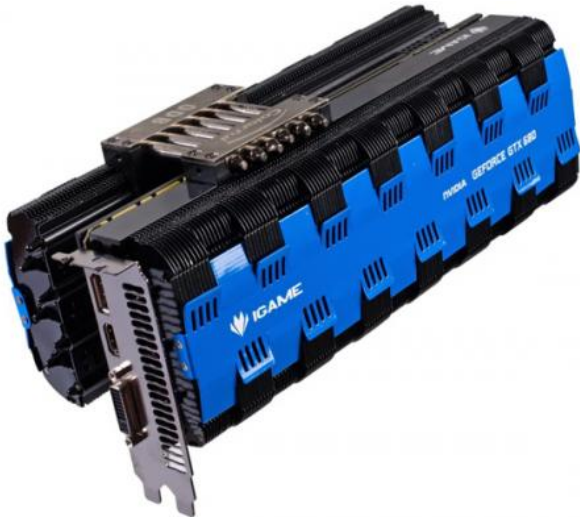


# Colorful creates passively cooled Nvidia graphics card

29 June 2012, by Nancy Owano



With a big enough heatsink, can a high-end graphics card be passively cooled? No fan? No noise? China-based manufacturer Colorful showed off its answer, introduced at Computex earlier this month. Colorful has what it says is the world's first passive-cooled GeForce GTX 680 graphics card, the iGame GTX 680 "passive." Instead of a cooling fan, two very large aluminum heatsinks carry the task of drawing heat away from the core. Colorful set out to eliminate noise completely by a passively cooled graphics card in its iGAME range that uses Nvidia's GeForce GTX 680 chipset.

The GTX680 is Nvidia's powerful single-core graphics card. GeForce refers to a brand of graphics processing units (GPUs) designed by Nvidia. In March it was announced that the first chip based on the Kepler architecture was hitting the market, aboard a new graphics card called the GeForce GTX 680.

The passively cooled GeForce GTX 680 model

uses 20 heatpipes and two aluminum heatsinks. Colorful claims this is the first zero-noise GTX 680 solution.

Colorful is considered one of Nvidia's most important board partners in Asia. Established in 1995, Colorful conducts research, designs, manufactures, and sells consumer graphics cards. Those familiar with Colorful regard it as a company that frequently comes up with surprises. One such description is that Colorful is "an unorthodox producer of [Nvidia](#) cards," according to PC reviews site, HEXUS. A Singapore-based technology site refers to Colorful as making "some of the most outrageous and over-the-top [graphics cards](#) you will find."

Colorful's "cooled" solution has 20 heatpipes combined with 280 aluminum fins. In reviewing the announcement, a note of concern was struck over the fact that Colorful has not yet mentioned clock speeds. Geek.com wonders if they might have underclocked the GPU to help keep temperatures to a minimum. "If it hasn't been underclocked, then it may be a card worth keeping an eye out for," said the report. The techPowerup site said that the design guarantees reliable silent operation at [reference](#) clock speeds or mild overclocking.

There has been no price or release date announced; Colorful is said to be still assessing the marketability of the design.

When Colorful first showed off the iGame card at [Computex](#) 2012 in Taipei earlier this month, the product was described as "iGame GeForce GTX 680 Silent" and drew prompt attention as a card that relies completely on passive cooling, not a fan,.

This is not the first time, however, that a manufacturer has achieved a passively cooled graphics card, and more competition is likely to emerge sooner than later, under different partnerships. Sapphire announced in early June

that it had come up with its new passively cooled Radeon HD 7770 card. Like the Colorful entry, this does not use a fan but instead dissipates heat via a "heatspreader." Sapphire partners with AMD.

**More information:**

[www.expreview.com/20045.html](http://www.expreview.com/20045.html) (in Chinese)

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APA citation: Colorful creates passively cooled Nvidia graphics card (2012, June 29) retrieved 14 November 2019 from <https://phys.org/news/2012-06-passively-cooled-nvidia-graphics-card.html>

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