

Colorful520-2048M D3 LP 0dB (N520-203-Q01)

Colorful520-1024M D3 LP 0DB (N520-103-Q01)

Colorful520-512M D3 LP 0DB (N520-053-Q01)

**The three cards share the same looks and only differ in memory capacity and module.*

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Model Name:

203: Colorful520-2048M D3 LP 0dB (N520-203-Q01)

103: Colorful520-1024M D3 LP 0DB (N520-103-Q01)

053: Colorful520-512M D3 LP 0DB (N520-053-Q01)

Brief Information:

Memory: **203:** 2048MB / 64bit, DDR 3

103: 1024MB / 64bit, DDR 3

053: 512MB / 64bit, DDR 3




Clocks (core/memory) **203 & 103 & 053:** 810MHz / 1000MHz

Video Ports: VGA + HDMI + DVI

TDP: 29W

DirectX: 11





Specification:

Chipset	GPU	NVIDIA GeForce GT 520 (GF119)
	Manufacturing Process	40 nm
	CUDA cores	48
Clock Speeds	Core Clock	810 MHZ
	Shader Clock	1620 MHz
	Memory Clock	1000 MHZ
Memory	Memory Size	203: 2048 MB 103:1024 MB 053:512 MB
	Memory Interface	64 BIT
	Memory Type	DDR 3
Interface and Connectors	Video Outport	VGA + HDMI + DVI
	PCI Express	2.0
	Additional Power connectors	N/A
	SLI	N/A
Thermal	Board Power (Idle / Load)	203 & 103 & 053: 7.9 W / 31.1 W^{*Note1}
	TDP (NVIDIA)	29 W
	Temperature (Idle / Load)	203: 34°C (GPU-Z) / 71°C (Furmark)^{*Note2} 103: 37°C (GPU-Z) / 75°C (Furmark) 053: 38°C (GPU-Z) / 84°C (Furmark)
Cooling	Type	Passive
	Fan Speed	N/A
	Acoustical Noise	0 dBA
	Fan Power Connector	2-pin
3D API	DirectX /Shader Model	11 / 5.0
	OpenGL	4.1
Others	Featured Technologies	  
	Form Factor	Dual Slot, Low Profile
	Packaging	1* Graphics Card, 1* User's Manual, 1* Driver CD, 2* brackets

Note 1: The test is only tested on 520-203(2G) and the power for 520-103(1G) & 520-053(512M) are not supposed to exceed the scope.

Note 2: The temperature is read from the software like GPU-Z and Furmark, and the data may not exactly show the actual electrical thermal status of the graphics card. Usually when tested by the infrared thermometer, the figures are always higher than those shown by software. However, considering few DIY users may use an infrared thermometer at hand to test the card's temperature, I give the software-based data here for reference, which should be more meaningful to most users.

Parts of the graphics card:

 <p>Front</p>	 <p>45° View</p>
 <p>Video ports</p>	 <p>135° View</p>
 <p>Back of N520-203-Q01</p>	 <p>Packaging and accessories</p>

GPU-Z and FurMark Reference:

203:

TechPowerUp GPU-Z 0.5.4

Graphics Card		Sensors	Validation
Name	NVIDIA GeForce GT 520		
GPU	GF119	Revision	A1
Technology	40 nm	Die Size	79 mm ²
Release Date	Apr 12, 2011	Transistors	Unknown
BIOS Version	75.19.1B.00.17		
Device ID	10DE - 1040	Subvendor	Colorful (7377)
ROPs	8	Bus Interface	PCI-E x16 @ x16
Shaders	48 Unified	DirectX Support	11.0 / SM5.0
Pixel Fillrate	6.5 GPixel/s	Texture Fillrate	6.5 GTexel/s
Memory Type	DDR3	Bus Width	64 Bit
Memory Size	2048 MB	Bandwidth	8.0 GB/s
Driver Version	nvlddmkm 8.17.12.6742 (ForceWare 267.59) / Win7		
GPU Clock	810 MHz	Memory	500 MHz
Default Clock	810 MHz	Memory	500 MHz
Shader	1620 MHz		
NVIDIA SLI	Disabled		
Computing	<input checked="" type="checkbox"/> OpenCL	<input checked="" type="checkbox"/> CUDA	<input checked="" type="checkbox"/> PhysX
	<input checked="" type="checkbox"/> DirectCompute 5.0		

GPU-Z of N520-203-Q01: Graphics Card

TechPowerUp GPU-Z 0.5.4

Graphics Card		Sensors	Validation
GPU Core Clock	270.0 MHz		
GPU Memory Clock	405.0 MHz		
GPU Shader Clock	540.0 MHz		
GPU Temperature	34.0 °C		
Fan Speed	40 %		
Memory Used	81 MB		
GPU Load	1 %		
Memory Controller Load	7 %		
Video Engine Load	0 %		
VDDC	0.9000 V		

Idle Temperature of N520-203-Q01:34°C

103:

TechPowerUp GPU-Z 0.5.4

Graphics Card		Sensors	Validation
Name	NVIDIA GeForce GT 520		
GPU	GF119	Revision	A1
Technology	40 nm	Die Size	79 mm ²
Release Date	Apr 12, 2011	Transistors	Unknown
BIOS Version	75.19.1B.00.01		
Device ID	10DE - 1040	Subvendor	Colorful (7377)
ROPs	8	Bus Interface	PCI-E 2.0 x16 @ x16 2.0
Shaders	48 Unified	DirectX Support	11.0 / SM5.0
Pixel Fillrate	6.5 GPixel/s	Texture Fillrate	6.5 GTexel/s
Memory Type	DDR3	Bus Width	64 Bit
Memory Size	1024 MB	Bandwidth	8.0 GB/s
Driver Version	nvlddmkm 8.17.12.6742 (ForceWare 266.58) / Win7		
GPU Clock	810 MHz	Memory	500 MHz
Default Clock	810 MHz	Memory	500 MHz
Shader	1620 MHz		
NVIDIA SLI	Disabled		
Computing	<input type="checkbox"/> OpenCL	<input checked="" type="checkbox"/> CUDA	<input type="checkbox"/> PhysX
	<input checked="" type="checkbox"/> DirectCompute 5.0		

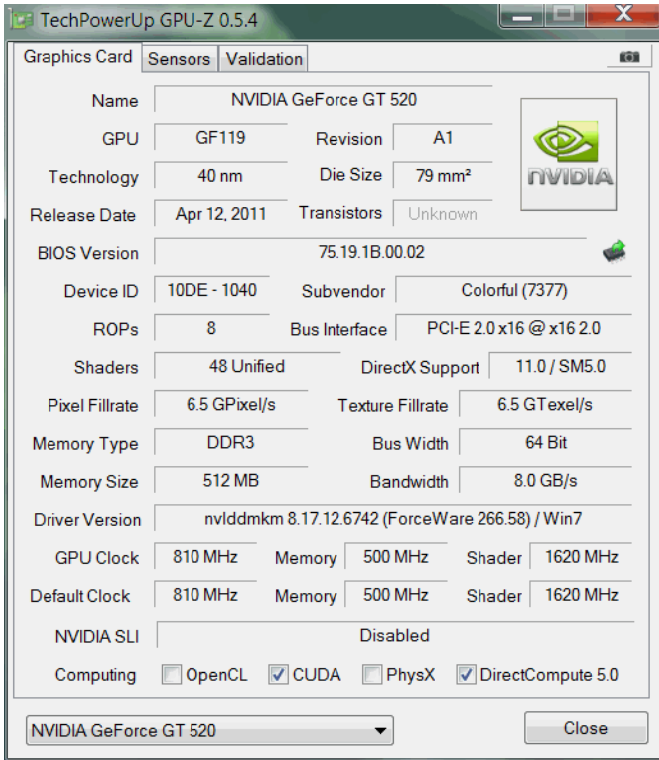
GPU-Z of N520-103-Q01: Graphics Card

TechPowerUp GPU-Z 0.5.4

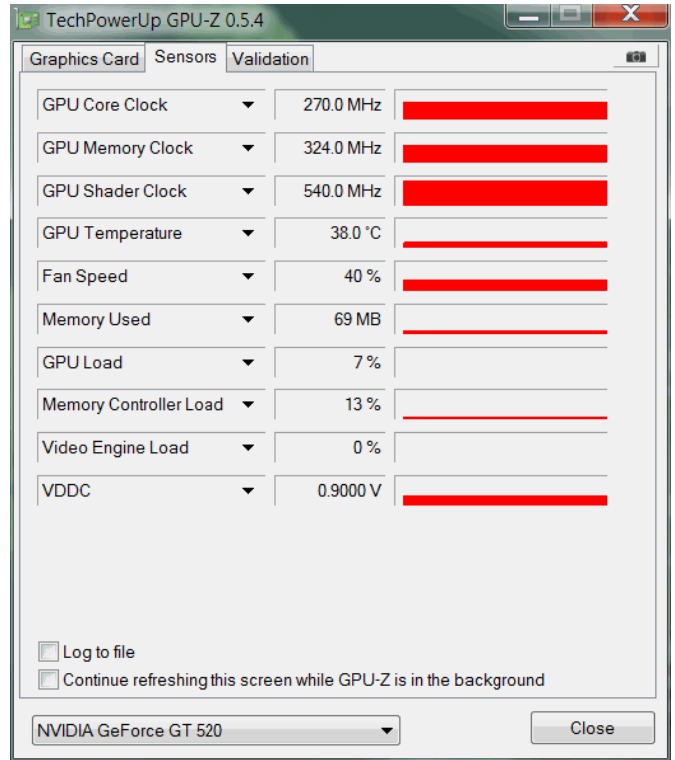
Graphics Card		Sensors	Validation
GPU Core Clock	270.0 MHz		
GPU Memory Clock	324.0 MHz		
GPU Shader Clock	540.0 MHz		
GPU Temperature	37.0 °C		
Fan Speed	40 %		
Memory Used	73 MB		
GPU Load	3 %		
Memory Controller Load	10 %		
Video Engine Load	0 %		
VDDC	0.9000 V		

Idle Temperature of N520-103-Q01:37°C

053:



GPU-Z of N520-053-Q01: Graphics Card



Idle Temperature of N520-053-Q01: 38°C



FurMark Full load of N520-203-Q01: Max Temperature 71°C



FurMark Full load of N520-203-Q01: Max Temperature 75°C

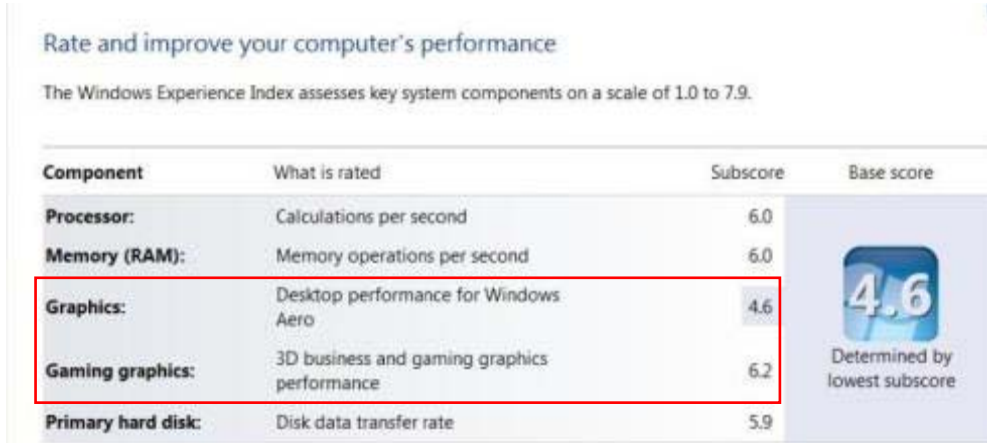


FurMark Full load of N520-053-Q01: Max Temperature 84°C

Windows 7 Experience Index:

Graphics: **4.6** (203 & 103 & 053)

Gaming: **6.2**



Platform: Intel Pentium E5300/ Colorful C.P45 TWIN/ 2*Kingston 2G DDR3 1333MHz/ Seagate ST3500418AS 500G/ Windows 7 Ultimate 32bit

Performance (For reference only):

Graphics card	G 210	GT 220	GT 240	GT 430	GT 520	GT 520	GT 520	HD 6450	HD 5550	HD 5450
Memory (MB/BIT)	1024/64	512/64	1024/128	1024/64	512/64	1024/64	2048/64	512/64	512/128	128/64
Clock(MHZ) _(core/SP/memory)	589/1402/1000	506/1050/1000	550/1340/1580	700/1400/1000	810/1620/1000	810/1620/1000	810/1620/1000	625/625/3200	550/550/1400	650/650/1800
Driver	266.58	260.99	260.99	266.58	280.26	280.26	280.26	8.84	8.782	8.82
3DMARK06 <small>DX9/1280*1024</small>	2585	3210	8695	4584	3773	3772	3768	5090	6774	3769
Vantage <small>DX10/Performance</small>	P815	P1190	P4317	P2269	P1868	P1849	P1870	P2300	P3310	P1189
3DMARK11 <small>DX11/Entry</small>	--	--	--	E1201	E1035	E1035	E1035	E1207	E1649	E694
Call of Duty-Black Ops <small>DX9 1280*800</small>	19	25	66	32	27	27	26	37	52	--
Crysis V1.21 <small>DX10 High / 1024*768/No AA</small>	9.995	12.58	33.48	18.475	14.675	14.64	14.685	18.915	29.44	13.33

Note: -- denotes the temporary lack of cards in tests.

Test Platform	
VGA Driver:	197.45
Main Board /Chip /Driver:	ASUS P6T/X58/6.1.7600.16385
System BIOS:	V0707
CPU:	Intel core i7 920/2.67GHz
SIMM /DIMM:	Corsair 2G × 3 DDR3 1333Hz
Hard Disk Drive:	WD 1001FALS 1.0TB
Monitor:	DELL 3008 WFP-HC
POWER	Corsair CMPSU-620HX
OS:	Windows 7 Ultimate6.1(7600)