



innovation with style

MSI GTX 650 Ti BOOST Twin Frozr Sales Kit

VGA Product Marketing
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GTX 650 Ti BOOST GPU Highlight



- ❑ 28nm GTX 650 Ti BOOST GPUs
- ❑ 768 Units of CUDA Cores
- ❑ 192 bits Memory Bus
- ❑ Support DirectX 11.1 API (feature level 11_0) / CUDA architecture
- ❑ Support PhysX / 3D Vision Surround



- ❑ Dynamically maximize clock speeds based on workload of the game
- ❑ Push performance to new levels and bring out the best in every game.



- ❑ Synchronize the graphics card's FPS with the monitor's refresh rate.
- ❑ Dynamically enable vertical sync based on current frame rates for the smoothest gaming experience.

Key Features of N650Ti TF 2GD5/OC BE

msi



Twin Frozr III Thermal Design



**Only 65°C cool and 25.37 dB quiet
under full load!!**

Afterburner Overclocking Utility



Power limit control and
GPU/Memory Clock offset

3D Vision Surround



Up to 4 displays for multifunction

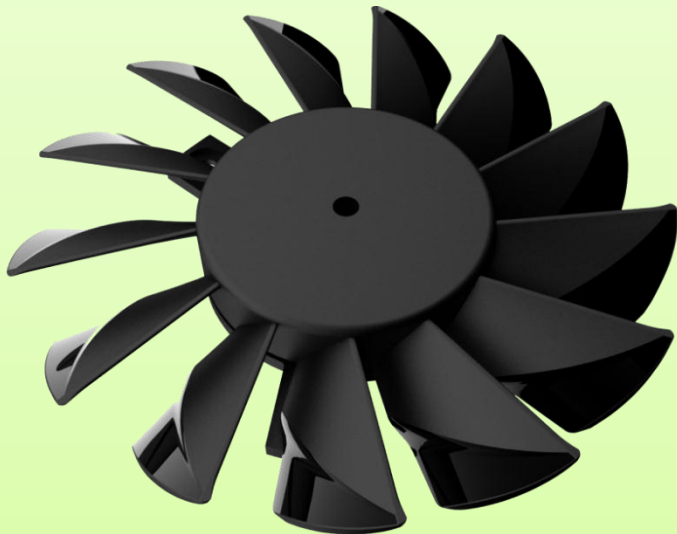
All Solid Capacitors



Better stability and longer product
lifetime

Propeller Blade

- MSI's exclusive innovation design
- 20% more airflow
- Cool down more components on the PCB



Propeller Blade

22.5

Traditional Design

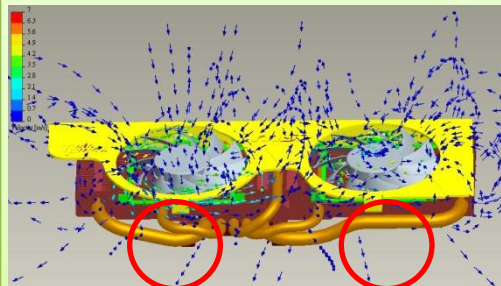
18.7

20% More
Airflow

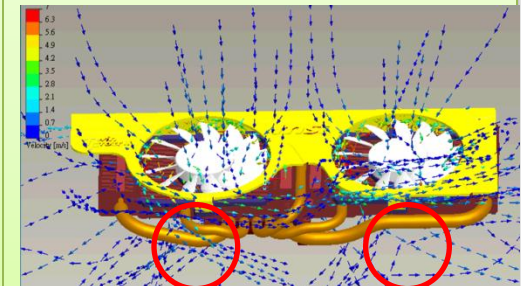
Airflow(CFM)

* Based on the same thermal model and rotated speed

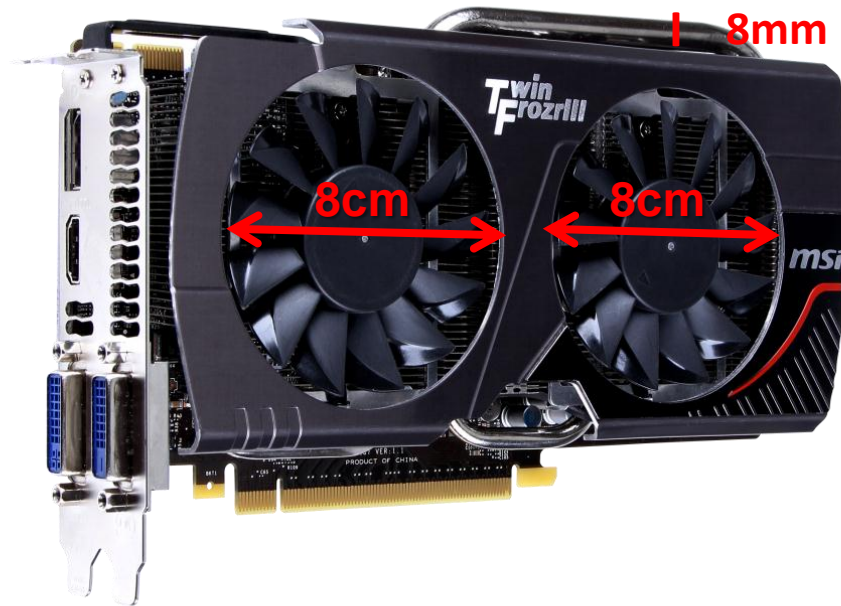
Traditional Design
Cover smaller area



Propeller Blade
Cover wider area



Twin Frozr III Thermal Design



Dual 8CM PWM Fans

Dual fans provide double air flow to cool down GPU/Memory/PLL Module at once.

SuperPipe Technology

Dual 8mm heat pipes provide faster heat dissipation.

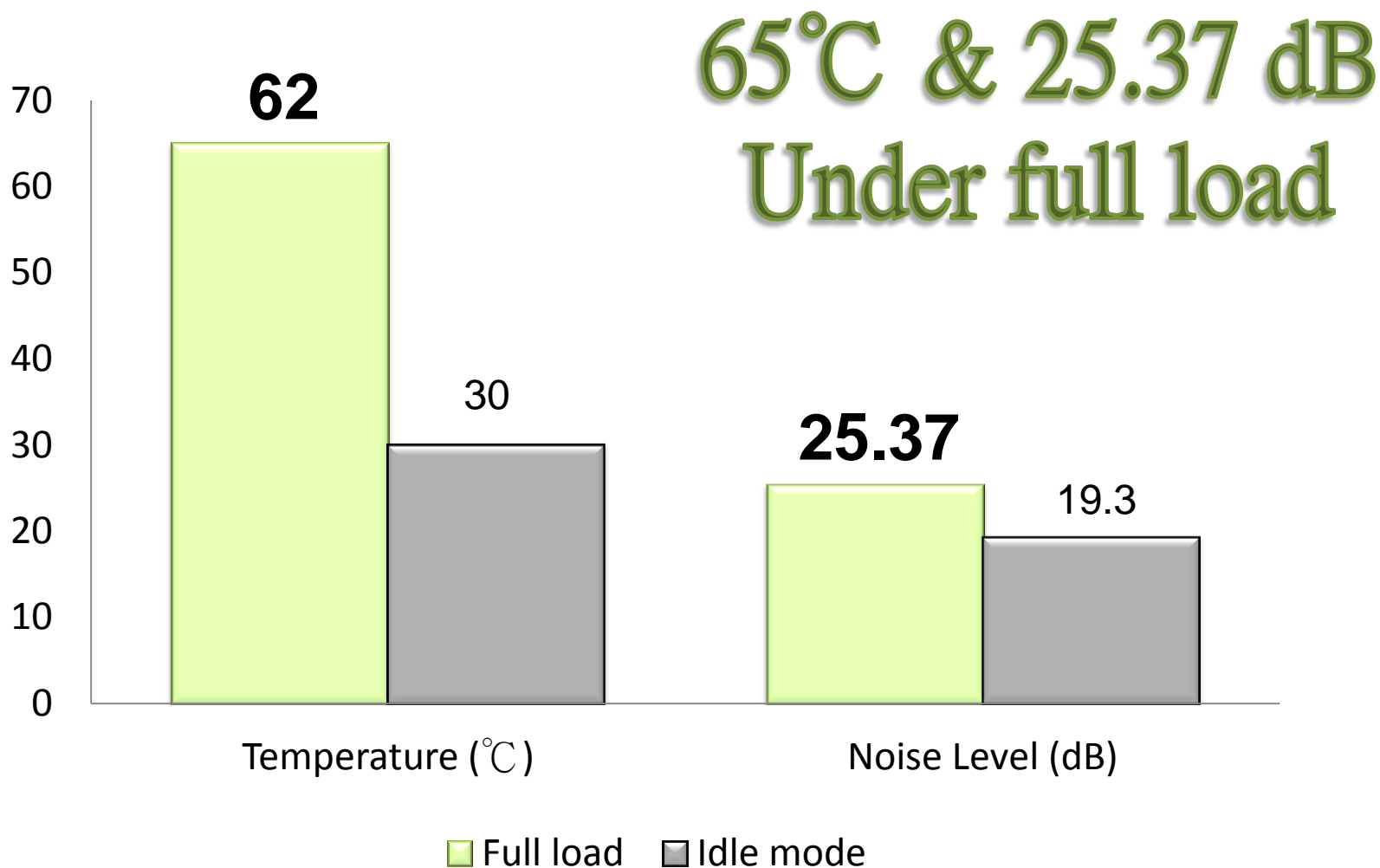
Nickel-plated Copper Base

Large size of Copper Base can dissipate the heat of GPU faster.

Form-in-one Heat Sink

Form-in-one heat sink covers the memory and power module.

Thermal Comparison



The thermal comparison is based on the same default GPU/Memory clock with their own bios under full load. The above result may differ from the actual testing.

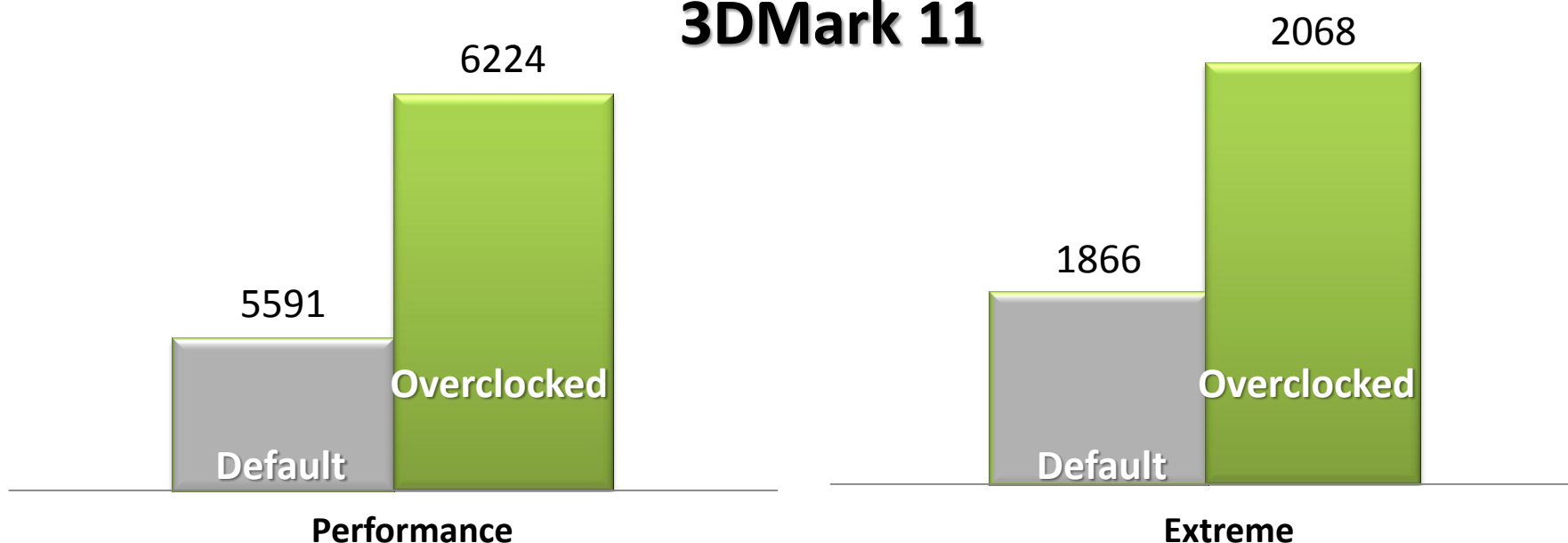
Power Limit Control by MSI Afterburner



- Whole new function for GeForce GTX 650 Ti BOOST to dynamically boost the maximum performance according to power loading.
- Support GPU/Memory Clock Offset
- Support Power Limit Control



3DMark 11



MSI Afterburner Overclocking Utility



- Whole new function for GeForce GTX 650 Ti BOOST to dynamically boost the maximum performance according to power loading.
- Support GPU/Memory Clock Offset
- Support Power Limit Control

Afterburner Interface



All must have features for overclockers!



**Kombustor
unified
benchmarking**



**Advanced
Fan Speed
Control**



**Supports
Multiple
Graphics cards**

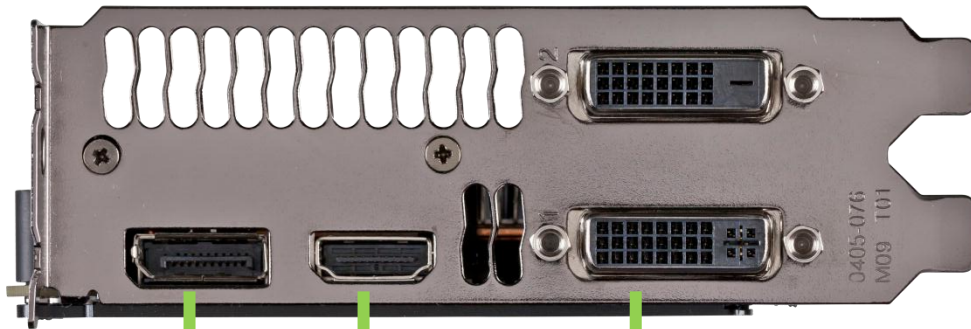


**Predator Video
Capturing**



**Afterburner APP,
total remote
control**

3D Vision Surround by a Single Card



- One MSI GeForce GTX 650 Ti BOOST expand PC games across three displays in full stereoscopic 3D.
- A single card enables to support up to four displays for more applications.

To experience stereoscopic 3D experience, the following hardware/system are needed .

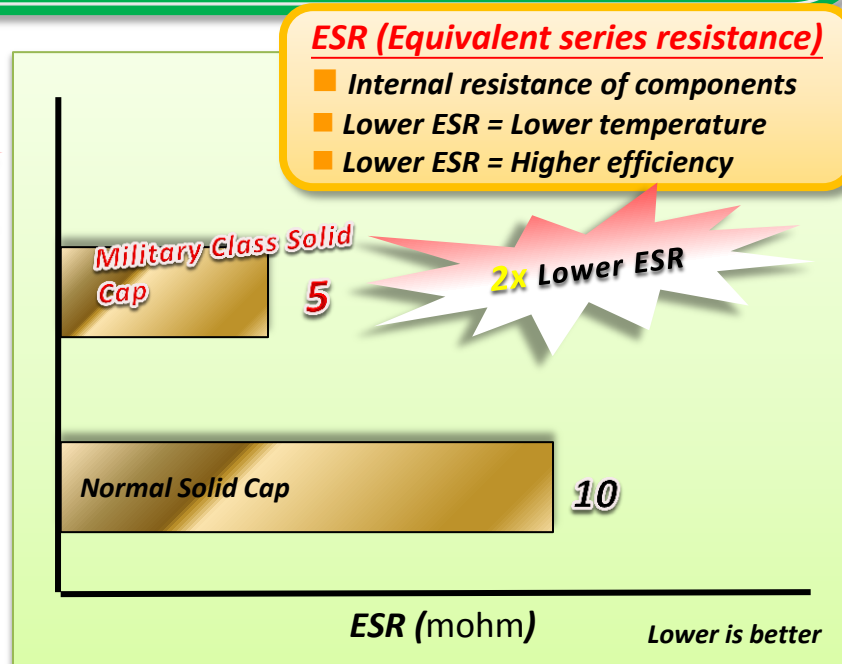
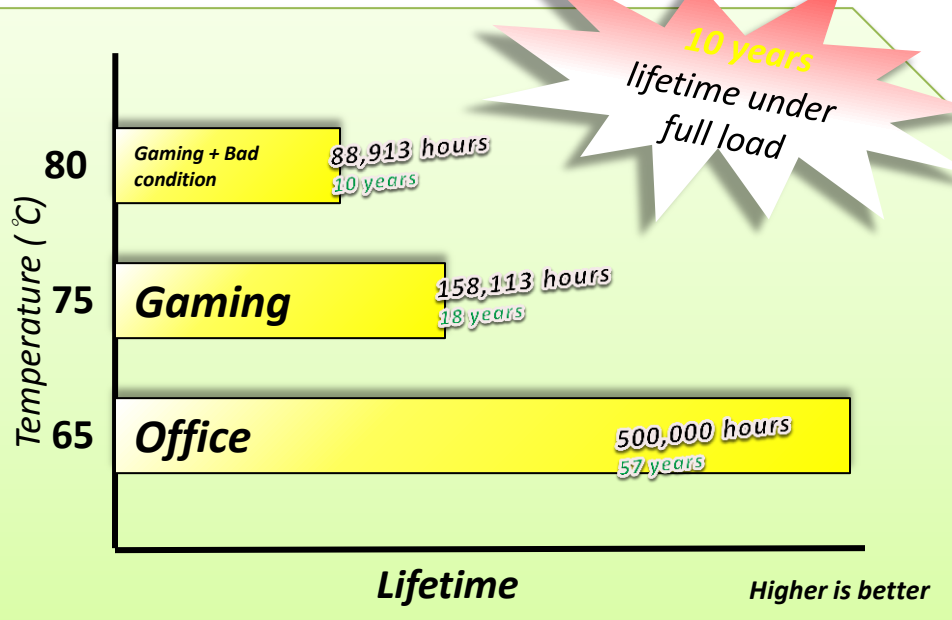




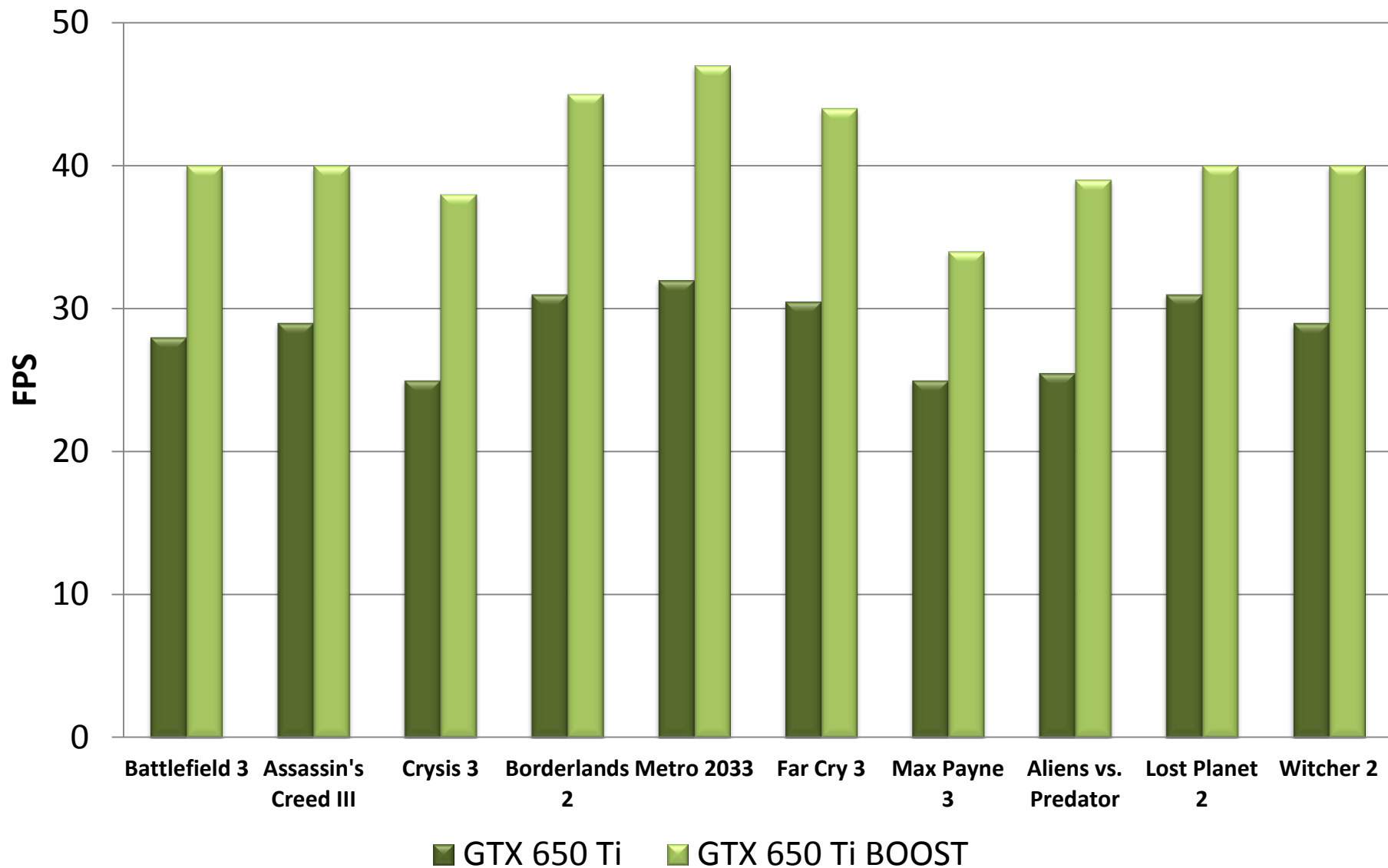
Solid Capacitor

Aluminum Core

- 10 years ultra long lifetime
- No explosion
- Extreme low ESR
- Lower temperature
- Higher efficiency

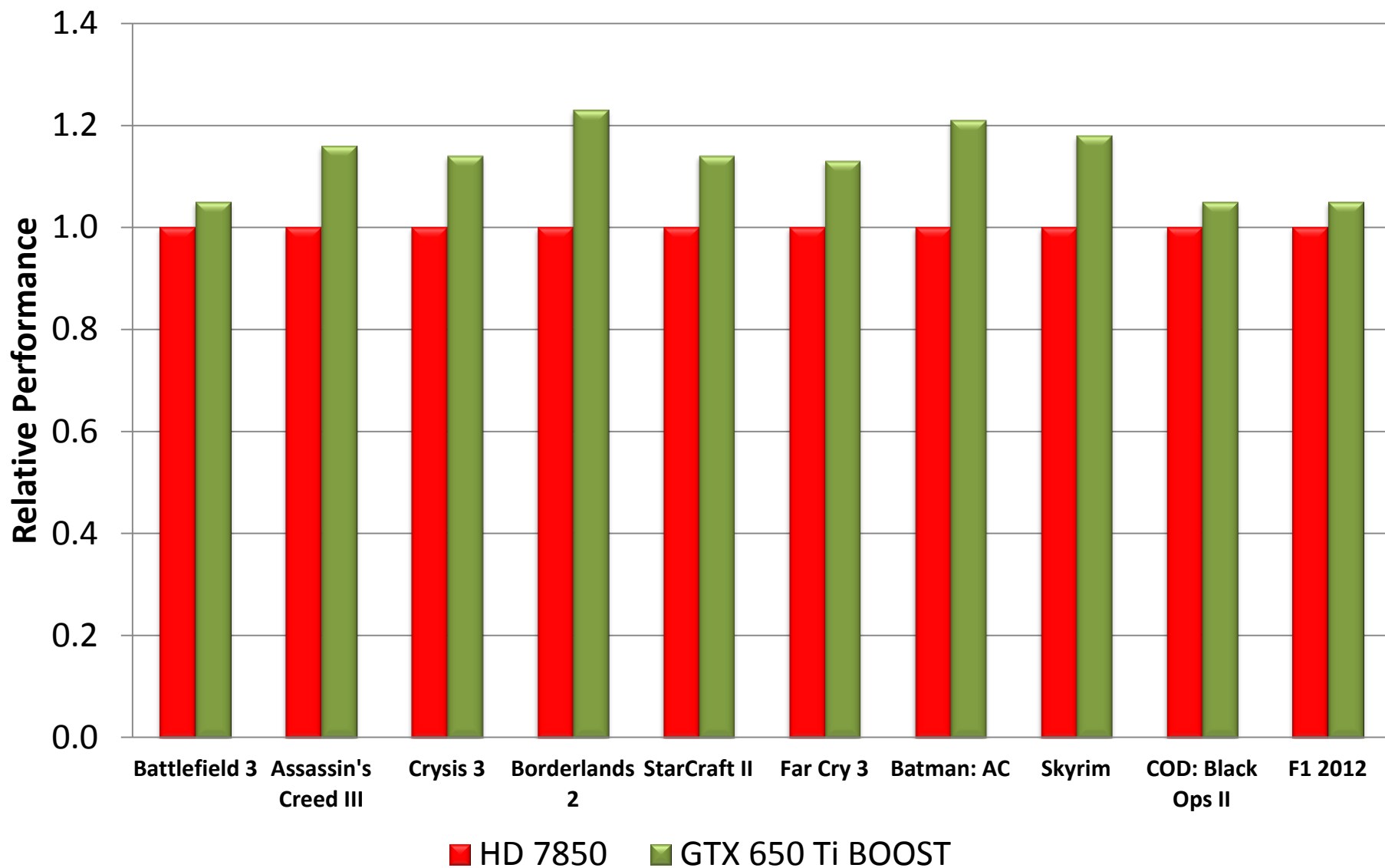


Gaming Performance Comparison



Data Source: NVIDIA

Gaming Performance Comparison



Data Source: NVIDIA

Product Specification

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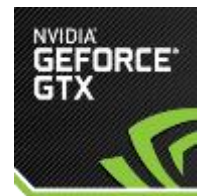


Marketing Name	N650Ti TF 2GD5(/OC) BE
Media Name	GTX 650 Ti BOOST Twin Frozr
Model	V287
GPU	NVIDIA GeForce GTX 650 Ti BOOST
Codename	GK106
CUDA Core	768 Units
Core Base Clock	980 MHz (OC: 1033 MHz)
Core Boost Clock	1033 MHz (OC: 1098 MHz)
Memory Clock	6008 MHz
Memory Size	2048MB GDDR5
Memory Bus	192 bits
Output	DisplayPort / HDMI / DL-DVI*2
TDP	134 W
Card Dimension	235x125.2x35.8mm
Form Factor	ATX
DirectX	11.1 API (feature level 11_0)
OpenGL	4.3
PCI Express	3.0
CUDA	Y
SLI	Y, 2-way SLI
PhysX	Y
PureVideo HD	Y
3D Vision Surround	Y, 3 outputs per card

Conclusion



- **Twin Frozr III thermal design** brings **65°C cool** and **25.37 dB quiet** under full load.
- Support **GPU/Memory offset** and **power limit control** by **MSI Afterburner** for better overclocking potential.
- Support up to 4 displays for multifunction with **3D Vision Surround**.
- **All Solid Capacitors** provide better stability and longer product lifetime.



Thanks for
your attention

