are select Radeon Pro and AMD FirePro™ GPUs that meet or exceed the Oculus Rift or HTC Vive recommended specifications for video cards/GPUs. Other hardware (including CPU) and system requirements recommended by Oculus Rift or HTC Vive should also be met in order to operate the applicable HMDs as intended. As VR technology, HMDs and other VR hardware and software evolve and/or become available, these criteria may change without notice.
 6. AMD PowerTune and AMD ZeroCore Power are technologies offered by certain FirePro™ and Radeon™ Pro products, which are designed to intelligently manage GPU power consumption in response to certain GPU load conditions.
 7. As of September 2016, certified for DisplayPort™ 1.4 HBR3 and ready for DisplayPort™ 1.4 HDR based on independent verification by DisplayPort™ testing authority. HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, monitor/TV, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support.

Radeon™ Pro WX 9100 16GB Graphics

Form Factor	Dual Slot (4.4" Height x 10.5" Length)
Graphics Controller	Radeon™ Pro WX 9100 graphics GPU: 4096 Stream Processors Power: 250 Watts Cooling: Active
Memory	16GB HBM2 memory Memory Bandwidth: Up to 483 GB/s Memory Width: 2048 bit
Connectors	6x Mini DisplayPort 1.4 – HDR ready connectors with HBR3 and MST support. Factory Configured: No video cable adapter included After market option kit: No video cable adapter included Additional DisplayPort-to-VGA or DisplayPort-to-DVI adapters are available as Factory Configuration or Option Kit accessories.
Maximum Resolution	8K support @ 60Hz Single monitor, single or dual-cable
Image Quality Features	Advanced support for 8-bit, 10-bit, and 16-bit per RGB color component. High bandwidth scaler for high quality up and downscaling
Display Output	6 full physical mDP 1.4 HDR Ready outputs FreeSync support

Technical Specifications

GPU Architecture	Vega™
Supported Graphics APIs	DirectX® 12.1 OpenGL® 4.5 OpenCL™ 2.0 Vulkan™ 1.0
Available Graphics Drivers	Windows 10 64-bit Windows 7 available from AMD Linux® 64-bit

HP qualified drivers may be preloaded or available from the HP support Web site:
<http://welcome.hp.com/country/us/en/support.html>

Notes	<ol style="list-style-type: none"> 1. HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, monitor/TV, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support. 2. Radeon VR Ready Creator Products are select Radeon Pro and AMD FirePro™ GPUs that meet or exceed the Oculus Rift or HTC Vive recommended specifications for video cards/GPUs. Other hardware (including CPU) and system requirements recommended by Oculus Rift or HTC Vive should also be met in order to operate the applicable HMDs as intended. As VR technology, HMDs and other VR hardware and software evolve and/or become available, these criteria may change without notice. 3. AMD PowerTune and AMD ZeroCore Power are technologies offered by certain FirePro™ and Radeon™ Pro products, which are designed to intelligently manage GPU power consumption in response to certain GPU load conditions. 4. As of September 2016, certified for DisplayPort™ 1.4 HBR3 and ready for DisplayPort™ 1.4 HDR based on independent verification by DisplayPort™ testing authority. HDR content requires that the system be configured with a fully HDR-ready content chain, including: graphics card, monitor/TV, graphics driver and application. Video content must be graded in HDR and viewed with an HDR-ready player. Windowed mode content requires operating system support.
--------------	---

AMD FirePro™ W7100 8GB Graphics

Part number	J3G93AA
Compatibility	Z240, Z440, Z640, Z840
Form Factor	Full height, single slot (9.5" X 4.376")
Graphics Controller	AMD FirePro™ W7100 graphics GPU: 1792 Stream Processors organized into 28 Compute Units Power: <150 Watts Cooling: Active
Bus Type	PCI Express® x16, Generation 3.0

Technical Specifications

Memory

8GB GDDR5 memory
Memory Bandwidth: up to 176 GB/s
Memory Width: 256 bit

Connectors

4x Display Port 1.2a connectors with HBR2 and MST support.

Factory Configured: No video cable adapter included
After market option kit: No video cable adapter included

Additional DisplayPort-to-VGA or DisplayPort-to-DVI adapters are available as Factory Configuration or Option Kit accessories.

Maximum Resolution

DisplayPort:
- 4096x2160 @24bpp 60Hz

Dual Link DVI:
- 2560x1600 (requires DP to DL-DVI adapter)

Single Link DVI:
- 1920x1200 (requires DP to DVI adapter)

VGA:
- 1920x1200 (requires DP to VGA adapter)

Image Quality Features

Advanced support for 8-bit, 10-bit, and 16-bit per RGB color component.
High bandwidth scaler for high quality up and downscaling

Display Output

Max number of monitors supported using DisplayPort 1.2a:
- 4 direct attached monitors
- 6 using DP 1.2a with MST and HBR2 enabled monitors

Monitor chaining from a single DisplayPort (subject to a max of 6 total monitors across all outputs, requires use of DisplayPort enabled monitors supporting MST and HBR2):
- one 4096x2160 display
- two 2560x1600 displays
- four 1920x1200 displays

Shading Architecture

Shader Model 5.0

Supported Graphics APIs

OpenGL 4.4
OpenCL 1.2 and 2.0
DirectX 11.2 / 12
AMD Mantle

Available Graphics Drivers

Windows 10 (64-bit and 32-bit)
Windows 8.1 / 8 (64-bit and 32-bit)
Windows 7 (64-bit and 32-bit)
Linux®

HP qualified drivers may be preloaded or available from the HP support Web site:
<http://welcome.hp.com/country/us/en/support.html>

Notes

5. AMD Eyefinity technology supports up to six DisplayPort monitors on an enabled graphics card. Supported display quantity, type and resolution vary by model and

Technical Specifications

board design; confirm specifications with manufacturer before purchase. To enable more than two displays, or multiple displays from a single output, additional hardware such as DisplayPort-ready monitors or DisplayPort 1.2 MST-enabled hubs may be required. See <http://www.amd.com/eyefinityfaq> for full details.

6. OpenGL 4.4 support available with driver 14.301.xxx or later.
 7. OpenCL 2.0 support planned in driver updates for early 2015.
 8. Configurations of a single FirePro™ W7100 graphics card in HP Z440 Workstation require the HP Z440 Fan and Front Card Guide Kit, configurable from the factory (CTO PN: G8T99AV) or as an Aftermarket Option (AMO PN: J9P80AA).
-

Technical Specifications

AMD FirePro™ W5100 4GB Graphics

Part number	J3G92AA
Compatibility	Z240 CMT, Z440, Z640, Z840
Form Factor	Full height, single slot (6.75" X 4.376")
Graphics Controller	AMD FirePro™ W5100 graphics GPU Frequency: 930Mhz GPU: 768 Stream Processors organized into 12 Compute Units Power: <75 Watts Cooling: Active
Bus Type	PCI Express® x16, Generation 3.0
Memory	4GB GDDR5 memory Memory Bandwidth: up to 96 GB/s Memory Width: 128 bit
Connectors	4x Display Port 1.2 connectors with HBR2 and MST support. Factory Configured: No video cable adapter included After market option kit: No video cable adapter included Additional DisplayPort-to-VGA or DisplayPort-to-DVI adapters are available as Factory Configuration or Option Kit accessories.
Maximum Resolution	DisplayPort: - 4096x2160 @24bpp 60Hz Dual Link DVI: - 2560x1600 (requires DP to DL-DVI adapter) Single Link DVI: - 1920x1200 (requires DP to DVI adapter) VGA: - 1920x1200 (requires DP to VGA adapter)
Image Quality Features	Advanced support for 8-bit, 10-bit, and 16-bit per RGB color component. High bandwidth scaler for high quality up and downscaling
Display Output	Max number of monitors supported using DisplayPort 1.2a: - 4 direct attached monitors - 6 using DP 1.2a with MST and HBR2 enabled monitors Monitor chaining from a single DisplayPort (subject to a max of 6 total monitors across all outputs, requires use of DisplayPort enabled monitors supporting MST and HBR2): - one 4096x2160 display - two 2560x1600 displays - four 1920x1200 displays
Shading Architecture	Shader Model 5.0

Technical Specifications

Supported Graphics APIs

OpenGL 4.4
OpenCL 1.2 and 2.0
DirectX 11.2 / 12
AMD Mantle

Available Graphics Drivers

Windows 10 (64-bit and 32-bit)
Windows 8.1 / 8 (64-bit and 32-bit)
Windows 7 (64-bit and 32-bit)
Linux®

HP qualified drivers may be preloaded or available from the HP support Web site:
<http://welcome.hp.com/country/us/en/support.html>

Notes

1. AMD Eyefinity technology supports up to six DisplayPort™ monitors on an enabled graphics card. Supported display quantity, type and resolution vary by model and board design; confirm specifications with manufacturer before purchase. To enable more than two displays, or multiple displays from a single output, additional hardware such as DisplayPort-ready monitors or DisplayPort 1.2 MST-enabled hubs may be required. A maximum of two active adapters is recommended for consumer systems. See <http://www.amd.com/eyefinityfaq> for full details.
 2. Configurations of two FirePro™ W5100 graphics cards in HP Z440 Workstation require the HP Z440 Fan and Front Card Guide Kit, configurable from the factory (CTO PN: G8T99AV) or as an Aftermarket Option (AMO PN: J9P80AA).
-

Technical Specifications

AMD FirePro™ W2100 2GB Graphics

Part number	J3G91AA
Compatibility	Z240 CMT/SFF, Z440, Z640, Z840
Form Factor	Low Profile, half length (full-height bracket included)
Graphics Controller	AMD FirePro™ W2100 professional graphics based on Oland GPU. GPU: 320 Stream Processors organized into 5 Compute Units GPU Frequency: 630Mhz Power: 26W Cooling: Active
Bus Type	PCI Express® x8, Generation 3.0
Memory	2GB DDR3 memory Memory Bandwidth: up to 28.8 GB/s Memory Width: 128 bit
Connectors	2x Display Port 1.2 connectors Factory Configured: No video cable adapter included After market option kit: No video cable adapter included Additional DisplayPort-to-VGA or DisplayPort-to-DVI adapters are available as Factory Configuration or Option Kit accessories.
Maximum Resolution	DisplayPort 1.2: - up to 4096x2160 x 24 bpp @ 60Hz Dual Link DVI(I) (requires adapter cable): - up to 2560 x 1600 x 32 bpp @ 60Hz Single Link-DVI(I)(requires adapter cable): - up to 1920 x 1200 x 32 bpp @ 60Hz VGA (requires adapter cable): - up to 1920 x 1200 x 32 bpp @ 60Hz
Image Quality Features	Advanced support for 8-bit, 10-bit, and 16-bit per RGB color component. High bandwidth scaler for high quality up and downscaling.
Display Output	2 x DisplayPort® 1.2a Maximum number of displays: 2
Shading Architecture	Shader Model 5.0
Supported Graphics APIs	OpenCL™ 1.2, DirectX® 11.2/12, OpenGL 4.4 OpenGL 4.4 support with driver release 14.301.xxx OpenCL 1.2 conformance expected with drive release 14.301.xxx

Technical Specifications

Available Graphics Drivers

Windows10 (64-bit and 32-bit)
Windows 8.1 (64-bit and 32-bit)
Windows 7 (64-bit and 32-bit)
Linux®

HP qualified drivers may be preloaded or available from the HP support Web site:
<http://welcome.hp.com/country/us/en/support.html>

Notes

Depending on the card model, native DisplayPort™ connectors and/or certified DisplayPort™ active or passive adapters to convert your monitor's native input to your card's DisplayPort™ or Mini-DisplayPort™ connector(s) may be required. See www.amd.com/FirePro™ for details.

Technical Specifications

AMD FirePro™ W4300 4GB Graphics

Part number	T7T58AA
Compatibility	Z240, Z440, Z640, Z840
Form Factor	Low Profile, single slot (6.6" x 3.118") Full Height, single slot (6.6" x 4.725")
Graphics Controller	AMD FirePro™ W4300 graphics GPU Frequency: 930Mhz Memory Clock Speed: 1500Mhz GPU: 768 Stream Processors organized into 12 Compute Units Power: <50 Watts Cooling: Active
Bus Type	PCI Express® x16, Generation 3.0
Memory	4GB GDDR5 memory Memory Bandwidth: up to 96 GB/s Memory Width: 128 bit
Connectors	4x Mini Display Port 1.2 connectors with HBR2 and MST support. Factory Configured: 4 mini-DP to DP cables After market option kit: 4 mini-DP to DP cables Additional DisplayPort-to-VGA, DisplayPort-to-HDMI, or DisplayPort-to-DVI adapters are available as Factory Configuration or Option Kit accessories.
Maximum Resolution	DisplayPort: - 4096x2160 @24bpp (3 x 4K @ 60Hz, 4 x 4K @ 30Hz)
Image Quality Features	Advanced support for 8-bit, 10-bit, and 16-bit per RGB color component. High bandwidth scaler for high quality up and downscaling Incorporated Adaptive-Sync enables FreeSync™ technology from AMD that allows GPU control of display refresh rates for tear-free and jitter-free image quality when rotating models or viewing video content. (Requires FreeSync compliant displays)
Display Output	Max number of monitors supported using DisplayPort 1.2a: - 4 direct attached monitors - 6 using DP 1.2a with MST and HBR2 enabled monitors Monitor chaining from a single DisplayPort (subject to a max of 6 total monitors across all outputs, requires use of DisplayPort enabled monitors supporting MST and HBR2): - one 4096x2160 display - two 2560x1600 displays - four 1920x1200 displays
Shading Architecture	Shader Model 5.0
Supported Graphics APIs	OpenGL 4.4 OpenCL 2.0 DirectX 12.0
Available Graphics Drivers	Windows 10 (64-bit and 32-bit)

Technical Specifications

Windows 7 (64-bit and 32-bit)
Linux®

HP qualified drivers may be preloaded or available from the HP support Web site:
<http://welcome.hp.com/country/us/en/support.html>

- Notes**
1. AMD Eyefinity technology supports up to six DisplayPort™ monitors on an enabled graphics card. Supported display quantity, type and resolution vary by model and board design; confirm specifications with manufacturer before purchase. To enable more than two displays, or multiple displays from a single output, additional hardware such as DisplayPort-ready monitors or DisplayPort 1.2 MST-enabled hubs may be required. A maximum of two active adapters is recommended for consumer systems. See www.amd.com/eyefinityfaq for full details.
 2. Configurations of two FirePro™ W4300 graphics cards in HP Z440 Workstation require the HP Z440 Fan and Front Card Guide Kit, configurable from the factory (CTO PN: G8T99AV) or as an Aftermarket Option (AMO PN: J9P80AA).
-

Summary of Changes

Date of change:	Version History:		Description of change:
January 1, 2017	From v1 to v2	Added	Radeon™ Pro WX 7100 8GB Graphics specs
June 5, 2017	From v2 to v3	Added	Radeon™ Pro WX 4100 4GB Graphics specs
December 13, 2017	From v3 to v4	Added	Radeon™ Pro WX 7100 1 st GFX 8GB Graphics and Radeon™ Pro WX 3100 4GB Graphics
March 27, 2018	From v4 to v5	Added	Radeon™ Pro WX 9100 16GB Graphics

© Copyright 2018 HP Development Company, L.P.

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein. The information contained herein is subject to change without notice. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Intel is a trademark of Intel Corporation in the U.S. and other countries. AMD is a trademark of Advanced Micro Devices, Inc. Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries.