

## Graphics Boards for *hyperCAD*<sup>®</sup>-S

System requirements: graphics engine requires an OpenGL accelerated graphics display driver. Latest generation of GPU with OpenGL 4.0 or higher is recommended.

Windows don't supply OpenGL accelerated drivers out of the box. End users will need to install drivers from OEM or manufacturers in order to access native hardware-accelerated OpenGL. These drivers can be found on the web sites of most hardware manufacturers.

The following table gives the list of graphic cards and display driver suggested. **Please note:** This does not mean that *hyperCAD*<sup>®</sup>-S can only run on these specific systems. These are only the systems that are currently running automated test or are currently used in daily work. *hyperCAD*<sup>®</sup>-S should run on any graphics system that supports a complete implementation of OpenGL.

Reference driver can be installed on notebook GPUs. However, please note that your notebook original equipment manufacturer (OEM) provides drivers for your specific notebook on their website. Please check with your notebook OEM about recommended software updates for your notebook.

On system with two graphic boards select the accelerated GPU (AMD/NVIDIA) instead of the integrated one, from the relative display control panel.

With NVIDIA Quadro board we recommend to use the "Workstation app - dynamic streaming" or the "3D App - Visual Simulation" profiles from the NVIDIA control panel.

On Windows 7 enable the desktop composition and the Aero Peek. Don't use the Basic themes like Windows 7 Basic or Windows Classic which prevent to enable the desktop composition. First select an Aero Theme from Control Panel->Personalization. Then enable the desktop composition from: Control Panel->System->Advanced system settings->Advanced->Performance Settings->Visual Effects->Enable desktop composition.

Windows 10 feature update may change the display driver or video card settings without any notification. We recommend checking after the Windows update. The *hyperCAD*-S<version>\systemchecktool.exe application may help you to identify problems.

Brand	Year	Series	Product	Windows 7 x64	Windows 8.1 x64 <a href="#">NVIDIA Driver downloads</a>	Windows 10 x64	
Quadro desktop workstation	2008	FX	FX 1800				
			FX 3800	340.84	340.84	341.96	
			FX 4800	341.96	341.96		
			FX 5800				
	2009-2010	Fermi	600				
			2000	340.84	340.84	341.96	
			4000	376.84	376.84	376.84	
			5000				
	2013	Kepler	6000				
			K600	376.84	376.84	376.84	
			K2000	391.03	391.03	391.03	
			K4000	392.37	392.37	392.37	
	2014	Kepler	K5000	412.40	412.40	412.40	
			K6000				
			K620	376.84	376.84	376.84	
			K1200	391.03	391.03	391.03	
	2015-2016	Maxwell	K2200	392.37	392.37	392.37	
			K4200	412.40	412.40	412.40	
			K5200				
			M2000	376.84	376.84	376.84	
	2017	Pascal	M4000	391.03	391.03	391.03	
			M5000	392.37	392.37	392.37	
			M6000	412.40	412.40	412.40	
			P400	376.84	376.84	376.84	
			P620 P600	391.03	391.03	391.03	
			P1000	392.37	392.37	392.37	
			P2000	412.40	412.40	412.40	
2018	Pascal	P4000					
		P5000					
2019	Turing	P6000					
		GP100					
		P5200	412.40	412.40	412.40		
		GV100					
		RTX 3000					
2019	Turing	RTX 4000	412.40	412.40	412.40		
		RTX 5000	431.94	431.94	431.94		
		RTX 6000					
		RTX 8000					
Quadro notebook	2008	FX	FX 880M				
			FX 1800M	340.84	340.84	341.96	
			FX 2800M	341.96	341.96		
			FX 3800M				
	2009-2010	Fermi	1000M	340.84	340.84	377.55	
				377.55	377.55		
	2009-2010	Fermi	2000M	340.84	340.84	341.96	
			3000M	376.84	376.84	376.84	
			4000M	391.03	391.03	391.03	
			5000M				
	2013	Kepler	K1000M				
			K2000M	376.84	376.84	376.84	
			K3000M	391.03	391.03	391.03	
			K4000M	392.37	392.37	392.37	
			K5000M	412.40	412.40	412.40	
	2013-2014	Kepler	K1100M				
K2100M			376.84	376.84	376.84		
K3100M			391.03	391.03	391.03		
K4100M			392.37	392.37	392.37		
K5100M			412.40	412.40	412.40		
K2200M							
2015-2016	Maxwell	M500M					
		M600M					
		M1000M	376.84	376.84	376.84		
		M2000M	391.03	391.03	391.03		
		M3000M	392.37	392.37	392.37		
		M4000M	412.40	412.40	412.40		
		M5000M					
2017	Maxwell	M620	391.03	391.03	391.03		
		M1200	392.37	392.37	392.37		

GeForce desktop / notebook	2017	Pascal	M2200	412.40	412.40	412.40			
			P600						
			P1000						
			P2000	391.03	391.03	391.03			
			P3000	392.37	392.37	392.37			
			P4000	412.40	412.40	412.40			
	2018	Pascal	P5000						
			P3200	392.37	392.37	392.37			
			P4200	412.40	412.40	412.40			
	2019	Turing	P5200						
			T1000	431.94	431.94	431.94			
	GeForce desktop / notebook	2009	Fermi	T2000					
				GTX 590, 580, 570, 560	372.70 391.35	372.70 391.35	372.70 391.35		
		2012	Kepler	GTX 590, 580, 570, 560	372.70 398.36 430.86	372.70 398.36 430.86	372.70 398.36 430.86		
				2014	Kepler	GTX 750			
						GTX 760	372.70	372.70	372.70
		GTX 770	398.36			398.36	398.36		
		GTX 780	430.86			430.86	430.86		
		2015	Maxwell	GTX TITAN					
GTX 950									
GTX 960				372.70	372.70	372.70			
GTX 970				398.36	398.36	398.36			
GTX 980				430.86	430.86	430.86			
2016-2017		Pascal	GTX TITAN X						
			GTX 1050						
			GTX 1060	372.70	372.70	372.70			
			GTX 1070 / Ti	398.36	398.36	398.36			
			GTX 1080 / Ti	430.86	430.86	430.86			
2018-2019		Turing	TITAN XP						
			RTX 2060						
	RTX 2070								
	RTX 2080 / Ti		430.86	430.86	430.86				
			TITAN RTX						

Brand	Year	Series	Product	Windows 7 x64	Windows 8.1 x64 <a href="#">AMD Driver downloads</a>	Windows 10 x64
AMD - ATI	2011	V	V3800	13.352.1019 15.201.2401.1009	13.352.1019 15.201.2401.1009	15.201.2401.1010
			V4800			
			V5800			
			V7800			
			V8800			
	2013	V	V3900	13.352.1019 15.201.2401.1009	13.352.1019 15.201.2401.1009	15.201.2401.1010
			V4900			
			V5900			
			V7900			
	2014	W	W600	13.352.1019 15.301.2601 18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0	13.352.1019 15.301.2601 18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0	15.301.2601 18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0
			W5000			
			W7000			
			W8000			
			W9000			
	2015	W	W2100	13.352.1019 15.301.2601 18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0	13.352.1019 15.301.2601 18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0	15.301.2601 18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0
			W4100			
			W5100			
			W7100			
			W8100			
	W9100					
2016	W	W4300	15.301.2601 18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0	15.301.2601 18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0	15.301.2601 18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0	
		W4300				
Radeon Pro desktop workstation	2017	WX	WX 2100	18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0 19Q2.1 Enterprise 26.20.11018.6	n.a.	18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0 19Q2.1 Enterprise 26.20.11018.6
			WX 3100			
			WX 4100			
			WX 5100			
			WX 7100			
2019	WX	WX 9100	19Q2.1 Enterprise 26.20.11018.6	n.a.	19Q2.1 Enterprise 26.20.11018.6	
		WX 3200 WX 8200				
Radeon desktop workstation	2012	HD 6000	HD 6000 series	Catalyst 13.12 Driver 13.251 Crimson 16.2.1 Driver 15.301.1901	Catalyst 13.12 Driver 13.251 Crimson 16.2.1 Driver 15.301.1901	Crimson 16.2.1 Driver 15.301.1901
			7300			
	2012	HD 7000	7400	Catalyst 13.12 Driver 13.251 Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	Catalyst 13.12 Driver 13.251 Crimson 16.2.1 Driver 15.301.1901	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009
			7500			
			7600			
			7700			
			7800			
	2013	HD 8000	7900	Catalyst 13.12 Driver 13.251 Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	Catalyst 13.12 Driver 13.251 Crimson 16.2.1 Driver 15.301.1901	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009
			8300			
			8400			
			8500			
			8600			
			8700			
	2013	R5	8800	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	Crimson 16.2.1 Driver 15.301.1901	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009
			8900			
			220			
			230			
			240			
	2014	R7	240	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	Crimson 16.2.1 Driver 15.301.1901	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009
			250			
260						
350						
360						
2015	R9	270	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	Crimson 16.2.1 Driver 15.301.1901	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	
		280				
		290				
		380				
		390				
2016	RX 400	460	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	Crimson 16.2.1 Driver 15.301.1901	Crimson 16.2.1 Driver 15.301.1901 Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	
		470				
		480				
2017-2018	RX 500	550	Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	n.a.	Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004 Adrenalin 19.5.2 - 26.20.11015.5009	
		560				
		570				
		580				
2019	VEGA	VEGA Series	Adrenalin 19.5.2 - 26.20.11015.5009	n.a.	Adrenalin 19.5.2 - 26.20.11015.5009	