

# I. Hardware Configuration

## 1. PCBA

Item	Result	Item	Result
Card Name	AMD Radeon E6760 GPU	Model Name	E6760
Bus Interface Type	PCI-E 2.0	Transfer Rate	16X
PCB Name	ER93FA VER:02	Vendor	NA

## 2. Chipset

Item	Result	Item	Result
Code Name	Turks	Product Branded Part Number	216-0810025
PCI Vendor ID	1002	PCI Device ID	6743
Subsystem Vendor ID	148C	Subsystem ID	2323
Date Code	1203	Shaders	480 Unified

## 3. Memory

Item	Result	Item	Result
Manufacturer	HYNIX	Product Branded Part Number	H5GQ2H24MFR-T2C
Speed(MHz)	800	Size (MB)	Linux : 1024MB
			Win XP : 1024MB
			Win 7 : 1024MB
Classification	DDR5	Package	FBGA
Date Code	148A	Tul P/N	NA

#### 4. Fix Display Card Into Case And Check Bracket

Item	Result
Check Bracket	PASS

#### 5. Connector

Item	Result	Item	Result
D-SUB	NO	DVI	NO
HDMI	NO	DP	YES *6 (Mini)
TV-OUT	NO	VIVO	NO

#### 6. Approval

Item	Result	Item	Result
FCC/CE Logo	YES	TV (PAL / NTSC)	NA
RoHS Logo	NO	WEEE Logo	YES

#### 7. Reboot Test

Item	Result
Reboot 20 Times	PASS

## II. Firmware Configuration

### 1. Bios

Item	Result	Item	Result
Product Name	TUL-ER93FA-E6760	Bios Version	013.012.000.041.042982
BIOS Date	04/20/12,14:12:2	Checksum	2600
Core Speed(MHz) (LINUX Mode)	599.97	Memory Speed(MHz) (LINUX Mode)	800.00
Core Speed(MHz) (OS Mode)	600	Memory Speed(MHz) (OS Mode)	800
Bios Config File	42982.bin	Hyper Memory	NO

### 2. Driver

Item	Result	
	Win XP-SP3	Win 7
Catalyst Ver	8.4	8.4
Driver Ver	8.96-120315a-135851C	8.96-120315a-135852C
Install	PASS	PASS
Uninstall	PASS	PASS

### 3. Diagnostics Testing

Item	Result
DOS Diag	NA
LINUX X64 Diag	P920

## III. Function Testing

### 1. External Power Testing

Item	Result
The alarm takes place while moving	NA

### 2. Mechanical Structure Check

Item	Result
Mechanical Structure Check	PASS

### 3. Fan Testing

Item	Result
Fan Speed Control	NO
Fan Mechanical Structure	PASS
Noise	a bit noisy

### 4. HDCP Testing (Mini DP to DP dongle)

Item		Result
COPP_HDCP_V01	Win XP-SP3	PASS
	Win 7	PASS

### 5. DP Testing (Mini DP to DP dongle)

Item		Audio Testing	Video Testing
DP	Win XP-SP3	PASS	PASS
	Win 7	PASS	PASS

## 6. Resolution Testing

Item	Resolution	Result
Win XP-SP3	1920*1080 60Hz	PASS
	1680*1050 60Hz	PASS
	1280*1024 60Hz	PASS
	1024*768 60Hz	PASS
Win 7	1920*1080 60Hz	PASS
	1680*1050 60Hz	PASS
	1280*1024 60Hz	PASS
	1024*768 60Hz	PASS

## 7. Water Ripple Checking

Item	Resolution	Result
Win XP-SP3	1920*1080 60Hz	PASS
	1680*1050 60Hz	PASS
	1280*1024 60Hz	PASS
	1024*768 60Hz	PASS
Win 7	1920*1080 60Hz	PASS
	1680*1050 60Hz	PASS
	1280*1024 60Hz	PASS
	1024*768 60Hz	PASS

## 8. Windows Testing

MB	TUL M3-A783M Ver : A	HDD	WD 3.5" SATAII 500GB
CPU	AMD Athlon II X4 630 Processor 2.80GHz AM3	MEMORY	ELIXIR DDR3-1600 2GB*2
POWER	COOLER MASTER RS-550-PCAR-E3 550W	DVD RW	ASUS DVD-E616P1
3D Mark and 3D Games Test		Result	
		Win XP-SP3	Win 7
3D Mark 11 (Performance)		NS	1280x720 SCORE : P1344
3D Mark Vantage (Performance)		NS	1280x1024 GPU SCORE : 5392
3D Mark06		1920x1080 4AA 8AF 5668	1920x1080 4AA 8AF 5599
Lost Planet		PASS	PASS
Temperature(°C)	FurMark1.10.1	65	68
	MOS(Q4003)	44	46
	3D Mark 03 Mother Nature	56	58
	MOS(Q4003)	38	42
Power Properties Test (Suspend & Wake UP)		PASS	PASS
Bacon Model		PASS	PASS
Zero Core Power		NS	NS
Burnin Testing		3DMARK 06 Resolution : 1920*1080 4AA 8AF	3DMARK 11 Resolution : 1920*1080 4AA 8AF
		72hrs PASS	17hrs PASS

### TUL CORPORATION

新北市汐止區新台五路一段 79 號 7 樓之 7  
7F.-7, No. 79, Sec. 1, Xinitai 5<sup>th</sup> Rd., Xizhi Dist., New Taipei City 221, Taiwan(R.O.C.)  
TEL:(+886) 2-8698-3000 FAX:(+886) 2-8698-3456

## 9. Outputs Testing

DP1 / DP2 / DP3 / DP4 / DP5 / DP6					
Item	Windows Test	Hot Insertion	Extend Function Test	Quality	DDC
DP1	PASS	PASS	PASS	PASS	PASS
DP2	Fail	Fail	Fail	Fail	Fail
DP3	PASS	PASS	PASS	PASS	PASS
DP4	PASS	PASS	PASS	PASS	PASS
DP5	PASS	PASS	PASS	PASS	PASS
DP6	PASS	PASS	PASS	PASS	PASS

PS: The XP system Only supplies two outputs.

## 10. TotalMedia Theatre 5 Function Testing

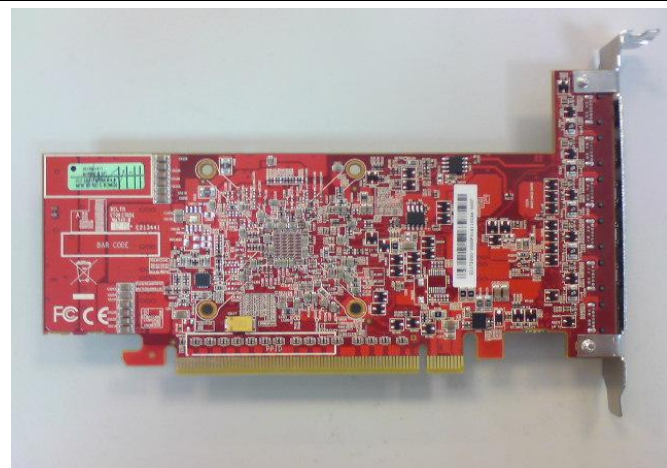
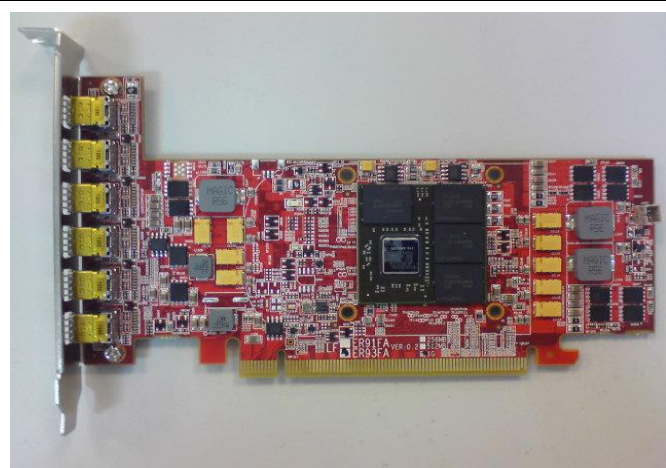
Port	Resolution	ATI Avivo	Result
DP	1920*1080 60Hz	Enable	PASS
		Disable	PASS



## IV.PCBA Photo

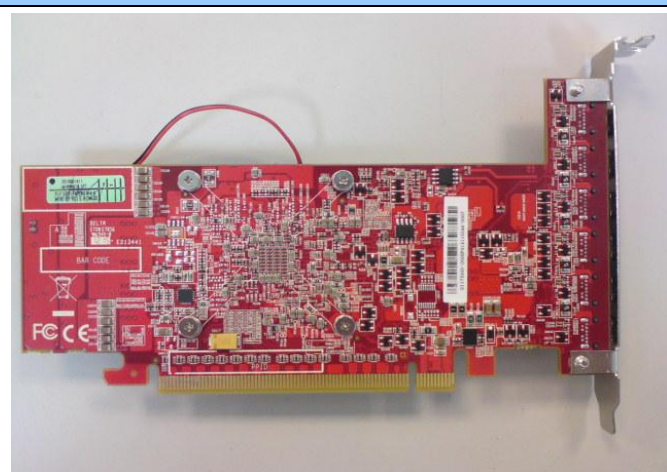
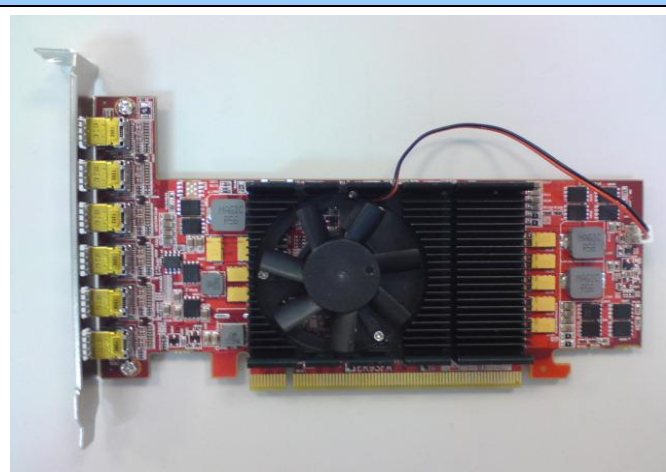
Top

Bottom



Top

Bottom



Connector



**TUL CORPORATION**

新北市汐止區新台五路一段 79 號 7 樓之 7  
7F.-7, No. 79, Sec. 1, Xinitai 5<sup>th</sup> Rd., Xizhi Dist., New Taipei City 221, Taiwan(R.O.C.)  
TEL:(+886) 2-8698-3000 FAX:(+886) 2-8698-3456



### Catalyst Control Center

**AMD VISION Engine Control Center**

硬體

圖形卡製造商	Powered by AMD
圖形晶片組	AMD Radeon E6760
裝置 ID	6743
廠商	1002
子系統 ID	2323
子系統廠商 ID	148C
圖形匯流排功能	PCI Express 2.0
最大匯流排設定	PCI Express 2.0 x16
BIOS 版本	013.012.000.041
BIOS 零件編號	113-xxx-xxx
BIOS 日期	2012/04/20
記憶體大小	1024 MB
記憶體類型	GDDR5
核心時脈 (兆赫)	600 MHz
記憶體時脈 (兆赫)	800 MHz
總記憶體頻寬 (以 GB/秒為單位)	51.2 GB/秒

### GPU-Z

TechPowerUp GPU-Z 0.6.2

Graphics Card: AMD Radeon E6760

Name	AMD Radeon E6760		
GPU	Turks	Revision	N/A
Technology	40 nm	Die Size	118 mm <sup>2</sup>
Release Date	May 2, 2011	Transistors	716M
BIOS Version	013.012.000.041.042982 (113-xxx-xxx)		
Device ID	1002 - 6743	Subvendor	PowerColor (148C)
ROPs	8	Bus Interface	PCI-E 2.0 x16 @ x16 2.0
Shaders	480 Unified	DirectX Support	11.0 / SM5.0
Pixel Fillrate	4.8 GPixel/s	Texture Fillrate	14.4 GTexel/s
Memory Type	GDDR5	Bus Width	128 Bit
Memory Size	1024 MB	Bandwidth	51.2 GB/s
Driver Version	atumdag 8.960.0.0 (Catalyst 8.4) / Win7		
GPU Clock	600 MHz	Memory	800 MHz
Default Clock	600 MHz	Memory	800 MHz
ATI CrossFire	Disabled		
Computing	<input checked="" type="checkbox"/> OpenCL	<input type="checkbox"/> CUDA	<input type="checkbox"/> PhysX <input checked="" type="checkbox"/> DirectCompute 5.0

AMD Radeon E6760

**TUL CORPORATION**

新北市汐止區新台五路一段 79 號 7 樓之 7  
 7F.-7, No. 79, Sec. 1, Xinitai 5<sup>th</sup> Rd., Xizhi Dist., New Taipei City 221, Taiwan(R.O.C.)  
 TEL:(+886) 2-8698-3000 FAX:(+886) 2-8698-3456

## V. Temperature Photo (Max : 68°C)



Note :

1. DP2 can't output signals.

### TUL CORPORATION

新北市汐止區新台五路一段 79 號 7 樓之 7  
7F.-7, No. 79, Sec. 1, Xinitai 5<sup>th</sup> Rd., Xizhi Dist., New Taipei City 221, Taiwan(R.O.C.)  
TEL:(+886) 2-8698-3000 FAX:(+886) 2-8698-3456