

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

System requirements: graphics engine requires an OpenGL accelerated graphics display driver. Latest generation of GPU with OpenGL 3.3 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 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	412.29	412.29	412.29	
			K6000	419.17	419.17	419.17	
			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	412.29	412.29	412.29	
			K5200	419.17	419.17	419.17	
			M2000	376.84	376.84	376.84	
	2017	Pascal	M4000	391.03	391.03	391.03	
			M5000	392.37	392.37	392.37	
			M6000	412.29	412.29	412.29	
			P400	376.84	376.84	376.84	
	2018	Pascal	P620 P600	391.03	391.03	391.03	
			P1000	392.37	392.37	392.37	
			P2000	412.29	412.29	412.29	
			P4000	419.17	419.17	419.17	
2019	Turing	P5000	412.29	412.29	412.29		
		P6000	419.17	419.17	419.17		
		GP100					
		GV100	412.29	412.29	412.29		
2019	Turing	RTX 4000	419.17	419.17	419.17		
		RTX 5000	412.29	412.29	412.29		
		RTX 6000	419.17	419.17	419.17		
		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	376.84	376.84	376.84	
			K2000M	391.03	391.03	391.03	
			K3000M	392.37	392.37	392.37	
			K4000M	419.17	419.17	419.17	
	2013-2014	Kepler	K5000M				
			K1100M	376.84	376.84	376.84	
			K2100M	391.03	391.03	391.03	
			K3100M	392.37	392.37	392.37	
	2015-2016	Maxwell	K4100M	412.29	412.29	412.29	
			K5100M	419.17	419.17	419.17	
			K2200M				
			M500M	376.84	376.84	376.84	
	2017	Maxwell	M600M	391.03	391.03	391.03	
			M1000M	392.37	392.37	392.37	
			M2000M	412.29	412.29	412.29	
			M3000M	419.17	419.17	419.17	
	2017	Maxwell	M4000M				
			M5000M				
M620			391.03	391.03	391.03		
M1200			392.37	392.37	392.37		
2017	Maxwell	M2200	412.29	412.29	412.29		

GeForce desktop / notebook	2017	Pascal	P600			
			P1000	391.03	391.03	391.03
			P2000	392.37	392.37	392.37
			P3000	412.29	412.29	412.29
			P4000	419.17	419.17	419.17
	2018	Pascal	P5000			
			P3200	392.37	392.37	392.37
			P4200	412.29	412.29	412.29
	2009	Fermi	P5200	419.17	419.17	419.17
			GTX 590, 580, 570, 560	372.70 391.35	372.70 391.35	372.70 391.35
	2012	Kepler	GTX 690, 680, 660, 650	372.70 398.36 418.81	372.70 398.36 418.81	372.70 398.36 418.81
	2014	Kepler	GTX 750			
			GTX 760	372.70	372.70	372.70
			GTX 770	398.36	398.36	398.36
			GTX 780	418.81	418.81	418.81
	2015	Maxwell	GTX TITAN			
			GTX 950	372.70	372.70	372.70
			GTX 960	398.36	398.36	398.36
			GTX 970	418.81	418.81	418.81
			GTX 980			
	2016-2017	Pascal	GTX TITAN X			
GTX 1050			372.70	372.70	372.70	
GTX 1060			398.36	398.36	398.36	
GTX 1070 / Ti			418.81	418.81	418.81	
GTX 1080 / Ti						
2018-2019	Turing	TITAN XP				
		RTX 2060	418.81	418.81	418.81	
		RTX 2070				
		RTX 2080 / Ti				
		TITAN RTX				

Brand	Year	Series	Product	Windows 7 x64	Windows 8.1 x64 <a href="#">AMD Driver downloads</a>	Windows 10 x64	
AMD - ATI	FirePro workstation	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						
Radeon Pro workstation	2017	WX	WX 2100	18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0	n.a.	18Q1 Enterprise 23.20.15018.16 18Q2.1 Enterprise 24.20.11001.15002 18Q4 Enterprise 24.20.13026.0	
			WX 3100				
			WX 4100				
WX 5100							
WX 7100							
2018	WX	WX 8200	18Q4 Enterprise 24.20.13026.0	n.a.	18Q4 Enterprise 24.20.13026.0		
		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	
Radeon desktop	2012	HD 7000	7300	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	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	
			7400				
			7500				
			7600				
			7700				
	2013	HD 8000	7800	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	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	
			7900				
			8300				
			8400				
			8500				
	2013	R5	8600	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	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	
			8700				
			8800				
			8900				
			220				
	2014	R7	230	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	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	
			240				
			240				
			250				
			260				
2015	R9	350	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	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		
		360					
		270					
		280					
		290					
2016	RX 400	380	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	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		
		390					
		460					
2017-2018	RX 500	470	Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004	n.a.	Adrenalin 18.5.1 Driver 24.20.11016.4 Adrenalin 19.1.1 - 25.20.15011.1004		
		480					
		550					
		560					
		570					
580							
590							